

NO.



PARLIAMENT OF NEW SOUTH WALES
LEGISLATIVE COUNCIL

STANDING COMMITTEE ON STATE DEVELOPMENT

Report

on

THE USE AND MANAGEMENT OF PESTICIDES IN
NEW SOUTH WALES

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INQUIRY'S TERMS OF REFERENCE

The Use and Management of Pesticides in New South Wales

(Reference received 12 November 1998)

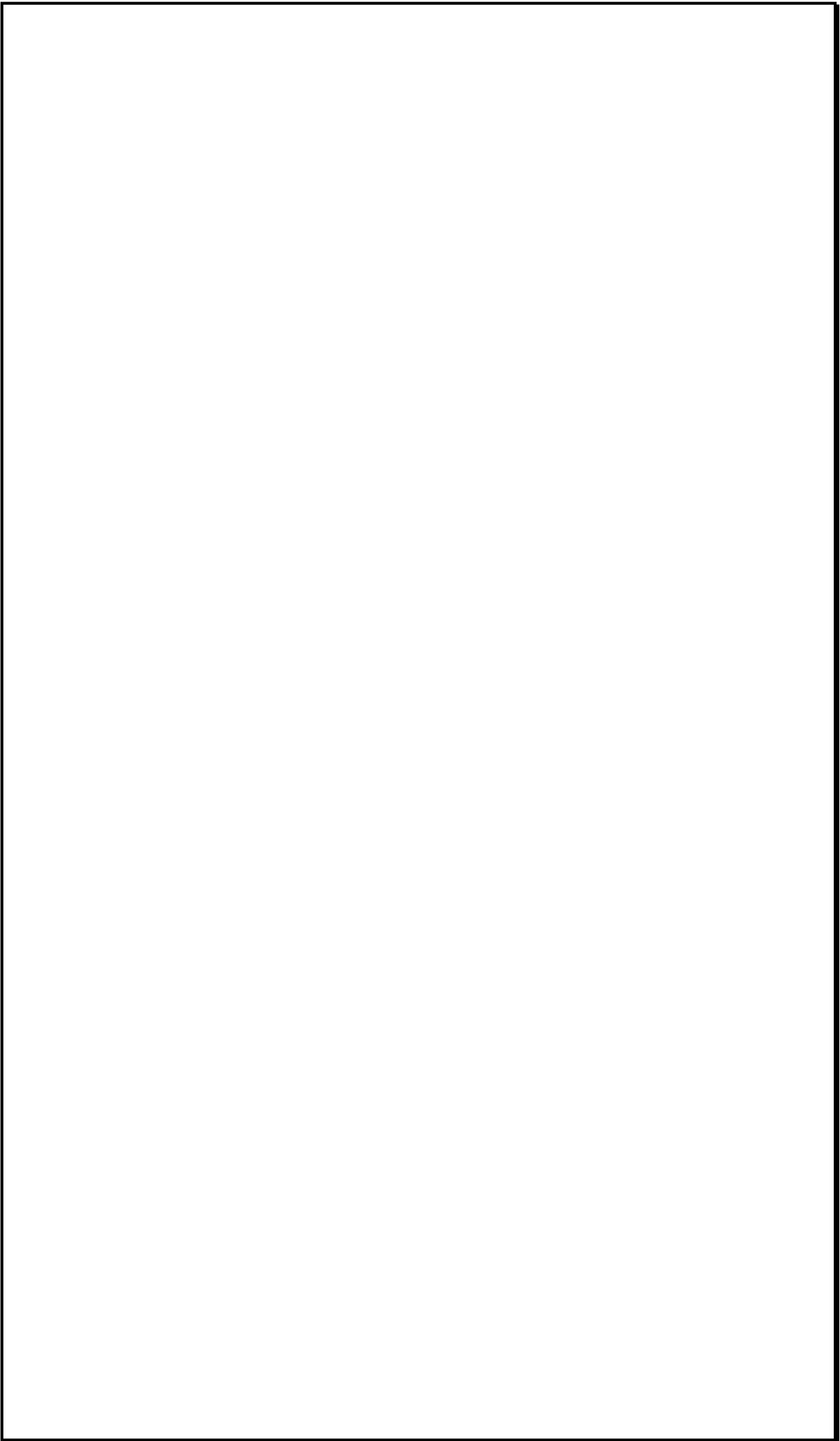
That in light of:

- its inquiry into the role of government in facilitating the international competitiveness of agriculture in New South Wales, and
- the widespread community consultation that was conducted in 1997 by the NSW Environment Protection Authority in conjunction with the Government's *Discussion Paper on Improving Pesticide Management in NSW*;

the Standing Committee on State Development inquire into and report on issues associated with all pesticide use in NSW and options for future policy and/or programs related to the management of pesticides, including all agricultural chemicals, having particular regard to:

- the sustainability of agricultural activities which currently rely on intensive pesticide use;
- the social, health, environmental and trade interests of the agricultural and wider community, including the need for avoiding and reducing the risks associated with pesticide use;
- the role of pesticide users, local government, State agencies and other stakeholders (including environment and other community groups) in the resolution of local conflicts in relation to pesticide use; and
- any opportunities for industry to address the issues through research and development (on aspects such as less pesticide-dependent plant varieties, improved pesticide products and application techniques) and the development and implementation of best management practices for pesticide use.

For the purposes of the inquiry, the Minister for the Environment has advised that the term pesticides includes herbicides, bactericides, pest baits, fungicides, insecticides, pest lures, rodenticides and pest repellents.



CHAIRMAN'S FOREWORD

On 12 November 1998 correspondence was received from the then Minister for the Environment, the Hon. Pam Allan, MP, issuing the Standing Committee on State Development with terms of reference to inquire into and report upon the use and management of pesticides in New South Wales.

In referring the matter to the Standing Committee, the Minister recognised the complex nature of pesticide legislation and policy and its relative importance and sensitivity to the community. The Minister foresaw the benefits from the inter-relationship of this inquiry with the Standing Committee's ongoing inquiry into the international competitiveness of agriculture in New South Wales. These factors combined were most appropriately considered through a Standing Committee mechanism that provided opportunities for industry, interest groups, government and community across New South Wales and interstate to present their views.

The Standing Committee approached this inquiry with the understanding that the use and management of pesticides involved a delicate balance of public health, environmental and economic concerns. The Standing Committee had the benefit of applying the considerable work undertaken since 1997 by the NSW Environment Protection Authority to canvass public perception of possible amendments to the *Pesticides Act 1978*. With this information as a base, the Standing Committee sought to encompass a range of regulatory and policy measures available to manage pesticides, including environmental planning instruments, provisions of the *Pesticide Act 1978*, and education and training.

The report comprises two volumes, the first presents the Standing Committee's views, considerations and recommendations. The second volume contains the amended transcripts emanating from the Standing Committee's five public hearings. Both volumes have been published in the pursuit of disseminating community perspectives on the important issue of pesticides. In preparing this report I am satisfied that it addresses the stated terms of reference.

The Standing Committee's findings are addressed in three main sections within volume one of the report. The first section (Chapter two), discusses the use of pesticides in urban and rural landscapes. The section reflects the

overwhelming view of industry and a number of government organisations who indicated that the social, economic and environmental benefits of effectively managed pesticide use outweighed the risks. The agricultural industry, the largest user of pesticides, reported the influence of market demand for a reliable supply of low priced, high quality produce dictated their need for pesticide use. The Standing Committee received analytical evidence of the occurrence of pesticides in persons, livestock and water sources at sites extending up to 3.6 kilometres or more from the possible source. In many instances inadequate research has been undertaken to ascertain the consequences of pesticide occurrences.

The second section (Chapter three and Chapter four) considers the instruments available for managing the use of pesticides in the community. The Standing Committee received a strong community message that measures need to be implemented to minimise the occurrence of pesticide drift and contamination of non target species or areas such as neighbouring property, watercourses and livestock. Economic losses incurred by livestock producers in domestic and overseas markets from endosulfan residues in cattle demonstrated the need to improve the way pesticides are managed. The report contains a number of legislative and policy approaches that seek to achieve this end.

From a regulatory perspective, the Standing Committee reviewed the New South Wales Environment Protection Authority's options for amendment of *the Pesticides Act 1978* and made a number of recommendations in that regard. The Standing Committee supports the amendment of s.37 of the *Pesticides Act 1978*, removing the requirement that an applicator be proven to wilfully cause risk of injury or damage by a pesticide. The Committee received views from a broad cross section of the community advocating a greater sharing of responsibility and liability for the application of pesticides than is currently outlined under legislation. The Standing Committee supports the inclusion of provisions enabling clear delineation between the responsibility of the land owner and contracted professional to use pesticides. Penalties for breach of responsibility under the Act are to be weighted accordingly.

Part of the report is devoted to the role of planning in managing pesticide drift and issues raised about incompatible land uses and the application of buffer zones. As a case study example of planning issues, the Standing Committee reviewed concerns raised by sections of the Dubbo community regarding a proposed cotton development in the area. The introduction of regional agricultural plans as regional environmental planning instruments

is recommended as an innovative and flexible approach for progressing towards a resolution of these matters.

The third section (Chapter five) considers alternatives to the use of pesticides, focussing on the notion of the precautionary principle, organic farming and notes a recent CSIRO research program aiming to control termites and locusts by fungus.

The Standing Committee's deliberations were assisted by being able to source evidence received not only from this inquiry but also from its concurrent investigations for the inquiry into the international competitiveness of agriculture in New South Wales.

In my capacity as Chairman, and on behalf of the members of the Standing Committee on State Development, I would like to thank the staff of the Committee's secretariat who worked on the inquiry. Appreciation is extended to the previous Director, Ms Anna McNicol, Director/Senior Project Officer, Mr Steven Carr, Senior Project Officer, Mr Robert Stefanic, and the Committee Officer, Ms Annie Marshall for their assistance. Particular mention should be given to efforts undertaken during the final stages of the inquiry where public hearings and report preparation was conducted to a confined time schedule.

I would also like to thank all those individuals and organisations who directed their time, interest and expertise to preparing submissions or appearing as witnesses before the Standing Committee during this inquiry.

Hon. Tony Kelly, MLC
Chairman

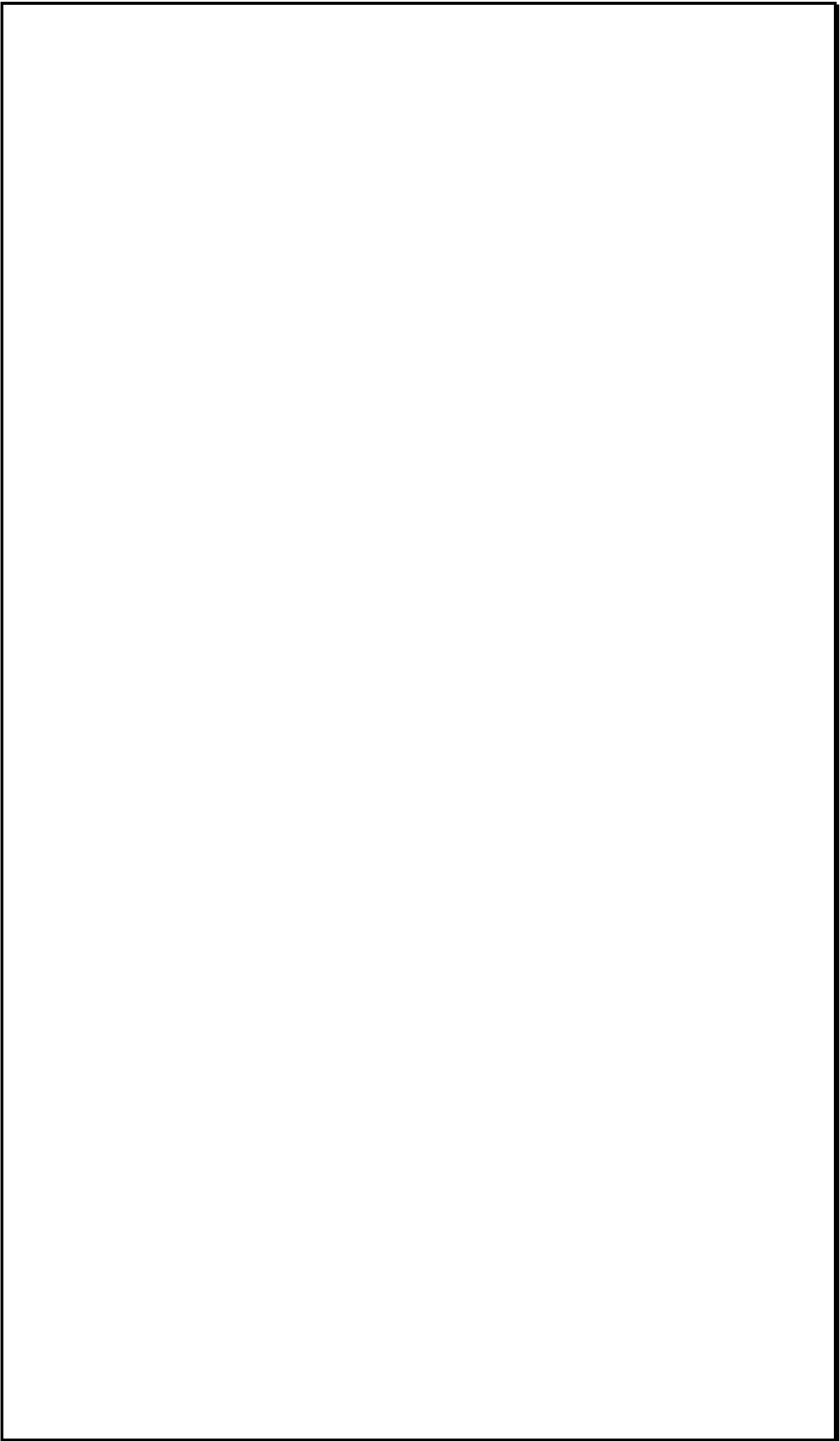
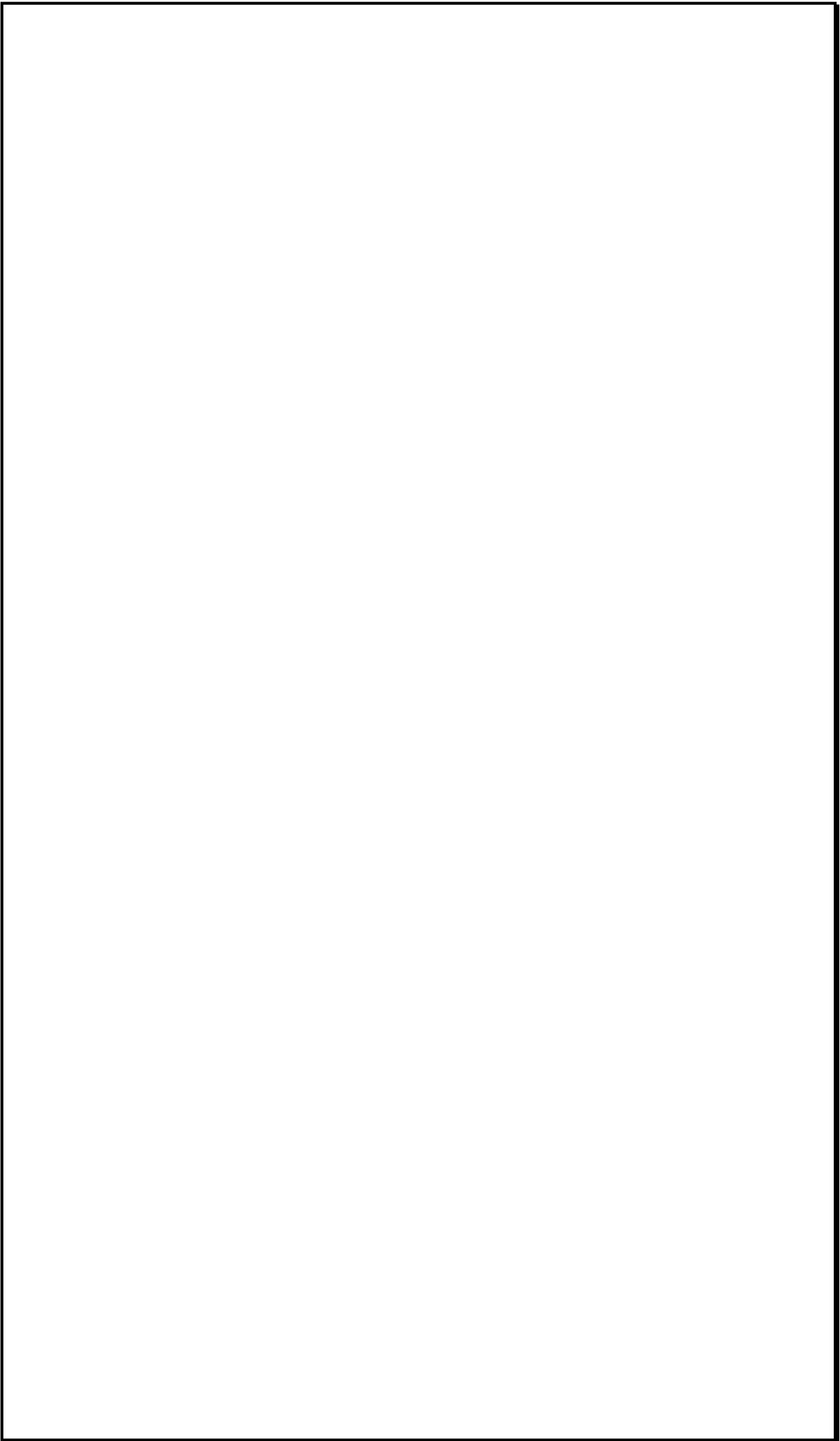


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MEMBERSHIP OF THE STANDING COMMITTEE

The Hon Tony Kelly, MLC Chairman
Australian Labor Party

The Hon Dr Brian Pezzutti, RFD MLC Deputy Chairman
Liberal Party

The Hon Ian Cohen, MLC
The Greens

The Hon John Johnson, MLC
Australian Labor Party

The Hon Ian M Macdonald, MLC
Australian Labor Party

SECRETARIAT TO COMMITTEE

Ms Anna McNicol Director
(Until 16 July 1999)

Mr Steven Carr Director/Senior Project Officer

Mr Robert Stefanic Senior Project Officer
(For the period 2 August 1999 – 24 September 1999)

Mr Stephen Fenn Research Assistant

Ms Annie Marshall Committee Officer

ESTABLISHMENT AND FUNCTIONS OF THE STANDING COMMITTEE

In June 1988, the Legislative Council of the New South Wales Parliament resolved to establish two Standing Committees—the Standing Committee on Social Issues and the Standing Committee on State Development. After the 1995 election a third Committee, the Standing Committee on Law and Justice, was established. At that time the Standing Committee on Privilege and Ethics was reconstituted by resolution.

The functions of the State Development Committee, as set out in the Resolutions of the Legislative Council, are to inquire into, consider and report to the Council on:¹

options for future policy directions and emerging issues to ensure that opportunities for sound growth and wise development for the benefit of the people in all areas of New South Wales are pursued;

- any proposal, matter or thing concerned with economics and finances, resources and energy, transportation, tourism, public administration, local government, the Olympics, primary industry, industrial and technological developments and environmental issues in New South Wales; and
- any proposal, matter or thing concerned with the problems or disadvantages uniquely or predominantly experienced in country areas, including the viability of cities and towns in those areas.

¹ Legislative Council, 1st Session, 52nd Parliament, Committees, Resolutions, Office Holders and Ministerial Representation, (Draft), p 6

OPERATION OF THE STANDING COMMITTEE

Matters for inquiry may be referred to the Standing Committee by a Minister of the Crown or by resolution of the Legislative Council. Additionally the Standing Committee may inquire into and report to the House on any annual report or petition that has been tabled in the Legislative Council that is relevant to the functions of the Standing Committee. The Standing Committee may publish papers and evidence taken in public, as it considers appropriate. In that connection the Standing Committee may prepare and distribute discussion papers as aids to its inquiries.

The Legislative Council resolution enables the Standing Committee to:

- summons witnesses;
- make inspections;
- call upon the services of government organisations and their staff with the consent of the appropriate Minister;
- accept written submissions concerning inquiries from any person or organisation;
- conduct public hearings; and/or
- meet and make joint reports with other federal and state parliamentary committees.

Reports must be tabled in the Legislative Council within ten days of adoption by the Standing Committee. Each report is debated in the House. The Leader of the Government in the Legislative Council is required to respond within six months to any recommendations for Government action that have been set out in Standing Committee reports.

PUBLICATIONS BY THE STANDING COMMITTEE

Discussion Paper 1 May 1989

Public Sector Tendering & Contracting in New South Wales: A Survey

Report 1 August 1989

Public Sector Tendering & Contracting in New South Wales: Supply of Goods and Services

Report 2 October 1989

Public Sector Tendering & Contracting in New South Wales: Local Government Tendering & Contracting

Discussion Paper 2 November 1989

Coastal Development in New South Wales: Public Concerns & Government Processes

Discussion Paper 3 June 1990

Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting: Management Options

Report 3 April 1991

Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting. Volume A

Report 4 September 1991

Coastal Planning & Management in New South Wales: A Framework for the Future. Volume 1

Supplement to 4 September 1991

An Alternative Dispute Resolution Primer

- Report 5 December 1991
Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting. Volume B
- Report 6 December 1991
Payroll Tax Concessions for Country Industries. Volume I
- Report 7 June 1992
Public Sector Tendering & Contracting in New South Wales: Supply of Goods and Services: Follow Up Report
- Report 8 October 1992
Coastal Planning & Management in New South Wales: The Process for the Future. Volume II
- Report 9 April 1993
Public Sector Tendering & Contracting in New South Wales: Local Government Tendering & Contracting: Follow Up Report
- Discussion Paper 4 August 1993
Regional Business Development in New South Wales: Trends, Policies and Issues.
- Report 10 May 1994
Regional Business Development in New South Wales: Achieving Sustainable Growth: Principles for Setting Policy. Volume I
- Report 11 November 1994
Regional Business Development in New South Wales: Achieving Sustainable Growth: Initiatives for Setting Policy. Volume II
- Report 12 August 1996
Rationales for Closing the Veterinary Laboratories At Armidale and Wagga Wagga and the Rydalmere Biological and Chemical Research Institute

Report 13 October 1996

Factors Influencing the Relocation of Regional Headquarters of Australian and Overseas Corporations to New South Wales

Report 14 April 1997

Interim Report on the Fisheries Management Amendment (Advisory Bodies) Act 1996

Report 15 April 1997

Waste Minimisation and Management

Report 16 July 1997

The Fisheries Management Amendment (Advisory Bodies) Act 1996

Discussion Paper 5 October 1997

Future Employment and Business Opportunities in the Hunter Region

Report 17 November 1997

Fisheries Management and Resource Allocation in New South Wales

Report 18 March 1998

Operations of the Sydney Market Authority (Dissolution) Bill from Commencement until 31 December 1997

Discussion Paper 6 May 1998

International Competitiveness of Agriculture in New South Wales

Report 19 July 1998

Future Employment and Business Opportunities in the Hunter Region; and The Downsizing of the Rack Rite Investment Proposal

Report 20 September 1998

Interim Report on the Provision and Operation of Rural and Regional Air Services in New South Wales

GLOSSARY

ABARE	Australian Bureau of Agricultural and Resource Economics
ANZECC	Australia and New Zealand Environment and Conservation Council
Avcare	National Association for Crop Protection and Animal Health
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DLWC	NSW Department of Land and Water Conservation
NRA	National Registration Authority
NSW EPA	Environment Protection Authority of New South Wales

RECOMMENDATIONS OF THE COMMITTEE

Recommendation 1..... page 6

The Standing Committee recommends that a freestanding definition of “pesticides” be included in the *Pesticides Act 1978*.

Recommendation 2..... page 17

The Standing Committee recommends that the NSW Government establish Regional Inter-Agency Committees on Pesticides. The Regional Inter-Agency Committees on Pesticides would have a purview to:

- Identify regionally specific impacts of pesticides on public health, environment and property;
- Transfer information and coordinate resources in relation to pesticides and the impact of pesticides;
- Conduct research and advisory programs;
- Provide advice to the proposed Statutory Advisory Committee where the Regional Inter-Agency Committees on Pesticides considers it appropriate (See discussion on a Statutory Advisory Committee at Recommendation 42); and
- Source information from other government agencies.

Recommendation 3..... page 20

The Standing Committee recommends that the NSW Health expand its research into the impacts of pesticide exposure on human health.

Recommendation 4.....page 34

The Standing Committee recommends that adequate additional financial resources be provided to the Department of Urban Affairs and Planning to enable the expeditious development of Regional Agricultural Plans. In formulating these plans, the Department of Urban Affairs and Planning should consult with the community and, move to incorporate provisions for:

- A minimum lot size that can result from a subdivision of prime agricultural land, unless development consent provides otherwise;
- Identification of prime agricultural land with a view to maintaining land use strictly for agricultural purposes;
- Identification of areas incompatible with pesticide use, eg. schools, organic farms;
- Inclusion of accredited environmental management systems and best management practices for agricultural operations, particularly in relation to pesticide application. Such mechanisms should include:
 - Site specific buffer zone measures; and
 - Calibrated weather and wind monitoring equipment operated at the time of professional and commercial pesticide application.

Recommendation 5.....page 39

The Standing Committee recommends that no amendment be made to the *Pesticides Act 1978* delegating regulatory authority to industry.

Recommendation 6.....page 42

The Standing Committee recommends that education and training in the use and management of pesticides be compulsory for applicators who conduct application activities for professional purposes and that other commercial applicators undertake education and training regimes that correspond with user needs and toxicity of chemicals applied. The mechanisms to implement an education and training program may include pamphlets, video instruction or course attendance where appropriate and be funded by a levy on agricultural chemical sales.

Recommendation 7.....page 52

The Standing Committee recommends that the outmoded provisions of the *Pesticides Act 1978* be repealed including those concerning registration and approval of pesticides.

Recommendation 8.....page 52

The Standing Committee recommends that wherever the term “Registrar of Pesticides” appears in the Act should be replaced with references to the NSW Environment Protection Authority.

Recommendation 9.....page 56

The Standing Committee will, as part of its review process (refer to Recommendation No.45), consider the issues of growers from non-English speaking backgrounds or with low literacy levels, developments in compliance with pesticide labelling by these growers and the progress of the Premier’s Taskforce.

Recommendation 10.....page 56

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for use of a pesticide contrary to the directions on a pesticide label or permit.

Recommendation 11.....page 56

The Standing Committee recommends that pesticide labels provide clear instructions for use, and that until a consistent standard for labels is implemented, purchasers of pesticide products with non-compliant labels should be provided with material safety data in the form of durable sheets or other relevant media.

Recommendation 12.....page 57

The Standing Committee recommends that lower concentrations or lower usage rates of pesticides be permitted by way of a “Pesticide Order” under the *Pesticides Act 1978* where the usage is not inconsistent with label directions and is approved by the National Registration Authority.

Recommendation 13..... page 57

The Standing Committee recommends that the NSW Environment Protection Authority commence consultation with the National Registration Authority and Avcare to address the issue of minor use, intellectual property rights and impediments to the registration process. The consultation should be conducted with a view to increasing the accessibility of pesticides suitable for minor use.

Recommendation 14..... page 58

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence to use or dispose of a pesticide so as to cause harm or damage to people or property. (See Recommendations 20 and 22 for discussion of “harm”)

Recommendation 15..... page 58

The Standing Committee recommends that the NSW Environment Protection Authority cooperate with industry to develop initiatives that encourage responsible container disposal. As part of its review (Recommendation 45), the Standing Committee will consider the Authority’s progress in this area.

Recommendation 16..... page 58

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for inappropriate disposal of a pesticide container.

Recommendation 17..... page 59

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for the intentional or negligent pesticide use or disposal resulting in harm to people or property. (See Recommendations 20 and 22 for discussion of “harm”)

Recommendation 18..... page 59

The Standing Committee recommends that the NSW Environment Protection Authority, investigate methods to institute an unwanted chemical container disposal system in urban and rural environments.

Recommendation 19.....page 64

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for the intentional or negligent pesticide use or disposal that threatens or harms the environment.

Recommendation 20.....page 64

The Standing Committee recommends that clear and unambiguous definitions be provided for the words “harm” and “environment” in the *Pesticides Act 1978*.

Recommendation 21.....page 64

The Standing Committee recommends that the *Pesticides Act 1978* reflect the greater sensitivity of children to pesticide exposure within the definition of harm.

Recommendation 22.....page 64

The Standing Committee recommends that in defining the concepts of “harm” and “harm to the environment”, the NSW Environment Protection Authority consider relevant provisions in the Tasmanian *Agricultural and Veterinary Chemicals (Control of Use) Act 1995*, the Victorian *Agricultural And Veterinary Chemicals (Control Of Use) Act 1992* and the New South Wales *Protection of the Environment (Operations) Act 1997*.

Recommendation 23.....page 66

The Standing Committee recommends that the penalties for serious breaches of the *Pesticides Act 1978* be amended to introduce penalty levels consistent with the *Protection of the Environment (Operations) Act 1997*.

Recommendation 24.....page 67

The Standing Committee recommends that the *Pesticides Act 1978* be amended so that maximum penalties for minor offences imposed by a Local Court are consistent with the relevant provision under the *Protection of the Environment (Operations) Act 1997*.

Recommendation 25..... page 68

The Standing Committee recommends that the *Pesticides Act 1978* be amended to introduce a system of penalty infringement notices that are clearly defined from offences applicable for serious pesticide misuse. For example, failure to read instructions on a label may draw an offence under both provisions.

Recommendation 26..... page 69

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide the NSW Environment Protection Authority and Local Courts with discretionary powers to compel an offender, where appropriate, to undertake penalty measures such as education or remediation in addition to, or instead of fines.

Recommendation 27..... page 70

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide guidelines to the courts on matters to consider for determining penalties.

Recommendation 28..... page 71

The Standing Committee recommends that the *Pesticides Act 1978* be amended to empower the NSW Environment Protection Authority, through pesticide orders, to control ground based application of pesticides.

Recommendation 29..... page 72

The Standing Committee recommends that the *Pesticides Act 1978* be amended to empower the NSW Environment Protection Authority to issue site specific compliance notices where urgent action is required to prevent harm and/or remediate contamination from pesticides.

Recommendation 30..... page 74

The Standing Committee recommends that aircraft used for aerial spraying purposes must be accredited by the Civil Aviation Safety Authority of Australia as suitable for aerial spraying purposes. Further, that the Civil Aviation Safety Authority of Australia conduct a comprehensive consultation process to evaluate the suitability of aircraft such as ultra light aircraft for pesticide application.

Recommendation 31.....page 76

The Standing Committee recommends that WorkCover Authority of NSW's administrative responsibility for licensing of urban pest and weed controllers be transferred to the NSW Environment Protection Authority. The transfer should not only include the transfer of responsibility from WorkCover Authority of NSW to the NSW Environment Protection Authority but also the corresponding resources including funding, persons or positions, records and data needed to maintain existing responsibilities.

Recommendation 32.....page 81

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide inspectors with stronger powers to permit them to more effectively conduct their duties.

Recommendation 33.....page 82

The Standing Committee recommends that the NSW Environment Protection Authority consult with corresponding Commonwealth, State and Territory agencies with regard to inter-state mutual recognition of licences for pilots and reciprocal powers for interstate inspectors when pursuing investigations across borders.

Recommendation 34.....page 82

The Standing Committee recommends that the NSW Environment Protection Authority increase the number of pesticide inspectors servicing New South Wales and that the NSW Government provide additional funding to the Authority to meet such costs.

Recommendation 35.....page 84

The Standing Committee recommends that the *Pesticides Act 1978* be augmented to provide for joint or shared liability of all parties responsible for an offence where a breach of the Act occurs. To ensure equitable and effective implementation of this concept, the Standing Committee proposes the following:

- All parties involved in the application of a pesticide which results in the commission of an offence may be liable under the *Pesticides Act 1978*;

- The *Pesticides Act 1978* should be amended to clearly define the boundaries of responsibility of each party for the application of pesticides;
- The parties should include the grower or occupier who is responsible for the application target area, the consultant or agronomist responsible for providing specialist advice and direction on the use of a pesticide, the pesticide applicator including the pilot in an aerial spraying operation or ground based operator, and any employee, employer or contractor of the parties responsible for the offence;
- In each case, it may be a defence that, the offence committed was due to causes over which the party had no control, took all reasonable precautions and used due diligence to prevent the offence being committed.

Recommendation 36 page 86

The Standing Committee recommends that the *Pesticides Act 1978* be amended to require all statutory, professional and commercial users of pesticides, including primary producers, keep records of pesticide applications and that these records should be available for inspection and/or copying by the NSW Environment Protection Authority. Accordingly the NSW Environment Protection Authority should develop a proforma document for recording relevant information.

Recommendation 37..... page 87

The Standing Committee recommends that the NSW Environment Protection Authority be empowered to provide records of pesticide applications for research purposes to other statutory bodies including NSW Health and the Department of Urban Affairs and Planning.

Recommendation 38..... page 87

The Standing Committee recommends that aerial applicators be strongly encouraged implement Global Positioning Satellite marking systems as a record keeping device for use by aerial applicators. The Standing Committee recognises that such systems would not only provide irrefutable and time-saving evidence to investigators, but would also benefit applicators in defence of offences arising from pesticide applications.

Recommendation 39.....page 87

The Standing Committee recommends that areas identified for aerial pesticide application be validated by a Global Positioning Satellite marking system (handheld or other).

Recommendation 40.....page 88

The Standing Committee recommends that the NSW Environment Protection Authority conduct a public education program in the use, management and disposal of pesticides in non-farming situations.

Recommendation 41.....page 89

The Standing Committee supports the establishment of a statutory advisory committee in accordance with the revised model proposed by the NSW Environment Protection Authority.

Recommendation 42.....page 89

The Standing Committee recommends that the NSW Environment Protection Authority review and report on the membership and structure of the statutory advisory committee in 12 months of its establishment to determine its effectiveness and the level of stakeholder satisfaction.

Recommendation 43.....page 90

The Standing Committee recommends that the NSW Environment Protection Authority consult with the National Registration Authority to ensure labels on pesticides incorporate notification requirements where they are not already provided and where appropriate.

Recommendation 44.....page 90

The Standing Committee is concerned to ensure that an additional obligation for notification with respect to labelling (see Recommendation 43) be required where pesticide application is planned near schools, bus routes and environmentally sensitive areas or where a reasonably foreseeable risk of chemical trespass may occur.

Recommendation 45..... page 91

The Standing Committee on State Development will:

- **monitor the implementation of amendments to the *Pesticides Act 1978* and the impacts of such amendments for a four year period (until 30 September 2003);**
- **accept and consider any representations made to the Committee concerning amendments to the *Pesticides Act 1978* during that period; and**
- **table any additional report in the Legislative Council from time to time.**

Recommendation 46..... page 91

The Standing Committee recommends that the NSW Environment Protection Authority provide to the Standing Committee on State Development annual reviews outlining the progress and impact of any amendments to the *Pesticides Act 1978*. The first review should commence from enactment of the amendments until 30 September 2000, with reviews conducted annually thereafter to and including 30 September 2003.

Recommendation 47..... page 91

The Standing Committee recommends that NSW Agriculture provide to the Standing Committee on State Development annual reviews that identify impediments and enhancements to productivity and competitiveness experienced by the New South Wales agricultural industry emanating from amendments to the *Pesticides Act 1978*. The first review should commence from enactment of the amendments until 30 September 2000, with reviews conducted annually thereafter to and including 30 September 2003.

Recommendation 48..... page 95

The Standing Committee recommends that NSW Agriculture support research with increased funding into alternative methods to control and eradicate pests, plant disease and weeds other than by pesticide application.

1 INTRODUCTION

1.1 This inquiry

On 12 November 1998, correspondence was received from the then Minister for the Environment, the Hon Pam Allan, MP, issuing the Standing Committee on State Development with terms of reference to inquire into and report upon the use and management of pesticides in New South Wales.

Following the March 1999 New South Wales State Election, the Legislative Council resolved to establish the Standing Committee on State Development for the 52nd Parliament along with the following two inquiries not previously completed during the 51st Parliament:¹

- Inquiry into the international competitiveness of agriculture in New South Wales; and
- Inquiry into the use and management of pesticides in New South Wales.

The Legislative Council further resolved that the Standing Committee might review any evidence, submissions or documents previously lodged with the Committee in the 51st Parliament.²

The Standing Committee advertised for public submissions to the inquiry in rural and metropolitan newspapers from the 28 November 1998. Following the establishment of the Standing Committee for the 52nd Parliament, the Committee wrote to all persons and organisations that had previously expressed interest in the inquiry. Those contacted were advised of the inquiry's re-establishment and the willingness of the Standing Committee to accept additional written submissions.

At time of publishing this report, the Standing Committee had received 191 submissions to the inquiry and heard evidence from 69 witnesses during five public hearings held in Sydney (twice), Dubbo, Gunnedah and Lismore. A total of 69 documents were tabled with the Standing Committee at the public hearings for the Committee's consideration. The Standing Committee conducted one site visit to a landholding in the Gunnedah area.

The Standing Committee received oral and written representations from a broad range of industry, government and interest groups expressing views from local,

¹ *Hansard*, Legislative Council, 52nd Parliament of New South Wales, p.293.

² *Hansard*, Legislative Council, 52nd Parliament of New South Wales, p.293.

state and national perspectives concerning the most appropriate approach for the use and management of pesticides in New South Wales.

1.1.1 NSW Environment Protection Authority discussion paper

The Standing Committee recognises the role that the NSW Environment Protection Authority has played in facilitating community discussion of amendments the Authority proposed for the *Pesticides Act 1978*.

In June 1997, the NSW Environment Protection Authority released a discussion paper entitled *Improving Pesticide Management in NSW*, outlining proposed amendments to the *Pesticides Act 1978*. At this point the NSW Environment Protection Authority advertised for submissions to be made in relation to the discussion paper. A closing date for submissions was set for 8 August 1997 although this was later extended to 31 August 1997. The NSW Environment Protection Authority conducted a total of six public consultation meetings in Dubbo, Griffith, Gunnedah, Lismore, Penrith and Yass during July 1997 to address issues outlined in the discussion paper. These meetings involved the attendance of over 320 participants.³

The NSW Environment Protection Authority received 127 submissions in response to its discussion paper. At the commencement of the Standing Committee's inquiry, the NSW Environment Protection Authority attempted to contact those who had made submissions to ascertain their willingness or otherwise for their submission to be forward to the Standing Committee for consideration. As a result of this process, 117 submissions were forwarded to the Standing Committee, and formed a significant part of the total 191 submissions received. The Authority's own submission takes account of the consultative process it conducted and subsequently refined a number of points it raised in the discussion paper.

1.1.2 Inquiry into the international competitiveness of agriculture in New South Wales

The terms of reference for this inquiry refer to the Standing Committee's concurrent inquiry into the international competitiveness of agriculture in New South Wales. The terms of reference for the agriculture inquiry are detailed in Appendix II of this report.

³ Submission No.37, NSW Environment Protection Authority, Part 3, p.1.

In preparing the terms of reference for the inquiry into the use and management of pesticides in New South Wales, the Minister for the Environment was aware of the relevance that the pesticides inquiry had to the issues already being considered by the Standing Committee as part of its agriculture inquiry. Particular issues that relate to both inquiries include incompatible land use planning, right to farm legislation, quality assurance measures for export and domestic markets and organic farming techniques.

1.1.3 Volume one of the report

The report addresses issues in three sections. The first (Chapter two) outlines the role of pesticides in the community and reflects upon the dependence of pesticides in agriculture to ensure economic and social sustainability. Chapter two also comments upon the social, economic and environmental implications of pesticide use in the community. Measures to manage pesticide use are considered in the second section (Chapter three), incorporating land use planning and a review of the legislative amendments proposed for the *Pesticides Act 1978*. The third section (Chapter four) examines alternatives to the use of pesticides.

Recommendations concerning the role of industry, interest groups and government at state and local level are outlined in Chapter two and Chapter three. Comment is made concerning the opportunities for research and development and best management techniques in Chapter three and Chapter four.

1.1.4 Volume two of the report

Contained in volume two of this report is the amended transcript version of evidence heard by the Standing Committee during the Committee's five public hearings for the inquiry.

2 THE USE OF PESTICIDES

2.1 The definition of a “pesticide”

The *Pesticides Act 1978 (NSW)* does not contain a freestanding definition of “pesticides”. Under section 2 of the *Pesticides Act 1978*, the word “pesticide” has,

...the same meaning as agricultural chemical product in the Agvet Code and includes a veterinary chemical product (within the meaning of that Code) that is represented as being suitable for, or is manufactured, supplied or used for, the external control of ectoparasites of animals;

The meaning of “pesticides” must therefore be obtained from the Agvet Code which refers to the *Agricultural and Veterinary Chemicals Code Act 1994 (Cth)*.¹

Clause 4 of Schedule 1 to the Act defines the meaning of an “agricultural chemical product” as follows:

- (2)...a substance or mixture of substances that is represented, imported, manufactured, supplied or used as a means of directly or indirectly:
- (a) destroying, stupefying, repelling, inhibiting the feeding of, or preventing infestation by or attacks of, any pest in relation to a plant, a place or a thing; or
 - (b) destroying a plant; or
 - (c) modifying the physiology of a plant or pest so as to alter its natural development, productivity, quality or reproductive capacity; or
 - (d) modifying an effect of another agricultural chemical product; or
 - (e) attracting a pest for the purpose of destroying it.

Clause 4(3) of Schedule 1 to the *Agricultural and Veterinary Chemicals Code Act 1994 (Cth)* also states that an agricultural chemical product includes a substance or mixture of substances declared by the regulations to be an agricultural chemical product. These substances are outlined in clause 7(1) of the *Agricultural and Veterinary Chemicals Code Regulations (Cth)* being,

¹ The provisions of the *Agricultural and Veterinary Chemicals Code Act 1994 (Cth)* are adopted into NSW legislation by the *Agricultural and Veterinary Chemicals (NSW) Act 1994*.

- (a) dairy cleansers for on-farm use;
- (b) any substance used in conjunction with an agricultural chemical product to identify areas treated with that product;
- (c) insect repellents for use on human beings.

Clause 4(4) of the *Agricultural and Veterinary Chemicals Code Act 1994 (Cth)* also outlines that an agricultural chemical product does not include a veterinary chemical product or substances declared by the regulations not to be an agricultural chemical product. The substances declared not to be agricultural chemical products are contained in Schedule 3 of the *Agricultural and Veterinary Chemicals Code Regulations (Cth)*.

In an effort to simplify discussion, agricultural chemical products will be referred to as pesticides for the purposes of this report.

Recommendation 1

The Standing Committee recommends that a freestanding definition of “pesticides” be included in the *Pesticides Act 1978*.

2.2 The extent of pesticide use in the community

There are approximately 3,800 pesticides registered by the National Registration Authority for use in New South Wales.² A broad range of application methods exist for these pesticides including on-ground baiting, mechanical ground spray, hand spray and aerial application.

There is a paucity of information available concerning the actual quantity of pesticides used in New South Wales or Australia, although information is collected on the annual value of pesticides sold. Where information exists it is collected and published at the national level, without details of individual state and territory breakdowns.

NSW Agriculture’s submission provided the most extensive information concerning the annual value of agricultural chemicals (including pesticides) sold in Australia, drawing from data collected by the National Association for Crop Protection and Animal Health (Avcare) and the National Registration Authority.

² Evidence of Dr Shepherd, NSW Environment Protection Authority, 21 June 1999, p.69.

The information is presented in tabular format below (Table 1) and reflects an increase in the value of agricultural chemicals purchased at the farm gate during the period 1991 to 1997. NSW Agriculture submitted the view that anecdotal evidence indicates the increase in value of agricultural chemicals sold is a consequence of newer, more expensive chemicals being purchased rather than any increase in the quantity of agricultural chemicals sold.

Table 1**Farm gate value of agricultural chemical sales in Australia**

Year	91(2)	92(2)	93(2)	94(2)	95(2)	96(3)	97(3)
\$AUS (96/97) Million	633	790	832	913	1,058	1,244	1,355

(1) Converted to 96/97 dollar values using Australian Bureau of Agricultural and Resource Economics

(ABARE) Index of Prices Paid

(2) National Association for Crop Protection and Animal Health (Avcare)

(3) National Registration Authority

Source: NSW Agriculture³

Details of the average percentage composition of Australian agricultural chemical sales, by type, over the five year period 1992 to 1996 have been formulated by sourcing dollar sales of agricultural chemicals from ABARE.⁴ Results are depicted in Figure 1. Herbicides (49%) comprised the largest, on average, proportion of total agricultural chemical sales in Australia during the period 1992–1996. Animal health products (26%) were, on average, the second largest component of total agricultural chemical sales during the same period, although only veterinary chemical product suitable for external control of ectoparasites from this category are administered under the *Pesticides Act 1978*.⁵

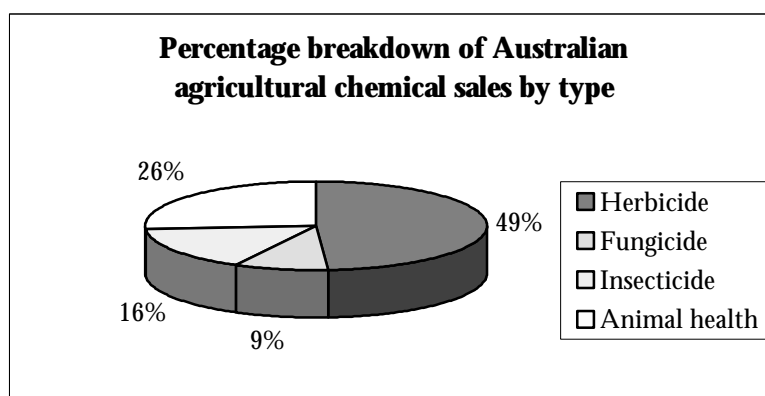
³ Submission No.37, No.103, NSW Agriculture, p.9.

⁴ *Australian Commodity Statistics 1998*, ABARE, Canberra, 1998, Table No.99, p.101.

⁵ See section 2.1 of this report.

Figure 1

Average percentage breakdown of Australian agricultural chemical sales, by type for the period 1992 – 1996.



Source: Australian Commodity Statistics 1998, ABARE.

2.2.1 Users of pesticides in the community

Pesticide users in New South Wales can be classified by a number of different criteria including:

- Toxicity of pesticide used or applied;
- Quantity of pesticide used or applied;
- Application technique (air or ground based); and
- Purpose of use.

For the purposes of this report, the final criteria has been adopted to separate pesticide users into the following classifications:

- “Professional” purpose – the use or application of pesticides in return for financial or non-financial benefit from another party. For example, an aerial pesticide applicator contracted by a farmer to apply pesticides.
- “Commercial” purpose – the use or application of pesticides in commercial business operations. For example, a farmer applying pesticides to crops that are grown for profit.
- “Domestic” purpose – the use or application of pesticides for non-financial benefit in and around private dwellings. For example, a farmer applying pesticides to gardens in a residential setting.

A “purpose” based classification of pesticide users was considered to provide the greatest clarity and functionality for policy and regulatory administration. At present, New South Wales does not have a consistent approach to classifying pesticide users. Aerial applicators are licensed on the basis of application technique. Urban pest and weed controllers are licensed in relation to their purpose of use. Other pesticide applicators are not classified.

The number of users of pesticides that may be classified as professional, commercial, or domestic is not easily quantifiable. The NSW Environment Protection Authority’s existing licensing classification of aerial applicators in New South Wales reveals that there are approximately 100 aerial operator organisations and 270 pesticide rated pilot licences currently issued with licences by the Authority under the *Pesticides Act 1978*.⁶ The Standing Committee heard evidence that, of the quantity of pesticide used for agricultural purposes in New South Wales, an estimated 70 to 75 per cent is applied through ground based techniques by contractors or individual farmers.⁷ Aerial operators undertake the remaining proportion of pesticide application.

There is no specific data available to identify the proportion of total pesticides used in the pursuit of agriculture or urban pest management, although it may be assumed that the former involves a more significant volume of usage.

2.3 Beneficial implications from the use of pesticides

Evidence received by the Standing Committee identified four types of benefits realisable through the use of pesticides. These are outlined below:

1. Social benefits can be achieved by the use of pesticides to control and eradicate pests such as termites, rats and mice in the domestic and commercial environment. Eradication of pests with capacity to spread diseases fulfils important public health objectives for the community.
2. Improvement in the health and welfare of animals can be attained through the application of agricultural and veterinary chemicals specified under the *Pesticides Act 1978*. Examples of pesticides within this category include those external applications that control lice, ticks and mites in livestock.
3. Environmental benefits can be accomplished through the use of pesticides to control or eradicate the spread of noxious plant or animal species. The use

⁶ NSW Environment Protection Authority correspondence, 20 August 1999.

⁷ Evidence of Mr Weatherstone, Aerial Agricultural Association of Australia, 21 June 1999, p.66.

of pesticides to control weeds also enables farmers to conduct minimum tillage or zero tillage farming operations. Minimum and zero tillage operations limit soil compaction, topsoil disturbance and soil erosion providing significant soil conservation benefits.

4. Economic benefits can be achieved by industry and, in particular, the agricultural industry via the use of pesticides. Investigations conducted by the Standing Committee revealed that the agricultural industry perceived industry reliance on pesticides was largely a consequence of the producers' responses to the following industry drivers:
 - The need for the farmer to provide a cost-effective product to compete in domestic and international markets;
 - Requirements by supermarkets, distributors and processors for farmers to supply goods at a particular volume, quality and reliability;
 - Consumer expectations and demand for produce of a particular quality and appearance.

In its submission to the Standing Committee, NSW Agriculture raised the following issues as part of the rationale for the use of pesticides by the agricultural industry:

There is no doubt that pesticides contribute to higher yields in agriculture. In the absence of pesticides more land would need to be converted to agriculture to achieve the same output..

Pesticides are important in producing quality products which meet market requirements for colour, appearance, size and taste. The type and quality of products produced by farmers is increasingly determined by the market place which is influenced by the preferences and tastes of consumers...

...the use of herbicides is important in the control of weeds which degrade the environment and disrupt native plant communities. Herbicides are also an important element in minimum till and no till soil conservation practices which protect fragile soils and conserve soil moisture.⁸

There is a scarcity of research quantifying the benefits of pesticide use in agriculture or other sectors of the community. The NSW Farmers' Association, in its submission to the Standing Committee, referred to research that estimates annual losses of US\$300 billion in global crop production as a consequence of

⁸ Submission No.44, NSW Agriculture, p.8.

insects, weeds and diseases.⁹ NSW Agriculture's submission to the Standing Committee identified findings by the United Nations Food and Agriculture Organisation (FAO) estimating the withdrawal of chemicals presently used in agriculture world wide would reduce global farm output by 30%.¹⁰ The submission extrapolates that the impact of removing pesticides from the Australian agricultural industry would amount to a gross value loss in output of approximately \$5 billion.¹¹

Mr Ian Campbell, a representative of the Banana Industry Committee, in evidence before the Standing Committee, outlined the challenge faced by many agricultural producers in reducing the use of pesticides within the context of satisfying market demand and operating a commercial business.

We certainly endorse the responsible use of pesticides. In my submission I mentioned that we are spending a lot of research and development dollars to find varieties that reduce reliance on chemicals. But also, of course, we have to produce a product that is acceptable to consumers. We would all like to be totally organic, but the reality is that you cannot grow bananas in commercial quantities totally organically.¹²

Mr Rod Fayle, President of the Australian Macadamia Society, in evidence to the Standing Committee, similarly reflected upon the commercial consequences emanating from the non-application of pesticides in macadamia plantations.

Those who have chosen not to use pesticides – and there are certainly some in the industry, and we do have a number of research projects trying to develop this further – find that they have to reject something in the order of between 40 and 60 per cent of their production as being unsatisfactory and having to be used for perhaps production of oil or something like that. That is quite a big penalty for them. So, while you can achieve quite a lot in the reduction of the use of pesticides, we have in practice [found] that it is very difficult to achieve a complete production by organic means.¹³

Mr Peter Mullins of the Rural Lands Protection Board State Council, in evidence to the Standing Committee, identified not only the combined

⁹ Submission No.17, NSW Farmers' Association, p.3.

¹⁰ Submission No.44, NSW Agriculture, p.9.

¹¹ Based on an ABARE estimate of gross value output for the Australian agricultural industry of \$16.7 billion in 1996/97. Submission No.44, NSW Agriculture, p.9.

¹² Evidence of Mr Campbell, Banana Industry Committee, 4 August 1999, p.329

¹³ Evidence of Mr Fayle, Australian Macadamia Society, 4 August 1999, p.308.

environmental and economic benefits from the use of the pesticide Frenock to control serrated tussock, but also the need for the expeditious introduction of an effective replacement of this chemical.

At the moment we estimate that anywhere between 800,000 and one million hectares of New South Wales is rendered useless by infestation of serrated tussock. There is one, and only one, pesticide that can be used selectively against serrated tussock, and that is Frenock. It was manufactured in Japan. A series of circumstances at both the Japanese end and the Australian end late last year resulted in commercial decisions being taken to cease to produce and to cease to import the product. We are basically left defenceless against that particular weed. From where we sit, there simply has been inadequate attention and urgency paid to, first, the withdrawal and, second, a replacement.¹⁴

The Standing Committee is also aware of the strong economic and social interrelationships many rural communities have with agriculture through the industry's provision of income and employment. Pesticide sales and the maintenance of agricultural output through pesticide use create beneficial economic and social outcomes in rural communities.

2.4 Risks associated with pesticide use

Pesticides are essentially poisonous chemicals. The use of pesticides involves a risk of injury or harm that may be social, economic or environmental in nature. Pesticides have the potential to injure or harm persons, property or the environment of those using the pesticide and those in surrounding areas unconnected with its use. This section outlines the types of adverse implications that can occur through the use and misuse of pesticides.

2.4.1 Social risks

2.4.1.1 Instances of exposure to pesticides

The Standing Committee received representations from a significant number of concerned citizens and interest groups regarding the social and public health consequences from exposure to pesticides.

¹⁴ Evidence of Mr Mullins, Rural Lands Protection Board State Council, 5 August 1999, p.369.

Ms Jo Immig, Chemicals Campaigner with the Total Environment Centre, relayed to the Standing Committee the type of frequent concerns raised by citizens with the organisation:

The Total Environment Centre frequently receives calls from members of the community in both the rural and urban areas. In the urban environment they go along the lines of, "I am at home with my baby. I have washing on the line and a vegetable patch out the back. The neighbours are spraying their house with chlorpyrifos. Is this dangerous? I have a bit of a headache, the chemical smell is filling my house. What should I do?" We also had a call from a child care centre in a state of panic. A bowling green directly next door was being treated heavily with pesticides while children were in the child care centre.¹⁵

The Standing Committee heard evidence from Mr Don and Mrs Ann Want, private citizens, in relation to their experience with two of their children who suffer from a condition known as Multiple Chemical Sensitivity. The Committee heard of adverse health impacts of one of the children from exposure to chemicals and, in particular, pesticides.

Whenever he is removed from chemical exposure his health has stabilised, and whenever he is subjected to chemical exposure we get the same symptoms, of headaches, rectal bleeding, nausea and depression. In a chemically controlled environment, he is fine...

We have withdrawn him from school, he is now doing distance education for medical reasons, and he is a different child health-wise because he is in a controlled environment.¹⁶

The Standing Committee considered a number of instances of exposure to pesticides that had been lodged by citizens with the NSW Environment Protection Authority as instances where a breach of the *Pesticides Act 1978* may have occurred. The Committee heard evidence from Mr Bob Meadley, Director, Environmental Services, Narromine Shire Council that he attended to a report of a school bus being exposed to pesticide from an aerial applicator in the Narromine Shire during February 1999.¹⁷ The Committee understands that the NSW Environment Protection Authority found no trace of pesticides in the samples taken from the bus.¹⁸ In a statement released by the NSW Environment

¹⁵ Evidence of Ms Immig, Total Environment Centre, 21 June 1999, pp.5.

¹⁶ Evidence of Mrs Want, private citizen, 4 August 1999, p.317.

¹⁷ Evidence of Mr Meadley, Narromine Shire Council, 26 July 1999, pp.154.

¹⁸ NSW Environment Protection Authority media release of 30 July 1999, "Pesticide samples negative".

Protection Authority on 30 July 1999 in respect to the reported incident, the Authority referred to the possible impacts on human health of odour from pesticides:

... 5 of 11 children noticed a smell, two had headaches and one felt 'a bit queasy'

Health experts have advised that these symptoms are probably from the smell of the very odorous pesticide Karate (active ingredient methomyl) and Nurin (lambda-cyhalothrin), and that no toxic effects to the children on the bus are likely from this application.

While the current pesticides law does not provide grounds for legal action, the EPA recognises that pesticide odour is an increasing concern to farmers and residents..

Odour may need to be considered during the NRA's pesticide registration process, along with the current assessment of the active ingredients, additives and vapours.¹⁹

Ms Christine Robertson, Director, New England Public Health Unit tabled two documents with the Standing Committee pertaining to tests on water quality in rainwater tanks in the Gunnedah area conducted by the NSW Environment Protection Authority and the New England Public Health Unit. A pilot test was prepared in 1996, followed by a more intensive survey during the 1997 summer cropping season. Water samples from selected rainwater tanks were tested against maximum residue limits (MRLs) as set out in the National Health and Medical Research Council's 1987 "Drinking Water Quality in Australia" guidelines.

Findings from the surveys were as follows:

- Pesticides were detected in 36 of the 54 (64%) rainwater tanks sampled in the 1997 program;
- The highest endosulfan concentrations were recorded as 0.27 ppb in the 1996 program and 0.12 ppb in the 1997 program, these figures were well below the MRL level of 40 ppb; and
- Endosulfan residues were detected in raintanks up to 3600 metres from the nearest possible source.²⁰

¹⁹ NSW Environment Protection Authority media release of 30 July 1999, "Pesticide samples negative".

The study recommended the introduction of annual procedures to clean sediment from rainwater tanks and installation of first flush diverters to assist in reducing the amount of pesticides in rainwater tanks. Ms Robertson referred to this program initiative in evidence before the Standing Committee:

We found in that particular preliminary survey some fairly nasty sorts of chemicals, like dieldrin, which supposedly had not been used for a long time. We worked out that there were some major problems for people with fresh water tanks and not using first flush diverters. The dieldrin, DDT and chlordane were in the sludge. So on those particular issues we ran a huge publicity campaign about people monitoring and looking after their tanks.²¹

In relation to the findings of the 1997 survey, Ms Robertson expressed concern as to the existence of endosulfan in rainwater tanks and acknowledged that pesticide drift had occurred.

This particular study again did not give any evidence that any levels of endosulfans in the tanks were at all dangerous or above the accepted national guidelines, but what we did find – which we found concerning – is that from 30 metres to 3,700 metres away from the closest possible agricultural spray there were trace elements of endosulfan. I reiterate that those were “trace elements”. There was no proven human risk to people, but there definitely had been drift across those areas.²²

2.4.1.2 The significance of pesticide concentrations to human health

In the Lismore public hearing, Professor John Beard, Director, Northern Rivers Institute of Health and Research, Northern Rivers Area Health Service, discussed with the Standing Committee the lack of understanding concerning the impacts of pesticides on humans:

I would have to say I have been very surprised how little we know about the health impact of pesticides. And the more I read, the less I think we know, especially from a human health perspective. There are some quite extensive studies looking at the impact of

²⁰ Tabled document No.48, NSW Environment Protection Authority and New England Public Health Unit.

²¹ Evidence of Ms Robertson, New England Public Health Unit, 27 July 1999, p.223.

²² Evidence of Ms Robertson, New England Public Health Unit, 27 July 1999, p.234.

very high doses of pesticides in rats, but the implication of those in humans is quite debatable. The other evidence is very poor.²³

Professor Beard reiterated his view as to the uncertainty of risk to health from exposure to pesticides, even in instances where pesticide residues were found by biological tests to be apparent in the human body:

The problem with testing blood or other biological monitoring for pesticides is to know how to interpret the results. For example, if we took blood from all the people in this room, we would probably find DDT in over 50 per cent of us at detectable levels. But what does that mean in terms of health? It goes back to what I said at the very beginning: unfortunately, the evidence that we have about whether pesticides cause health problems or not is so poor that we cannot say.²⁴

Dr Lynn Fragar, Director, Australian Centre for Agricultural Health and Safety, at the Standing Committee's Gunnedah public hearing discussed the difficulty in sourcing pesticide related information through the complex nature of inter-agency government responsibility at Commonwealth, state and local level and the interrelated involvement of various industry groups. An excerpt from Dr Fragar's evidence is outlined below including her recommendation on how to address this issue:

I would suggest that within New South Wales at least we should be taking action to establish a central coordinating and controlling body, in the interests of improving communication between agencies. At the moment, such does not exist. We set out in the Australian Centre for Agricultural Health and Safety with a view to developing guidance material for farmers on this issue, not to walk into a program of research and development.

The previous government had a ministerial advisory group on pesticides, not relating to health particularly but that provided at least some arrangement whereby government departments at State level could communicate with each other about their programs and issues; and where, if you identified gaps, then a discussion could be held about what would be a good recommendation to make about filling those information gaps. At the moment we do not have such an arrangement at State level.

²³ Evidence of Prof. Beard, Northern Rivers Area Health Service, 4 August 1999, p.335.

²⁴ Evidence of Prof. Beard, Northern Rivers Area Health Service, 4 August 1999, p.339.

I believe that, with the development of that national strategy there are the beginnings of that sort of opportunity for liaison and communication at that level, and some sort of an arrangement whereby government agencies and other agencies with an interest and responsibility in this area can come together at the New South Wales level, and that that would greatly enhance the capacity of agencies to do their work better, in the full knowledge of what each other is doing; and, when problems occur, to be able to find out who is dealing with; and for clarification of the roles that various agencies have but that are not well understood or known outside the basic “club” of people who are in the know. That would be my main recommendation to come out of my experience in this area.²⁵

Recommendation 2

The Standing Committee recommends that the NSW Government establish Regional Inter-Agency Committees on Pesticides. The Regional Inter-Agency Committees on Pesticides would have a purview to:

- **Identify regionally specific impacts of pesticides on public health, environment and property;**
- **Transfer information and coordinate resources in relation to pesticides and the impact of pesticides;**
- **Conduct research and advisory programs;**
- **Provide advice to the proposed Statutory Advisory Committee where the Regional Inter-Agency Committees on Pesticides considers it appropriate (See discussion on a Statutory Advisory Committee at Recommendation 42); and**
- **Source information from other government agencies.**

Relevant committee representatives to the inter-agency committees on pesticides would include NSW Environment Protection Authority, Department of Urban Affairs and Planning, Department of Land and Water Conservation, NSW Health’s Area Health Services, and Local Council.

²⁵ Evidence of Dr Fragar, Director, Australian Centre for Agricultural Health and Safety, 27 July 1999, p. 231.

2.4.1.3 Testing and research into the health impacts of pesticide use

Ms Christine Robertson tabled with the Standing Committee two notable research reports relating to public health and pesticide use in the New England Area Health Service region. The first, conducted by the NSW Department of Health, reported upon the asthma epidemic in the Tamworth area during the period November 1-5 1990.²⁶ The report outlined possible triggers for asthma including an "...ever lengthening list of industrial chemicals, plant and animal proteins..."²⁷ Research found that similar asthma epidemic had occurred around November in 1986 and 1988 in association with climatic changes such as thunderstorms or a cold southerly change. The study, while not identifying the cause of the asthma epidemic, implicated the existence of aeroallergens, occurring as a result of the breakdown of pollen grains into small respirable size fragments under certain weather conditions as a possible cause. The report did not identify that pesticides had been a contributing factor.

The second report, entitled *Preliminary report of the Health Impacts of Pesticides on affected persons in the Gunnedah Community*, was prepared by the Australian Agricultural Health Unit²⁸ on behalf of the North West District Health Service and Northern Districts Public Health Unit. The study examined the health of 61 persons in the Gunnedah region that had reported illness as a consequence of aerial spraying of pesticides. The report documented the following findings:

- 22% of 58 participants had one or more symptoms that were probably related to chemical exposure;
- 50% of participants had one or more symptoms that had an uncertain relationship with chemical exposure;
- 50% of participants had one or more symptoms that were unrelated to chemical exposure;
- Most participants experienced symptoms during the agriculture summer crop spraying period of October to March; and
- Participants in the survey reported a poorer health status than the rest of the Australian population although this was not statistically significant.

The report recommended a broader and more formal community wide study into the health impacts of agricultural chemicals to improve the validity and accuracy of results.²⁹

²⁶ Tabled document No.49, New England Public Health Unit.

²⁷ Tabled document No.49, New England Public Health Unit, p.5

²⁸ Tabled document No.46, Australian Agricultural Health Unit, tabled by the New England Public Health Unit.

²⁹ Tabled document No.46, Australian Agricultural Health Unit, tabled by the New England Public Health Unit p.ii.

The Standing Committee questioned Professor Beard concerning the feasibility of conducting comparative trials to assess the impact on human health where pesticides had been recently introduced into the environment for a before and after comparison. In response Professor Beard raised the following concerns:

There are a number of problems. The first one would be ethical, in that you would be using humans essentially for research. I mean, I think if we believe there is a problem with chemicals, we should not be using them, rather than conducting research on humans.

The second problem is. What do we measure? Over a short period of time, the symptoms can be so subjective. If people are aware that a chemical is being introduced into their environment, they may believe that they have got more of those symptoms, and so it would be difficult to measure. If you could identify some hard outcomes. For example, for asthma, you might be able to do peak flows; so that you can measure people's lung function, rather than people reporting that they had more test problems.

There might be some use in doing that. But properly conducted epidemiological research in places where chemicals are already in use could also be of benefit, without some of the ethical problems. One of the problems with doing that is the lack of information. You have already highlighted the fact that for some health conditions we do not have trend data, or we do not have ongoing data as to whether there are more or less of them. We do have that for some things, but some of the more subtle health effects are not available.³⁰

Support for the NSW Environment Protection Authority's position to expand licensing and subsequent record keeping requirements to all professional and commercial pesticide users received indirect support from Professor Beard, during his evidence to the Standing Committee concerning possible approaches to monitoring the impact of pesticide exposure.

Coming back to your question about occupational health, it is one thing to want to do a study into workers, but it is another thing to do it if you do not have any exposure history. For example, the speakers before me referred to pesticides and said that if there was a register of people who used pesticides and what chemicals they

³⁰ Evidence of Prof. Beard, Northern Rivers Area Health Service, 4 August 1999, p.342.

used, it would then be relatively easy to do long-term follow-ups of their health, and similarly with people working in specific occupational trades that might use pesticides.

I think those, probably in the short term, give more likelihood of finding something, because many of the outcomes that we are looking at might have a lag period of 10 or 20 years between exposure and outcome.³¹

Dr Lynn Fragar, in evidence before the Standing Committee similarly supported research into the health impacts of users and handlers of pesticides via the establishment of an adverse health effects register.³²

Recommendation 3

The Standing Committee recommends that the NSW Health expand its research into the impacts of pesticide exposure on human health.

2.4.2 Economic risks

Adverse economic implications can occur where non-target animal and plant species are exposed to pesticides. Organic producers are particularly susceptible to occurrences of non-target pesticide. Pesticide drift onto organic crops threatens the economic marketing advantages of organic farmers as producers of residue free commodities. The suitability of a farmer to hold an organic farming accreditation can also be brought into question from occurrences of non-target pesticide exposure.

Economic losses have recently been experienced by cattle producers as a consequence of endosulfan residues in livestock exceeding domestic and export maximum residue levels. A trend is occurring in international markets for commodities to contain low or zero levels of pesticide residues. A number of Australia's major trading partners such as South Korea and Japan are adopting this approach. At present, Australian beef exports have a maximum residue level requirement for endosulfan of 0.1 mg/kg. This is half the domestic maximum residue level requirement.

Economic implications also extend to future sales of commodities, particularly in the international market. Instances of pesticide residue in meat exceeding the

³¹ Evidence of Prof. Beard, Northern Rivers Area Health Service, 4 August 1999, pp.342-343.

³² Evidence of Dr Fragar, Director, Australian Centre for Agricultural Health and Safety, 27 July 1999, p.234.

maximum residue limit, or where supply is constrained from the occurrence of pesticide residues, encourage the international market to begin to question the standards of quality and reliability of Australian agricultural produce.

The Australian Beef Association, in its submission to the Standing Committee, referred to the economic implications to beef cattle producers from the unintended exposure of livestock to pesticides.

Although there has been extensive debate and disagreement on the toxicity and harmful effects of agricultural chemicals, the fact still remains that beef producers whose livelihood is dependent solely on cattle and who in no way contribute to spray drift of chemicals are being impacted upon in an injurious and economically harmful manner.

Over past years, the cost to industry and individuals has amounted to millions of dollars financially and incalculable damage to Australia's reputation as a domestic supplier and exporter of first class product.³³

As part of the Endosulfan residue survey, approximately 1,500 cattle producers from cotton growing districts were placed on the "E" list as having livestock at risk of endosulfan contamination. The program was undertaken by the then Bureau of Resource Sciences Australia, in conjunction with NSW Agriculture, Queensland Department of Primary Industries, Australian Lot Feeders' Association, Cattle Council of Australia and Cotton Australia.³⁴ Cattle producers were then placed on the list according to the following criteria:

- Cattle grazed on a property which is currently growing a cotton crop to which endosulfan has been or may be applied; or
- Cattle grazed on a property immediately adjoining a property currently growing a cotton crop to which endosulfan has been or may be applied (includes properties separated by roads or creeks); or
- In the opinion of the State Department, there is potential risk of turning off endosulfan contaminated cattle from the property.³⁵

In evidence before the Standing Committee, Mr Montgomery explained how the 'E' listing of his livestock had altered his farm management behaviour.

³³ Submission No.34, Australian Beef Association, p.2.

³⁴ Tabled document No.23, Mr Montgomery, pp.1-2.

³⁵ Tabled document No.25, Mr Montgomery, p.1.

...we now have to modify our whole management process because of what our neighbours do. I am finding that more and more distasteful.

I have had all the country along my boundary quarantined for the last six months, simply because they are growing cotton there. I cannot use that land without some risk to my own cattle or cattle that I may have there on agistment. That is a real worry to me. I do not know whether you people who are in business would like it if the statutory authorities came to you and said you must cease trading or quarantine that much of your business for six months of a financial year. It makes trading pretty awkward.³⁶

The Rural Lands Protection Boards' Association of NSW State Council also made reference to the impact on the livestock industry in domestic and export markets from endosulfan and other pesticide residues in cattle. Mr Peter Mullins, Chief Executive Officer identified livestock producers, meatworks and meatworks employment as those predominantly affected.

There are both actual and hidden impacts all of which disadvantage livestock producers. The most telling is the damage just the risk of residue contamination does to the credibility of the livestock industries. Its impact can be seen in lower prices at sale and lower volumes being sought for purchase.

Residues have a number of impact[s] on exports. The obvious one is the rejection of product in overseas markets and the cancellation of forward orders until the residue threat is removed.. In addition there is an overflow effect on all other meat products being exported to that overseas market. In other words, if one Australian supplier is involved, it is likely that all other Australian suppliers to that same market suffer.

The second impact is on employment in meat works..

There is also a practical impact on meatworks...Only after the test results are clear will animals be processed. There are considerable costs in this as well as delays in works' throughput and filling export orders.³⁷

³⁶ Evidence of Mr Montgomery, 26 July 1999, pp. 136-137.

³⁷ Correspondence of Mr Mullins, Rural Lands Protection Boards' Association of NSW State Council, 3 September 1999, pp.2-3.

In recognition of the economic costs experienced by the cattle industry, the Australian Cotton Industry Council in a letter to cattle producers advised of the cotton industry's willingness to consider claims for compensation for endosulfan contamination.³⁸ The letter detailed the following circumstances upon which compensation may be provided to owners or purchasers of cattle:

- For condemned beasts;
- For transportation costs incurred to and from the abattoir where the consignment is forced to be returned to the property of origin due to endosulfan contamination;
- Verified losses at the saleyard where cattle have residues between ½ and full MRL. Compensation is payable at the rate up to 12 cents / kilogram (live weight) in this instance; and
- Where buyers of contaminated cattle can verify price discrimination in the sale of produce with endosulfan residue.

Prior to the beef industry's concerns regarding endosulfan residues in cattle, the industry faced similar residue contamination matters with Chlorfluazuron (CFZ or Helix®). Andrew Montgomery, cattle producer, tabled two letters with the Standing Committee two letters from NSW Agriculture in 1994 and 1995, outlining the monitoring program for Chlorfluazuron residue in cattle.³⁹ The criteria upon which cattle farms' "tail tag"⁴⁰ would be classified with a risk status was similar to that for farms placed on the "E" list for endosulfan.

In advising of the process for testing cattle for Chlorfluazuron, NSW Agriculture outlined the process for testing cattle.

While your tag is on the list, every lot of your cattle which is slaughtered will be tested for CFZ residues at the abattoir (unless already tested on-farm) and held pending satisfactory test results. The cost of this testing will be passed back to you, the cattle owner.⁴¹

NSW Agriculture advised Mr Montgomery of the reasons why Chlorfluazuron testing costs were to be borne by the producer.

Peak industry bodies agreed that the cost of managing this problem would be borne by processors and producers, and it is standard industry practice to pass lot testing charges back to

³⁸ Tabled document No.26, Mr Montgomery.

³⁹ Tabled document No.20, Mr Montgomery, letter dated 20 December 1994.

⁴⁰ Producer identification code.

⁴¹ Tabled document No.20, Mr Montgomery, letter dated 6 March 1995.

producers by deductions from their account sales. It has also been standard practice for a number of years that all cattle sales are at vendor risk where such stock are found to have chemical residues above the Australian maximum residue limit (MRL).⁴²

Another type of economic loss may be experienced by users of pesticides in instances where the pesticide is not effectively applied, or where pests have developed a resistance to the active ingredient.

2.4.3 Adverse environmental implications

The use of pesticides has the capacity to impact adversely upon the health of flora and fauna and consequently affect biodiversity within a region. Research into the impact of pesticides on the biodiversity of an area is not widely available. The Standing Committee received representations from a number of interest groups and citizens who tabled with the Committee results of chemical analysis tests identifying active ingredients of pesticides in the environment. Ms Vicki Doubleday, Secretary of the Gunnedah Environment Group tabled results prepared by NSW Health of leaf samples from a Gunnedah property identifying the existence of the type b -Endosulfan.⁴³ Mr Andrew Montgomery advised the Standing Committee of an incident where pesticides from another property contaminated water in his on-farm storage, leading to the death of a number of fish including Murray cod, bony bream and yellow belly.⁴⁴ Chemical analysis of the water storage conducted by the NSW Environment Protection Authority found residues of endosulfan I, endosulfan II and endosulfan sulfate present in fish and water samples. The highest pesticide residues in water were recorded as 1.2 ug/L of endosulfan sulfate. Profenofos and Chlorpyrifos were recorded as being present in water samples at the level at 0.5 ug/L.⁴⁵

The Department of Land and Water Conservation conducts an extensive and consistent research program to identify the existence of pesticide residues in water courses in central and north western regions of New South Wales. The program has identified pesticides in water courses since 1991 from joint 50:50 funding by the Department of Land and Water Conservation and the water users of the Macintyre, Gwydir, Namoi and Macquarie valleys.⁴⁶ Total annual funding for the scheme is estimated at around \$600,000.⁴⁷

⁴² Tabled document No.20, Mr Montgomery, letter dated 6 March 1995.

⁴³ Tabled document No.43, Gunnedah Environment Group.

⁴⁴ Evidence of Mr Montgomery, 26 July 1999, p.143.

⁴⁵ Tabled document No.16, Mr Montgomery.

⁴⁶ *Central & North West Regions Water Quality Program*, Department of Land and Water Conservation, December 1998.

⁴⁷ Correspondence Department of Land and Water Conservation, 23 August 1999.

In 1997/1998 the Department of Land and Water Conservation conducted water sampling for pesticides at 31 water course sites spread across the valley catchments of the Border Rivers, Gwydir River, Namoi River, Macquarie River and Barwon-Darling river. During peak cotton spraying periods of December and January, water sampling was conducted once per week.⁴⁸ Results of the water analysis revealed that:

In terms of compliance with the ANZECC (1992) Australian Water Quality Guidelines, 65% of samples taken over the summer months exceeded the guideline value for endosulfan for the protection of aquatic ecosystems. This value has not varied significantly over the last three seasons.⁴⁹

The herbicide Diuron was found to be at levels exceeding Australia and New Zealand Environment and Conservation Council guidelines for irrigation water in 15% of the samples tested during the peak spraying season.

The Department of Land and Water Conservation water sampling tested for 15 insecticides and 11 herbicides and found traces of insecticides such as Profenos, Chlorpyrifos and Dimethoate and herbicides including Atrazine, Desethyl Atrazine, Fluometuron, Metolachlor, Prometryn.

With the exception of one chemical, all water samples contained pesticide residues below the National Health and Medical Research Council's guidelines for drinking water. Of the 26 chemicals tested by the Department of Land and Water Conservation only 3 have upper limit guidelines for the protection of aquatic ecosystems as prepared by the Australia and New Zealand Environment and Conservation Council.⁵⁰ Consequently there is an extensive information void as to the present impact of a number of chemicals on the aquatic ecosystem.

2.5 Conclusion

The Standing Committee recognises the benefits from sourcing information from a pesticides register maintained by all professional and commercial pesticide applicators. The register would include information concerning the type of pesticide used and the location and time of use. Pesticide registers are

⁴⁸ *Central & North West Regions Water Quality Program*, Department of Land and Water Conservation, December 1998, pp.2-3.

⁴⁹ *Central & North West Regions Water Quality Program*, Department of Land and Water Conservation, December 1998, executive summary.

⁵⁰ Australian Water Quality Guidelines for Fresh and Marine Waters, Australia and New Zealand Environment and Conservation Council, Canberra, November 1992.

already required by NSW Environment Protection Authority licence conditions for aerial pesticide applicators. Similar register conditions apply to urban pest and weed controllers under the *Hazardous Chemicals Regulation 1996*. This information would be beneficial to NSW Government agencies in identifying trends in injury or harm to persons, property and the environment that may or may not be attributable to pesticides. Trends may be identified over time, be specific to a region or a pesticide type. A significant proportion of pesticides are applied in New South Wales through ground based application techniques. At present these pesticide applicators are not licensed by the NSW Environment Protection Authority and are not required to maintain a pesticide use register.

The Standing Committee supports additional research to ascertain ecologically sustainable levels of pesticides for various biota. The Standing Committee understands that the Australia and New Zealand Environment and Conservation Council has, in draft format, published revised guidelines for fresh and marine waters in 1998 and is working towards this objective.

With around 3,800 pesticides registered for use in New South Wales, the task of determining the ecological sustainable levels of pesticide exposure for biota is not realistically achievable. The validity of this view is strengthened when consideration is given to the permutations of pesticide exposure that are possible to biota from combining various pesticide types and the instances of pesticide application over time. Better management of pesticides to mitigate or avoid adverse impacts on biota may be the most cost effective avenue for government and the community.

3 MANAGEMENT OF PESTICIDES – PLANNING AND EDUCATION INSTRUMENTS

Chapter three and chapter four of this report outline the various instruments available to the government and the community in managing pesticide use. These two chapters combined comprise the majority of the report, and in so doing reflect upon the number, nature and complexity of instruments implemented to manage pesticides in New South Wales.

Chapter three encompasses considerations of the following pesticide management instruments:

- regulatory and policy matters relating to planning;
- industry self regulation practices; and
- education and training.

A significant number of submissions expressed the view that successful management of pesticides required the use and integration of a number of instruments rather than reliance any one particular instrument.

3.1 Planning as a management instrument

The Standing Committee received a considerable number of submissions and public hearing evidence advocating the use of appropriate planning instruments in the management of pesticides. Implementation of an effective land use planning strategy at the local level provides an important means of avoiding land use conflict. During investigations for this report and its concurrent inquiry into the international competitiveness of agriculture in New South Wales, the Standing Committee familiarised itself with the benefits that planning provides. Used effectively, planning provides a mechanism to minimise the loss of prime agricultural land and to enable the grouping of similar land uses that reduces the circumstances for incompatible land use between rural and urban land holders. Concerns arising from residential land holders regarding incompatible land use with rural land holders relate to noise, odour, pesticide use, and operation of machinery for 24 hour periods. Conversely rural land holders take issue with any move to restrict farming practices and operation of the business unit.

One of the major challenges facing local government is managing the change in land use over time. Submissions received by the Standing Committee give reference to instances of conflict that may arise between similar agricultural land use types. Such instances arise from a rural land holder who chooses to subdivide land, or where a mixed farmer, bounding a cattle property decides to intensify agricultural practices and incorporate greater use of pesticides.

As the agency responsible for monitoring and investigating instances of pesticide drift, or non target pesticide exposure in the community, the New South Wales Environment Protection Authority made the following comments in relation to the cause of many pesticide related conflicts:

In many cases pesticide conflict stems directly from the proximity of incompatible land uses, for example the location of a property which applies pesticides on a regular basis next to one where there is sensitivity about pesticide use..In many instances, where incompatible land uses are co-located, issues associated with the use and management of pesticides are unlikely to be resolved by controls over the use of pesticides, which are only able to treat the symptoms.¹

3.1.1 Implementation of planning instruments

The Standing Committee took note of the positions taken by various state government agencies and local councils with respect to establishing the conditions of land use for land zoned agricultural through environmental planning instruments as defined under the *Environmental Planning and Assessment Act 1979*.

3.1.1.1 Dubbo City Council local environment plan

The Standing Committee examined the local environment plan approach taken by the Dubbo City Council as a consequence of receiving submissions, and developing an understanding of community opposition to a development application lodged with Council for alteration of use of land zoned agricultural. Alteration of agricultural activities in this instance related to the replacement of previously irrigated cereal crops including lucerne, soya bean, wheat and sorghum with irrigated Ingard® cotton.²

To investigate the issue further the Standing Committee conducted a public hearing at Dubbo canvassing views from local government, industry and interest group perspectives. Mr Greg Geoghegan, Manager, Strategic Planning, Dubbo City Council, outlined to the Standing Committee the process by which the Council prepared its rural local environment plan in 1997.

The history of this goes back about four years. The process of preparation of what is now the 1997 rural LEP began in 1995 with a series of three rounds of community meetings throughout the rural area. There were about 25 meetings in all. We went out with a quite open mind as to where we were going to go ultimately, initially with a strategy and then the LEP which would give expression to that.

¹ Submission No.37, NSW Environment Protection Authority, p.1.

² Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.101.

The issues raised by the community ultimately drove many of the provisions of the LEP. Perhaps the most unique of those is the ultimate status of having defined cotton farming as a specific use and assigning it a consent status. That came specifically from the repeated concerns expressed by the rural attendees at those meetings – for the most part, people who lived on the land or who worked the land. Their concerns derived principally from pesticide use and practices related to their use, and their concerns about conflict – conflict with their own agricultural enterprises; and, secondly, but I guess more by reputation than by any specific scientific evidence that was available to them or to us, the allied concerns relating to health and so forth.

So, as a result of those concerns, we drafted an LEP which identified cotton in the manner you see. That is ultimately what was exhibited. At the time of the exhibition of that LEP we received no expressions of concern as a consequence of that exhibition relating to that proposed status of cotton farming.³

Mr Doug Herd, Director, Environmental Services, Dubbo City Council in evidence to the Standing Committee highlighted the potential problem the Council faced in:

- foreseeing the diversity of activities that may be conducted as an “existing use” on land zoned rural;
- preparing local environment plans for such diversity; and
- achieving a resolution by the Council.

...Dubbo City Council ultimately recognised that cotton farming was not currently a part of existing “agriculture” or “intensive agriculture” in Dubbo, and resolved that, before it could become so by de facto means – that is, through being introduced – to define cotton farming independently of those generic terms.⁴

From a rural land holder’s perspective the proposed cotton development at Dubbo provides a reflective case study of the potential conflicts that can arise through the subdivision of rural land and development of incompatible land use over time. In his opening statement to the Standing Committee, Mr Peter Cone, Cotton Australia, representing the proposed developer Mr John Furney spoke of historical subdivision of land in the area.

John Furney acquired his property in the Rawsonville area back in 1976. It was one of a larger properties in that area. Most properties at that time were larger. Subsequently, a number of them have been

³ Evidence of Mr Geoghegan, Dubbo City Council, 26 July 1999, p.120.

⁴ Evidence of Mr Herd, Dubbo City Council, 26 July 1999, p.115.

subdivided. John's property, Oakben, remains whole by comparison.⁵

3.1.1.2 Cessnock City Council local environment plan

The Standing Committee takes note of the measures taken by the Cessnock City Council in its Vineyards district local environmental plan and development control plan to minimise the occurrence of land use conflicts arising from viticultural application of chemicals. Initiatives involve dedicated planning policies for the vineyards district that includes:

- Allocation of a specific category within the agricultural land zone for the vineyards district, 1(v) Rural (Vineyards) zone;
- Minimum lot size of 40 hectares for subdivision of land; and
- Provisions for setback and spray drift separation distances between dwellings stated as:
 - A minimum of 75 metre spray drift / noise front building set back;
 - A minimum 50 metre side building set back;
 - For new developments, a front set back of 50 metres will apply from a common boundary with no existing or approved commercial vineyard. Where a commercial vineyard exists the set back will be 100 metres will be required from the boundary;
 - Alternatively land holders can implement an 80 metre set back which incorporates a minimum 30 metre vegetation spray drift buffer; and
 - Instances where the building set back cannot be met due to land constraints, the appropriate set back will be subject to Council decision.⁶

3.1.1.3 Right to farm legislation

The NSW Farmer's Association outlined its policy with respect to "right to farm" legislation to the Standing Committee during its inquiry into the international competitiveness of agriculture in New South Wales. The policy is presented below:

The Association seeks the enactment of "Right to Farm" legislation, which would recognise the rights of established farmers to carry out their normal farm operations, unimpeded by restrictions on matters such as noise and odour. The Association proposes that this could be achieved by setting aside common law action for nuisance in respect of non-designated agricultural activities.

The Association is also seeking that Local Government authorities develop a 'buyer beware' statement and policy that can be used by local government across the State to make prospective buyers of

⁵ Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.101.

⁶ Correspondence of Cessnock City Council, 22 December 1998.

property in semi-urban rural areas aware of the potential impact of farming operations.⁷

Mr Ian Campbell, representative of the Banana Industry Committee raised the issue of right to farm in the context of determining appropriate buffer zones to minimise nuisance:

Buffer zones obviously are a very good thing. The unfortunate thing is that we have inherited a lot of problems. I suppose local government has a lot to answer for too. But, I suppose if they had had a crystal ball they would never have approved residential sites close to existing banana plantations. You have the ridiculous situation now that you can have a plantation, and if the neighbour sells out and that property is subdivided, you can build very close to that plantation.

So, what is the farmer supposed to do? Is he to destroy X number of metres of his plantation to accommodate the law as it stands? I think there is a great responsibility for local government, before it gives approval, to look at existing land uses. The right to farm also comes into the question. We do have to feed ourselves. We tend to forget that.⁸

Department of Urban Affairs and Planning reported to the Standing Committee that almost all states in the United States had enacted right to farm legislation. The legislation did not however provide legal protection for breaches of federal or state anti-pollution laws resulting from harm or pollution caused by use of agricultural chemicals.⁹

3.1.1.4 Buffer zones

The implementation of buffer zones to minimise non target exposure to pesticide spray drift was a persistent theme in submissions and public hearing evidence received by the Standing Committee. NSW Health, in its submission stated that:

Investigation of planning controls and buffer zones need to be considered as priorities.¹⁰

The Standing Committee received varying views relating to the appropriate nature and distance that buffer zones should be established. Ms Kate Hughes, private citizen advised the Standing Committee that buffer zones should be implemented

⁷ Submission No.27, NSW Farmers' Association, p.18, (Standing Committee's inquiry into the international competitiveness of agriculture in New South Wales).

⁸ Evidence of Mr Campbell, Banana Industry Committee, 4 August 1999, p.332.

⁹ Submission No.73, Department of Urban Affairs and Planning, pp.16-17.

¹⁰ Submission No.33, NSW Department of Health, p.6.

on a site specific basis with consideration given to individual land holder activities and neighbouring property requirements.

It is silly to put a blanket on it and say it has to be 150 metres or it must be two miles. With all this regulation on toxics it must be site specific. That will help resolve it for all stakeholders, for the grower who has to grow his crop.¹¹

As detailed previously in section 3.1.1.2 of this report, Cessnock City Council's approach to buffer zones for the viticultural district local environment plan provided a degree of flexibility in the distance and types of buffers, including provisions for a vegetation buffer to stop spray drift.

An important matter for consideration with buffer zones relates to who should provide the buffer. The right to farm legislation outlined in the previous section emanates from the perspective that agricultural activities were the original land use type. Consequently the onus is on subsequent land holders to recognise, at the time of purchasing a nearby parcel of land, that activities and specific nuisance are associated with agriculture.

Cr Richard Staples, Byron Shire Council, outlined to the Standing Committee his ideological perspective of buffer zones during the Committee's Lismore public hearing as follows:

The overriding principle, to my mind, should be that if you are going to pollute your property you should provide the buffer and not expect your neighbour to provide it.¹²

The Department of Urban Affairs and Planning, in its submission to the Standing Committee opposed the introduction of buffer zones where such action would contribute to isolation of land. The Department cited the following material published as part of its EIS Guideline series for potentially polluting industries:

As the establishment of "buffer" areas around facilities can lead to unacceptable land sterilisation, separation distances should not be viewed as a primary means of ameliorating impacts... The role of site separation as an impact mitigation measure should simply reinforce the impact mitigation measures provided by other means.¹³

The Department of Urban Affairs and Planning considered that the implementation of property plans, best management practices and environmental management systems provided the greatest potential outcomes at farm level to minimise non-target pesticide exposure.¹⁴ The establishment of buffer zones within

¹¹ Evidence of Ms Hughes, private citizen, 5 August 1999, p.355.

¹² Evidence of Cr Staples, Byron Shire Council, 4 August 1999, p.282.

¹³ Submission No.73, Department of Urban Affairs and Planning, p.14.

¹⁴ Submission No.73, Department of Urban Affairs and Planning, p.ii.

the confines of a pesticide user's land holding to achieve these farm objectives was supported. In the Department's view, there was no scope for the reliance by pesticide users on buffer zones beyond their boundary without first, agreement from a neighbour and possible compensatory measures.¹⁵

3.1.1.5 Department of Urban Affairs and Planning agricultural planning strategy initiative

The Department of Urban Affairs and Planning provided a detailed submission to the Standing Committee outlining, amongst other things, an agricultural planning strategy initiative applicable not only to matters considered in this inquiry, but also to the Committee's inquiry into the international competitiveness of agriculture in New South Wales.

The Department of Urban Affairs and Planning prefaced its approach to an agricultural planning strategy by documenting a number of objectives that it perceived could be realised through such a framework. These objectives include:

- Implementation of the *Policy for Sustainable Agriculture in New South Wales*¹⁶ as a strategic plan.
- Enable the strategic plan for agriculture to be sufficiently flexible to incorporate regionally specific agricultural industries;
- Recognise the importance of agriculture in New South Wales; and
- Ensure that the *Policy for Sustainable Agriculture in New South Wales* is implemented at the regional level rather than reliance on its introduction through local environment plans.

The Department of Urban Affairs and Planning has recommended the development and introduction of Regional Agricultural Plans to operate as a statutory regional environmental planning instrument (REP) under the *Environmental Planning and Assessment Act 1979*. The plans enable agriculture to be recognised in regional and local environmental planning instruments as a dedicated "industry" type.¹⁷ The Department envisages regional agricultural plans, in comprising policies derived from the *Policy for Sustainable Agriculture in New South Wales* and regional specific agricultural policies, would also be an appropriate mechanism for ensuring the following matters are given attention in environmental planning instruments:

- Ensure appropriate separation of pesticide users and non pesticide users in a region;
- Establish performance criteria for the acceptable use of pesticides by particular industries in certain areas;

¹⁵ Submission No.73, Department of Urban Affairs and Planning, p.15.

¹⁶ New South Wales Government, 1998.

¹⁷ Submission No.73, Department of Urban Affairs and Planning, p.9.

- Ensure all prime agricultural land is not contaminated by pesticide residue, which is particularly important for the future of organic farming industry;
- Require pesticide users to develop property management plans or environmental management systems to ensure sustainable long term use of pesticides;
- Provide a framework for other government policies to be introduced including native vegetation and water reform policies;
- Identify land best suited for agriculture and retain lands for such a purpose in the future; and
- Ensure efficient allocation of land resources between industries.¹⁸

This initiative outlines what local councils would be required to consider to ensure local environment plans are consistent with the operation of regional agricultural plans as regional environmental planning instruments. The Department indicates that this approach would enable a consistent application of New South Wales sustainable agricultural policy across local council area.¹⁹

Recommendation 4

The Standing Committee recommends that adequate additional financial resources be provided to the Department of Urban Affairs and Planning to enable the expeditious development of Regional Agricultural Plans. In formulating these plans, the Department of Urban Affairs and Planning should consult with the community and, move to incorporate provisions for:

- **A minimum lot size that can result from a subdivision of prime agricultural land, unless development consent provides otherwise;**
- **Identification of prime agricultural land with a view to maintaining land use strictly for agricultural purposes;**
- **Identification of areas incompatible with pesticide use, eg. schools, organic farms;**
- **Inclusion of accredited environmental management systems and best management practices for agricultural operations, particularly in relation to pesticide application. Such mechanisms should include:**
 - **Site specific buffer zone measures; and**
 - **Calibrated weather and wind monitoring equipment operated at the time of professional and commercial pesticide application.**

¹⁸ Submission No.73, Department of Urban Affairs and Planning, pp.9-10.

¹⁹ Submission No.73, Department of Urban Affairs and Planning, p.11.

For determining prime agricultural land the Standing Committee suggests consideration be given to both the land capability classification system adopted by the Department of Land and Water Conservation²⁰ and the land suitability classification system adopted by NSW Agriculture.

3.2 Industry self regulation and co-regulation

3.2.1 Industry self-regulation

The Standing Committee observed a consensus from industry, government, interest groups and the community advocating that the most effective approach to managing pesticides, incorporated industry self regulation practices as one of a number of pesticide management instruments. This view was expressed to the Standing Committee by Mr Michael Nicholls, Chairman, Agricultural Chemicals Committee, NSW Farmers' Association, concerning the components that would best achieve a pesticide risk reduction outcome:

The harder question is how do we as a community manage an issue... I think it is a blend of education, industry self-regulation and government statutory legislation.

The approach taken in providing appropriate weighting and balance between instruments of education, industry self regulation and government legislation was a point of difference between representations received by the Standing Committee, especially between environmental and industry groups.

The Standing Committee heard evidence in support of industry self regulation schemes including the adoption of best management practice, accreditation programs, integrated pest management programs and environmental management systems including ISO 14000.

Mr Peter Cone outlined to the Standing Committee, the nature of best management practices that were designed for implementation on a proposed cotton farm development in the Dubbo area.

As part of the best management practice process, a spray and drift management plan is required to be put in place. It is a very comprehensive document, but a very practical one, that systematically identifies areas of risk to his neighbours, to the environment and to any other relevant area. It specifically sets out procedures to minimise risk to those neighbours, et cetera. It also specifies individual people, be they regulatory authority people, be

²⁰ Land capability, Department of Land and Water Conservation, unknown publishing date and location.

they agronomists, be they farm workers, et cetera. It specifies the responsibilities that each of those people has on the farm. Above all, it involves...approaching neighbours and discussing the proposed spraying regimes, et cetera, with them prior to the spraying season commencing.

In addition to that, the spray and drift management plan sets out specific parameters for monitoring things such as wind direction, wind speed and other meteorological data. It also specifies buffer zones for specific blocks on the property. In addition to areas of risk with respect to the riverine environment, the best management practice plan also identifies these in particular.²¹

A number of environment and community groups raised concern with the concept of industry self regulation pointing to past and present activities where pesticide misuse has occurred. Amanda Pahl, Secretary, Mudgee District Environment Foundation stated in evidence to the Standing Committee:

Industry self-regulation of safe, legal chemical use does not work and is failing rural communities and threatening export industries. Industry standards must ensure fair and reasonable attempts to manage chemical safety. Industry standards must not require local communities to protect, monitor, regulate and enforce appropriate behaviour.²²

Similar sentiments were expressed by Mr Jeff Angel, Director of the Total Environment Centre in the Standing Committee's Sydney public hearing:

One of the reasons that we believe that the cotton industry and other intensive users have failed is that they are incapable of controlling the cowboys in the industry. Unlike the views of New South Wales farmers and the cotton industry, we do not believe that there are a few cowboys; we believe there are a lot of cowboys, and that is symptomatic of the lack of best practice which the industry cannot adopt voluntarily. For that reason we have rejected the self-regulation policies of the New South Wales Farmers' Association and the cotton industry. We have examined the best management practices manual of the cotton industry which became public a few months ago. That manual espouses voluntary compliance with minimum standards for environment protection and management without real consultation with stakeholders about the standards. There is no vision for the industry to minimise reliance on pesticides in the future or even acknowledge that the pesticide load must be reduced.²³

²¹ Evidence of Mr Cone, Cotton Australia, 26 July 1999, p.102.

²² Evidence of Ms Pahl, Mudgee District Environment Foundation, 26 July 1999, p.171.

²³ Evidence of Mr Angel, Total Environment Centre, 21 June 1999, p.4.

3.2.2 Co-regulation

The issue of co-regulation was raised by two significant industry groups, Cotton Australia/Australian Cotton Industry Council and Avcare during public hearings before the Standing Committee. The Hon. Gary Punch, Chief Executive Officer, Cotton Australia and Executive Director, Australian Cotton Industry Council, explained to the Standing Committee the cotton industry's vision for co-regulation as related to use and management of pesticides in New South Wales:

What we are talking about in terms of policing and sanctions we think is truly termed co-regulatory because we are seeking to take delegated regulatory authority in the case of New South Wales from the Minister for the Environment, probably under section 7 of the Pesticides Act, to enable the appointment of officials from our industry who will have the right of inspection. We have to discuss what other rights the State Government may or may not allow. In the context of Mr Cohen's comments, this should give the public greater surety that the industry is out there policing itself and banging a few heads together. That is in addition to existing governmental controls.

The use of regulatory powers under authorisation by the Australian Competition and Consumer Commission was also discussed by The Hon. Gary Punch as a means of industry imposing penalties on transgressors. The Standing Committee heard evidence from Avcare concerning its experience with co-regulation, and its support for the application of a co-regulatory approach in conjunction with the *Pesticides Act 1978*.

Avcare has played a leading role in pioneering the concept of co-regulation with its Agsafe program. Agsafe is a fully owned subsidiary of Avcare, both of which operate at arms length from each other. Agsafe was started by our industry in 1987 and today enjoys a good reputation based on a successful performance in raising the level of professionalism within the industry. Most importantly, Agsafe has an ACCC authorisation that gives it teeth to impose trade sanctions for non-compliance...

Avcare feels strongly about the role of co-regulation in achieving a modern and responsive pesticides Act in New South Wales. Co-regulatory programs with adequate teeth can make a significant and lasting contribution towards our more sustainable agricultural sector.²⁴

²⁴ Evidence of Mr Gauchat, Avcare, 5 August 1999, p.358.

The reasoning behind cotton industry interest in co-regulation stems in part from the desire to improve community perception of the industry as a pesticide user. The cotton industry considers that it is in their best interests to alter activities of those transgressing the *Pesticides Act 1978*.²⁵ During evidence before the Standing Committee, The Hon. Gary Punch outlined the advantages that a co-regulatory approach would achieve through supplementing existing legislative measures and augmenting the number of inspectors in the field.

We are seeking delegated powers to help police ourselves on the ground, not to the exclusion of existing provisions, but as a supplement to them. We recognise that one of the problems with the existing law is that there is just simply not enough bodies - not enough eyes and ears - to carry it through.²⁶

The co-regulatory approach was viewed by cotton industry representatives as the most effective instrument for catching transgressors within rural areas, where an ethos exists of not making a complaint against another farmer to a government agency.²⁷

The Standing Committee supports the right for industry to seek authorisation via the Australian Competition Consumer Council to restrict trade or commercial activity within its own sphere of commercial business.

The present regulatory system at Commonwealth and State level affords the responsibility for administration of legislation to government agencies. The system is designed to ensure legislation is administered in an unbiased and apolitical fashion with government agency decisions open to appeal through government or judicial mechanisms. Under this regime there is a clear separation of roles between the regulator and the regulated. The involvement of industry in the regulatory process would tend to mitigate these advantages.

The Standing Committee supports the development of industry self regulated programs including best management practice and environmental management systems as a non regulatory instrument for pesticide management. The Standing Committee considers that industry self regulation measures be reviewed by the Department of Urban Affairs and Planning, in consultation with industry and community groups, for incorporation into regional agricultural plans.

²⁵ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, pp. 47-48.

²⁶ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, p.48.

²⁷ Evidence of Hon. Mr Punch, Cotton Australia, Australian Cotton Industry Council, 21 June 1999, p.47.

Recommendation 5

The Standing Committee recommends that no amendment be made to the *Pesticides Act 1978* delegating regulatory authority to industry.

3.3 Community based agreements

Community based mediation, discussion and education provides an additional mechanism to manage pesticides. This approach attempts to facilitate workable solutions to concerns regarding pesticide use at the local level, involving local representatives and local issues.

The Standing Committee supports the approach taken by a number of communities such as Narromine and Gunnedah to address the management of pesticides through chemical liaison committees. The Standing Committee heard evidence from Ms Sandra Strong, President of the Gunnedah Chemical Liaison Committee who outlined the charter of the Liaison Committee:

To reduce community concern in the use of agricultural chemicals by developing and promoting “best practice” procedures in the Gunnedah and surrounding districts.

This will be achieved by:

- (a) Adopting and promoting the use of the Chemical Use Spray Guidelines.
- (b) Assisting in the education of the community, of growers and chemical users in the use of chemicals with the aim of minimising community concern through ensuring best practice procedures are complied with.
- (c) Informing the community of the role of the Committee.
- (d) Formulating a fair and standard procedure, for incidents to be reported by the community.
- (e) Identifying “sensitive areas” and determining a suitable resolution process for these areas.
- (f) Providing advocacy for the community and for individuals in its and their dealings with Government authorities and other bodies on pesticide issues.²⁸

Ms Strong in evidence to the Standing Committee, outlined the Chemical Liaison Committee’s achievements in relation to pesticide management:

...I believe, the Gunnedah Chemical Liaison Committee has been responsible for a huge attitudinal and behavioural change of users of

²⁸ Tabled document No.45, Gunnedah Chemical Liaison Committee.

agricultural chemicals. As previously stated, basic communication between neighbours has been the basic change.

Aerial applicators note a marked shift in farmers accepting accountability for their practices, and in farmers working within the guidelines as set down.

We now find that the majority of farmers have undertaken best management practices education...

The Gunnedah Chemical Liaison Committee has been responsible for education of operators – raising community awareness. This is an attitudinal and behavioural change. An example of that is a pest control operator locally who now places alert signs around the perimeters when he is spraying for spiders in houses, raising the awareness of the community.²⁹

The Gunnedah Chemical Liaison Committee advised that these achievements had been made with only limited funding from Gunnedah Shire Council for administration.³⁰

The Standing Committee recognises that assistance to community monitoring groups is required to meet operating costs of activities. Accordingly, the Standing Committee urges the NSW Environment Protection Authority, to examine funding mechanisms that assist community groups such as the Gunnedah Chemical Liaison Committee conduct pesticide related monitoring, education and mediation activities.

3.4 Education and Training of Pesticide Users

3.4.1 Present Training Initiatives

The Australian Environmental Pest Managers Association, in its submission to the Standing Committee, advised of a push from within major sections of the agricultural chemicals industry to develop a national standard, based on national training competency standards for licensed pest management technicians.³¹ These initiatives are envisaged to be industry driven and participation is non-compulsory.

Avcare, the peak national agricultural chemical industry organisation representing 38 major manufacturers and 4 distributors of agricultural and veterinary chemical

²⁹ Evidence of Ms Strong, Gunnedah Chemical Liaison Committee, Gunnedah, 27 July 1999, pp. 214-215.

³⁰ Evidence of Ms Strong, Gunnedah Chemical Liaison Committee, Gunnedah, 27 July 1999, p.223.

³¹ Submission No 38, Australian Environmental Pest Managers Association (NSW Branch), p.2.

products in Australia³², advocated the use of industry-driven competency training and codes of best practice supported, where necessary, by government intervention.³³ Avcare submitted that their Agsafe accreditation program ensures that people who sell or offer advice on crop protection and animal health products have appropriate training.³⁴

The WorkCover approved industry Code of Practice, in accordance with the provisions of Section 44A of the *Occupational Health and Safety Act 1983*, commenced on 1 September 1998³⁵ and requires that a training program should cover:

- Duties under the *Occupational Health and Safety Act 1983*;
- The *Occupational Health and Safety (Hazardous Substances Regulation)* and this code;
- Advice regarding the pesticides that may be stored or used in the workplace
- The legal significance of a label and any restrictions resulting from it
- Relevant and up-to-date legislation or guidance material relating to the transport, use, storage and disposal of pesticides.³⁶

At present TAFE New South Wales runs training modules on a variety of pesticides-related subjects pitched at various levels of difficulty and subsequent accreditation, including:

- Farm Chemical Use;
- Soil Monitoring and Management;
- Sustainable Farm Practices; and
- Environmental Awareness.³⁷

The Open Training and Education Network (which delivers distance learning), also offers pesticides-related subjects including:

- Weed Control;
- Pest Control (Urban);
- Pest Inspection (Timber);
- Trade Waste Treatment;
- Transportation of Dangerous Goods;
- Water Industry Operations (Wastewater Treatment); and
- a range of subjects on Environmental Principles and Environmental Practices.³⁸

³² Submission No 40, Avcare, Executive Summary, p.v.

³³ Submission No 40, Avcare, p.39.

³⁴ Submission No 40, Avcare, Executive Summary, p.xi.

³⁵ Submission No 2, WorkCover, Code of Practice for the Safe Use of Pesticides in non-agricultural workplaces, p.1.

³⁶ Submission No 2, WorkCover, Code of Practice for the Safe Use of Pesticides in non-agricultural workplaces, p.43.

³⁷ www.tafensw.edu.au/handbook.

Rapid Solutions' submission outlined the pesticide industry's initiative and progress towards national competency-based training:

At the last Pest Industry and Government Seminar (PIGS) conference held in Melbourne it was agreed that all States and Territories would change to the new skills based learning program established under the National Pest Control Competency Training Scheme established under ANTA... It has been agreed that the standard licence will require a trainee to be assessed against the National Units of Competency by a qualified Assessor.³⁹

3.4.2 End Users of Accredited Training

The Standing Committee received a number of representations advocating that all pesticide applicators, including farmers, should be formally trained in the use of pesticides to a national standard. Various stages of formal training may need to be established to ensure the differing needs of end users are encapsulated. Ms Jo Immig, Chemical Campaigner, Total Environment Centre referred to this issue in evidence to the Standing Committee:

...certain levels or categories of chemicals require more stringent training. For example, schedule 7 chemicals should be restricted to certain people who have attained a certain level of training with those materials. That training should be mandatory, not voluntary, as it is at the moment.⁴⁰

Recommendation 6

The Standing Committee recommends that education and training in the use and management of pesticides be compulsory for applicators who conduct application activities for professional purposes and that other commercial applicators undertake education and training regimes that correspond with user needs and toxicity of chemicals applied. The mechanisms to implement an education and training program may include pamphlets, video instruction or course attendance where appropriate and be funded by a levy on agricultural chemical sales.

An education and training system that reflects the needs of pesticide users provides a flexible and efficient approach for disseminating information concerning pesticide management. Pesticide applicators that only use softer pesticides may require the lowest levels of education and training in pesticide management. Conversely, high

³⁸ OTEN Enrolment Information Manual 1999, pp.32-48.

³⁹ Submission No 28, Rapid Solutions, p.15.

⁴⁰ Evidence of Ms Immig, Total Environment Centre, 21 June 1999, p.10.

volume users of pesticides, such as contract pesticide applicators using Schedule 7 pesticides, are likely to require the most detailed education and training regime.

3.4.3 The essentials of formal training

The three critical areas of formal training for pesticide use identified in submissions and public hearing evidence were:

- Application;
- occupational health and safety principles; and
- storage and disposal.

3.4.3.1 Application

A consensus was discernible both from submissions and witnesses representing industry, community and interest groups of the need for continued training and education in pesticide application. The Hon. Gary Punch of Cotton Australia stated:

We need to continually educate people both in technologies and chemicals that they are using in the application process.⁴¹

Another witness, Mr Peter Howat, Nufarm's Research and Development Manager for Australia, said:

I think you need to make people very much aware of application. Application is one area where there has not been a lot of direct information supplied to the users of the product... It is an area in which there has not been a lot of development of expertise... A lot of farmers who have grown up with application, but who have not, in a sense, been adequately trained in it, may not be as familiar as we would like with the total theory of what is actually occurring when they are applying a pesticide. I think there is a lot of training that should go on, and I would certainly like to see that.⁴²

3.4.3.2 Training in the principles of occupational health and safety

Dr Fragar, Director of the Australian Centre for Agricultural Health and Safety, made the following connection with respect to the operation of Farmsafe Australia's "Managing Farm Safety" course:

⁴¹ Evidence of Hon. Mr Punch, Cotton Australia, Cotton Industry Council, 21 June 199, p.47.

⁴² Evidence of Mr Howat, Nufarm, 26 July 1999, p.191.

Within that program the whole issue of hazard identification, risk assessment and risk control for pesticides is considered along with the other hazards that farmers are required to manage under occupational health and safety legislation. The Managing Farm Safety course for farmers and farm managers has been developed after analysis of hazard and risks within each commodity organisation. However, it is not within agriculture as a whole, but with particular commodity groups.⁴³

Amanda Pahl, of the Mudgee District Environment Foundation, outlined her concerns with the absence of workplace safety practices in the viticultural area of Mudgee:

Young, inexperienced or needy workers are often used in these rural areas, with little or no training,...protective clothing, or...washing facilities. The importation of non-English speaking casual workers doing night spraying work creates further risks if they are unable to read or understand basic requirements.⁴⁴

3.4.3.3 Storage and disposal

The question of storage and disposal of pesticides is as much an occupational health and safety issue as it is an environmental protection issue.

In its submission to the Standing Committee, Avcare detailed its new **drumMUSTER** initiative, which, as a joint initiative of the National Farmers' Federation, Avcare, the Veterinary Manufacturers & Distributors Association and the Australian Local Government Association, is proposed as the national solution for the waste generated by empty one-way farm chemical containers. In an open letter to stakeholders, the **drumMUSTER** program was referred to as:

...the Container Management Program (**drumMUSTER**)...an industry funded...collection and disposal scheme for all rigid non-returnable containers of over 1 litre/kilogram content that have been properly rinsed and cleaned.⁴⁵

drumMUSTER is not devised to collect old or unwanted chemicals, which is dealt with under a one-off government collection of unwanted and unused chemicals called the National Collection Storage and Destruction Scheme but, rather, to take certain designated containers out of the waste stream process and, where appropriate, recondition, reuse or recycle them.⁴⁶

⁴³ Evidence of Dr Fragar, Australian Centre for Agricultural Health and Safety, 27 July 1999, p.229.

⁴⁴ Evidence of Ms Pahl, Mudgee District Environment Foundation, 26 July 1999, p 169.

⁴⁵ Submission No.40, Avcare, Foreword, p ix

⁴⁶ **drumMUSTER**: An Open Letter to **drumMUSTER** stakeholders – What To Do With Your Empty Farm Chemical Containers, The Land, Advertisement, Thursday 1 July 1999, p.16.

drumMUSTER does however necessitate full implementation of several critical steps:

- farmers begin to pay a **drumMUSTER** levy of 4c a litre from 1 February 1999 on “recognised non-returnable plastic and steel containers”;
- farmers are required to properly clean their empty farm chemical containers on their own properties. “Please clean your farm chemical containers as soon as they are emptied, using one of the Avcare-approved cleaning processes, and put the rinse materials into your spray vat”;
- farmers are next required to store their clean containers on their properties until the moment of operational collection, which “will be publicised extensively when completed. Keep an eye out, and mark the times in your diary”;
- Councils are asked to make their tip or waste depot facilities available for farmers for a designated period to bring in their clean drums. (**drumMUSTER** pays Councils for their participation);
- when the operational collection is announced, farmers are required to transport their clean containers to the local council;
- **drumMUSTER** pays processors who then prepare these drums and take them away for recycling.⁴⁷

Mr Davis, Manager, Environment and Health, Dubbo City Council raised the issue of the practical application of the **drumMUSTER** program and provided an insight into difficulties the Council have experienced with this particular program:

We are not getting involved with the Drum Muster program at this stage because of an incident recently that we were told about in Gunnedah, where a number of drums were collected and shredded and were found to be still contaminated and not useable in another form. So the Drum Muster program, for all its good intentions, is very difficult at this particular point to implement. It is a pretty important issue..We have got to ensure that the chemical containers are cleaned to a standard that is suitable for their proposed use⁴⁸

When asked to clarify what was defined as suitable cleaning, Mr Davis indicated it to be triple rinsing and piercing the drums although the process did not seem to be operating sufficiently. The Standing Committee later raised the issue of the effectiveness of the triple rinsing in the **drumMUSTER** with Mr Peter Howat of Nufarm, who responded by stating:

...most of the spray booms that farmers have now actually have attachments on them to allow them to do the triple-rinse. They actually

⁴⁷ The Land, Advertisement, Thursday 1 July 1999, p.16.

⁴⁸ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

put a spike in the drum and it pushes the chemical out and rinses the drum at the same time... That will make a significant difference.⁴⁹

Another of the concerns expressed by Dubbo City Council in regard to the drum*MUSTER* program is outlined below:

We intended..to offer the Drum Muster organisation the opportunity to work directly with contractors who could provide a use for the shredded and processed material, but Drum Muster has said it cannot deal directly with contractors because of controls within the Environment Protection Authority and that it is necessary for local government to be involved.⁵⁰

Mr Davis explained that the drum*MUSTER* program required local councils to be part of the process, to act as the middle men to provide the collection facilities and to work with the contractors. Mr Davis concluded that:

Local government is not in a position to provide those end markets for these products ... we have a situation where we are being asked to collect the drums, process those drums, but, at the end of the day, the product cannot be used.⁵¹

An alternative approach to resolving the problem of storage and disposal of pesticide containers was described by Mr Peter Howat of Nufarm who informed the Standing Committee that Nufarm was the first company to be involved in the use of returnable 110-litre drums (Envirodrum) or 1,000-litre tanks (Envirotank).

The Envirodrum itself is a 110-litre tank that is a returnable container. It is fully sealed. It has a lot of benefits. One of the first is that it has reduced operator exposure. He does not actually take the top off the container to tip it out; he actually affixes a hose to that and he can fill his tank straight away... There is no drum disposal; they can return these 110-litre drums or 1,000-litre tanks. They don't have to triple-rinse them because they don't actually open the container at all.⁵²

Mr Howat advised that Nufarm colour-coded the drums to reduce confusion, producing different products in different coloured containers. Additionally, to prevent cross-contamination of chemicals, the design of the fixing point for the hose from a drum that has herbicides in it is three prongs and, for an insecticide, four-prongs. These returnable drums are exempt from the drum*MUSTER* levy of 4c a litre but do attract an upfront deposit of \$80 each, refundable when the drum is returned.

⁴⁹ Evidence of Mr Howat, Nufarm, 26 July 1999, p.186.

⁵⁰ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

⁵¹ Evidence of Mr Davis, Dubbo City Council, 26 July 1999, p.118.

⁵² Evidence of Mr Howat, Nufarm, 26 July 1999, p.181.

Mr Howat pointed out to the Standing Committee that:

Another initiative that Nufarm has taken and which I believe has helped in the management and use of pesticides in New South Wales is this move into dry products.. Obviously, there is a reduction in the use of solvents; a change in packaging form, going to a form of packaging that can be disposed of; increased safety in handling; ease of measurement; and a whole range of other things... [As a result] In 1998 we had 341,000 less 20-litre containers out there, by replacing them with either refillable Envirodrums or dry products.⁵³

Mr Howat affirmed that:

...the real bonus to the farmer has been in the handling of the chemicals. Most of the surveys that have been conducted, where pesticides contamination has been a concern of farmers, has been the emptying of the drums into the spray tank, which is not an easy task to do. With this, they can actually do it from the ground. You just click the fitting in, and it pumps the chemical straight into the tank.⁵⁴

3.5 Conclusion

While the Standing Committee acknowledges the considerable education and training material prepared by industry such as Avcare under their Agsafe program, additional suites of training modules may be required. The objective would be to achieve sufficient course content for formal accreditation. Stakeholders in this process might well include the Environment Protection Authority, TAFE, the Universities, NSW Agriculture, Agricultural Colleges, Farmsafe Australia, industry associations and environmental organisations.

Delivery of this accredited training could be spread across the current providers, such as TAFE and OTEN, the Universities, industry groups and the Agricultural Colleges.

Accreditation of formal training may be the best situation under the Vocational Education and Training (VET) system by the NSW Vocational Education Training Accreditation Board (VETAB), which is a registered training authority under the Australian National Training Authority (ANTA). This process would ensure that education and training is undertaken to a suitable standard.

drumMUSTER has documented difficulties for both farmers and Councils in its implementation and processing. Each container attracts a levy of 4c a litre.

⁵³ Evidence of Mr Howat, Nufarm, 26 July 1999, p.183.

⁵⁴ Evidence of Mr Howat, Nufarm, 26 July 1999, p.185.

Collection times and locations are arbitrary. Creation of a useful end product is dependent on outside factors. The program deals with chemicals in liquid form only. The potential user compliance appears low. Achieving an overall reduction in the amount of empty unused chemical storage drums on the farm would appear to be difficult.

Envirodrums and Envirotanks are sealed. A wide variety of drums can be used in this scheme. Each carries a returnable deposit of \$80 per drum or tank. Collection is by return to the purchase point. There is no end product as the drums are genuinely recyclable as chemical containers. The program deals with chemicals in both dry and liquid form. The end-user does have to purchase a pump (minimum outlay of which would be \$250). The design parameters appear to facilitate safe use. Compliance with the scheme appears to be more achievable. A measurable overall reduction in the amount of empty unused chemical storage drums on the farm in the environment would appear to be a beneficial outcome.

4 LEGISLATIVE MECHANISMS

4.1 Coordination between Commonwealth and State authorities

4.1.1 Commonwealth and State interdependence

The management of pesticides in Australia is composed of two interdependent components. The first is a National Registration Scheme concerned with the assessment, approval, registration and labelling of pesticide products. The second component is conducted at the state level, which involves the establishment and enforcement of controls over the use of pesticides.

4.1.2 The National Registration Scheme

The National Registration Scheme was established in July 1991 with the cooperation of the Commonwealth, State and Territory agencies to provide a single national assessment and registration scheme for agricultural and veterinary chemicals and to remove previous duplication and inconsistencies across jurisdictions. The National Registration Scheme places responsibility on the Commonwealth for evaluation, registration and review of agricultural and veterinary chemicals. To administer the Scheme, the National Registration Authority for Agricultural and Veterinary Chemicals was established under the *Agricultural and Veterinary Chemicals (Administration) Act 1992* (Cth) and was conferred its full range of powers by the *Agricultural and Veterinary Chemicals Code Act 1994* (Cth) ('Agvet Code'). To apply the Agvet Code to New South Wales, the *Agricultural and Veterinary Chemicals (NSW) Act 1994* was enacted as complementary legislation.

Under the Scheme, all pesticides used in NSW must be registered by the National Registration Authority before they can be manufactured, supplied, sold or used. Before a pesticide is registered, it must undergo a rigorous assessment process to ascertain a pesticide's impacts on the environment, human health and trade and effectiveness of the pesticide for its intended use. A significant aspect of the registration process is the specification of label directions that are relevant to each product, pest and situation of use. The responsibilities of the National Registration Authority for control over agricultural and veterinary chemicals extend to and include the point of retail sale.

4.1.3 Control of use

The states and territories maintain responsibility for the establishment and enforcement of controls over pesticide use such as licensing of users and spraying activities. The state based responsibilities are designed to ensure that pesticides are used in accordance with National Registration Authority requirements and without causing injury or damage to a person's health and property, the environment and trade.

As part of its responsibilities with respect to New South Wales, the Environment Protection Authority's role is:

- Education – to ensure that all those applying pesticides are aware of their legal responsibilities and are aware of the consequences of misapplying pesticides;
- Control of use under the *Pesticides Act 1978* – to enforce the control over the use of pesticides once they have been sold, and for guiding users on the appropriate and responsible use of pesticide products;
- Regulation under general NSW Environment Protection Authority legislation – as pesticides can affect other areas within the oversight of the NSW Environment Protection Authority including pollution, waste and clean water, other enforcement mechanisms are available;
- Research – pioneering toxicity studies on pesticides;
- Working with local communities – mediation to assist resolution of conflicts between stakeholder groups.

4.2 Review of the *Pesticides Act 1978*

4.2.1 Discussion paper overview

The *Pesticides Act 1978* (NSW) has been in existence for over twenty years and in this time there have been substantial changes in community expectations about the use of pesticides which has coincided with land use changes.¹ Other land uses and activities including residential and commercial development increasingly surround areas previously dominated by agricultural uses, and are incompatible with the traditional approach to pesticide use.² Many Australian and overseas jurisdictions have found the need to respond with firmer regulation of pesticide use.

Further, the introduction of the National Registration Scheme for the registration and labelling of pesticides has precipitated the need to review and update the change in nature of State government responsibilities.

¹ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 1, p.1.

² For example, Submission No.13, Mr Johnston, Alstonville, p.2.

Finally, the NSW Environment Protection Authority has submitted that a principle concern is the inability of the Act to prevent serious harm from pesticide misuse unless the harm was intentional or the use was clearly contrary to a specific label direction. Effectively, this means that negligent misuse is not an offence.³ Accordingly, the Protection Authority submits that amendments to current legislation could usefully:

- remove duplication with the National Registration Scheme;
- ensure proper use of pesticides;
- address community concerns relating to the potential adverse impacts of pesticides on human health, property, trade and the environment; and
- provide ongoing policy development in pesticide management and provide greater consistency with other environmental legislation.

4.2.2 Consistency of objectives

The Long Title of the *Pesticides Act 1978* states the following:

An Act to control the sale, supply, use and possession of pesticides; to control the application of pesticides and fertilisers from aircraft; to provide for the prevention of certain foodstuffs containing prohibited residues from becoming available for consumption;

Although the Long Title provides an overview of the scope of the Act there are currently no stated objectives. To achieve consistency with the *Protection of the Environment Operations Act 1997*, the NSW Environment Protection Authority has suggested that the objectives may include:⁴

- risk reduction;
- ecologically sustainable development;
- duty of care for pesticide users; and
- cross-sectoral input to policy making.

4.2.3 Registration of pesticides

As indicated by its Long Title, the scope of the *Pesticides Act 1978*, includes control of registration, sale and supply of pesticides and the issue of permits. The application of the Agvet Code to NSW introduced new provisions concerning the registration, sale and labelling of pesticides and also introduced some new definitions. The original provisions in the *Pesticides Act 1978* were not repealed.

³ Submission No.37, Environment Protection Authority NSW, Part 2, p.3.

⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p. 3.

To circumvent the duplication between the *Pesticides Act 1978* and the Agvet Code, a regulation was later introduced⁵ to suspend the operation of the conflicting provisions concerning registration (ss. 8–22), sale (ss. 29 and 30(1)) and labelling (ss. 34–36, 38, 41, 42(1) and 44) in the *Pesticides Act 1978*.

The discussion paper proposed to formally repeal these outmoded sections of the Act to avoid duplication and confusion and to update it in line with the National Registration Scheme⁶. In so doing, the discussion paper suggested an administrative measure to formally repeal provisions that are effectively inoperative.

An incidental administrative matter raised by the NSW Environment Protection Authority concerns the removal of the reference to the Registrar of Pesticides in the *Pesticides Act 1978*. As the National Registration Authority regulates the “registration” of pesticides, the title is redundant.⁷ The Standing Committee notes that the *Pesticides Act 1978* refers to the Agvet Code for its definition of a pesticide as an “agricultural chemical product” (as explained in section 2.1) and that this is a more accurate concept than the traditional use of the term “pesticide”. Further, considering other state jurisdictions have adopted the new concept, the NSW Environment Protection Authority may wish to consider reviewing use of the term “pesticide” in the Act and substitute this with “agricultural chemical product”.

Recommendation 7

The Standing Committee recommends that the outmoded provisions of the *Pesticides Act 1978* be repealed including those concerning registration and approval of pesticides.

Recommendation 8

The Standing Committee recommends that wherever the term “Registrar of Pesticides” appears in the Act should be replaced with references to the NSW Environment Protection Authority.

4.2.4 Current offences

The discussion paper outlined that the misuse of pesticides occurs when people do things with pesticides that⁸:

- are contrary to a label or pesticide permit or order directions;

⁵ Clause 9 of the *Agricultural and Veterinary Chemicals (NSW) Regulation 1995*.

⁶ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 2, p.2.

⁷ Submission No.37, Environment Protection Authority NSW, Part 2, p.11.

⁸ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3, p.2.

- cause a risk of harm or actual harm to people or damage to property; or
- cause a risk of harm or actual harm to the environment.

The current provisions under the *Pesticides Act 1978* dealing with these offences are ss.33 and 37. Section 33 states that unless required by an order, a person shall not, in preparing for use, using keeping or disposing of a registered pesticide, **wilfully or carelessly** disregard any instruction on any label affixed to a container in which the pesticide is situated (emphasis added).

Section 37 provides that a person shall not **wilfully and without reasonable cause** do anything likely to cause a risk of injury to a person by a pesticide or damage by a pesticide, to the property of another (emphasis added).

The NSW Environment Protection Authority recognised that in light of the main misuses, the current offence provisions limit the ability to ensure the proper use of pesticides. In practice few cases involve such deliberate misuse.⁹ In consideration of such issues, the discussion paper proposed measures to deal with misuse of pesticides in ways consistent with other jurisdictions and to avoid costly problems for industry and the community.¹⁰

4.2.5 Offences

4.2.5.1 Use of pesticides contrary to directions on labels or permits

The discussion paper stated that following label directions is the minimum standard of behaviour for pesticide users given that the failure to follow directions could lead to serious harm to persons, property or the environment and could impose adverse effects on trade.¹¹

The current requirement by s.33 for a wilful or careless disregard requires some degree of intention on the part of the user. The discussion paper indicated that, in line with other states, the offence should occur regardless of the user's intentions and impose a strict liability.

Although the labelling of pesticide containers is not within the jurisdiction of the NSW Environment Protection Authority, most submissions received by industry groups, agronomists and growers criticised the adequacy of pesticide labels. There is a general consensus that many of the pesticide labels currently in use are either

⁹ See for example, *Bray v Death* (unreported 2 March 1994 NSW Supreme Court) where the high standard of proof for a "wilful" act is outlined; Submission No. 37, Environment Protection Authority NSW, Part 2, pp.3-4.

¹⁰ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.1, p.3.

¹¹ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.1, p.3.

ambiguous or fail to give instructions that are capable of being explicitly followed.¹² In its submission, Independent Agricultural Services suggested,

...labelling must be clear and consistent to avoid confusion in the field. A national standard for labels should be implemented according to ISO/Australian Standards guidelines.¹³

A suggestion advanced by several submissions was for Material Safety Data Sheets to be included with all pesticides sold whether attached to the container or issued by the retailer.¹⁴ In this instance, the lack of space for labels on containers would no longer be a concern.

A number of submissions expressed concern with tighter offences for disregarding label directions and the impact on pesticide users with low literacy levels or from non-English speaking backgrounds.¹⁵ It was suggested that an offence to disregard label directions raises an issue of natural justice particularly in the Sydney Basin where a large proportion of pesticide users cannot read English.¹⁶ One submission considered that a consultation process be conducted to obtain knowledge of all languages spoken by users of particular pesticides and that, either labels have a multilingual component or that a toll free phone service be established where pesticide use information could be obtained in the relevant language.¹⁷

As the proposed provision imposes a strict liability offence for failing to follow the label directions, various organisations including NSW Agriculture believe that there is an obligation on the NSW Environment Protection Authority to identify instructions on labels more clearly and therefore should make appropriate recommendations to the National Registration Authority to address these issues.¹⁸

A number of submissions from industry and environmental groups have called for the ability to use lower than prescribed concentrations of pesticides without the consent of the National Registration Authority.¹⁹ Pesticide application at lower rates is currently unlawful as it is an offence under s.33 to disregard label instructions. The NSW Environment Protection Authority has proposed to permit usage at lower concentrations or lower usage rates, however there will be no intention for orders to duplicate or overrule the responsibilities of the National

¹² See for example, Submission No.66, Dr Parker, p.6.

¹³ Submission No.37, No.87 Independent Agricultural Services, p.2.

¹⁴ Submission No.10, Goddard Spraying Services, p.2; Submission No.37, No.61, Total Environment Centre, Nature Conservation Council, Inland Rivers Network, Australian Conservation Foundation, National Parks Association and Friends of the Earth, p.2.

¹⁵ For example, Submission No.33, NSW Health, p.7.

¹⁶ Submission No.66, Dr Parker, p.2

¹⁷ Submission No.37, No.41 Dr Hart, District Veterinarian, p.2.

¹⁸ Submission No.37, No.103 NSW Agriculture, p.2.

¹⁹ See for example, Submission No.58, Cooperative Research Centre for Weed Management Systems, p.3.

Registration Authority in setting nationally consistent controls on labelling.²⁰ (The regulatory aspect of this issue is further discussed at section 4.2.9.1)

Some submissions raised concerns that pesticide use at lower rates may lead to pest resistance.²¹ NSW Agriculture advised the NSW Environment Protection Authority that this would rarely be the case. Where resistance may occur, the NSW Environment Protection Authority has suggested implementing regulations that would prescribe pesticides for which lower use would not be permitted.²² This initiative is in accordance with the view of Avcare, a representative body of 38 manufacturers and 4 distributors of agricultural and veterinary chemicals in Australia. Approximately 90% of pesticide sales in Australia are attributable to members of Avcare.²³ In its submission to the Standing Committee, Avcare supported use of a product at less than maximum rate unless the label expressly prohibits such use.²⁴ A few submissions received from agricultural groups and Cotton Consultants Australia, (the cotton industry agronomists representative body) were not against below label rates but argued that such applications should remain under the control of the National Registration Authority so that industry and research consultation is maintained in relation to resistance management strategies.²⁵

The Avcare submission noted that no regulatory agency in Australia has addressed the issue of 'minor use'.²⁶ A minor use may occur where a pesticide is suitable for use to spray a crop but the use is not identified on the label because the use may not have been originally contemplated. Registration of these uses may not occur due to present economic disincentives such as where, a new product containing an existing active constituent which is off-patent or a new use of an existing off-patent product is registered, the registration data becomes immediately available to all competitors (permitting copying) at zero research and development cost.²⁷ There may be no economic benefit for a chemical company to pursue registration because the intellectual property is not adequately protected.²⁸

The proposed amendments imposing strict liability will create an offence for growers of a range of crops where legitimate pesticide usage is required but for which approval of such uses cannot be resolved. In her submission, Dr Frances Parker addressed this issue on behalf of growers in the Sydney Basin:

²⁰ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.9, p.7.

²¹ For example, Submission No.37, Australian Environmental Pest Managers Association Ltd, p.4.

²² Submission No.37, Environment Protection Authority NSW, Part 2, p.5.

²³ Submission No.40, Avcare, p.v.

²⁴ Submission No.40, Avcare, p.33.

²⁵ Submission No. 25, Cotton Consultants Australia, p.2.

²⁶ A minor use is defined as a use of a pesticide that is not economically viable (eg. a small market) for the manufacturer to develop, register and include on a product's label.

²⁷ Submission No.40, Avcare, Appendix 5, p.5.

²⁸ Submission No.28, Rapid Solutions, p.11.

Many crops, in particular Asian vegetables, are classed as minor crops and frequently there are no registered pesticides available for use on these specific crops. This means that farmers must use unregistered pesticides to control pest and disease. They are faced with a dilemma, use pesticides illegally, or face economic ruin because of the loss of their crops and their livelihood.²⁹

Avcare have urged that the NSW Environment Protection Authority address this issue before introducing legislative changes.³⁰

The Standing Committee supports measures by the NSW Environment Protection Authority in consultation with the National Registration Authority and other States and Territories to develop a consistent standard for the labelling of pesticides. The Standing Committee supports the important work of the Premier's Taskforce on Market Gardening by People of Non-English Speaking Background in the Sydney Basin in drawing attention to the significant safety issues surrounding pesticide labelling and compliance, by growers from non-English speaking backgrounds or with low literacy levels.

Recommendation 9

The Standing Committee will, as part of its review process (refer to Recommendation No.45), consider the issues of growers from non-English speaking backgrounds or with low literacy levels, developments in compliance with pesticide labelling by these growers and the progress of the Premier's Taskforce.

Recommendation 10

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for use of a pesticide contrary to the directions on a pesticide label or permit.

Recommendation 11

The Standing Committee recommends that pesticide labels provide clear instructions for use, and that until a consistent standard for labels is implemented, purchasers of pesticide products with non-compliant labels should be provided with material safety data in the form of durable sheets or other relevant media.

²⁹ Submission No.66, Dr Parker, p.6

³⁰ Submission No.40, Avcare, Appendix 5, p.5.

Recommendation 12

The Standing Committee recommends that lower concentrations or lower usage rates of pesticides be permitted by way of a “Pesticide Order” under the *Pesticides Act 1978* where the usage is not inconsistent with label directions and is approved by the National Registration Authority.

Recommendation 13

The Standing Committee recommends that the NSW Environment Protection Authority commence consultation with the National Registration Authority and Avcare to address the issue of minor use, intellectual property rights and impediments to the registration process. The consultation should be conducted with a view to increasing the accessibility of pesticides suitable for minor use.

4.2.5.2 Use or disposal of a pesticide that causes actual harm or damage to persons, property or the environment

There is no provision in the present legislation relating to the unintentional misuse of pesticides causing injury or harm.

It is outlined by the discussion paper that although a person may diligently follow directions about the use of pesticides, they may fail to take account of other relevant and “readily knowable considerations” and cause actual harm to people or property.³¹ There should be no degree of intention required for an offence.

The offence would be intended to encourage users to plan their spraying activities, exercise proper care and take into account important considerations such as spraying in suitable weather conditions.³² Accordingly, the discussion paper advocates that an offender may use as a defence that they were “following specific instructions” on a label, order or permit to avoid harm or damage.

A number of submissions have indicated that the provision should not only control disposal of pesticides but also disposal of pesticide containers.³³ However, it is argued that stricter legislation on disposal will not necessarily achieve appropriate disposal of containers.

As discussed at section 3.4.3.3, the **drumMUSTER** industry based initiative supported by Avcare and initiatives of certain catchment management

³¹ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.2, pp.3-4.

³² Submission No. 37, Environment Protection Authority NSW, Part 2, p.4.

³³ Submission No.37, No.28, Mr Flack, p.2.

committee's³⁴ have experienced limited success as the potential user compliance in returning empty and clean pesticide containers appears low. A recent initiative by Nufarm Australia may overcome the low compliance issue. In evidence before the Standing Committee, Mr Peter Howat, Manager, Research and Development at Nufarm Australia related that "basically 100 per cent" of containers on which deposits were taken were returned.³⁵ Before the option of formally regulating disposal of containers is examined, it will be necessary to evaluate the success of Nufarm Australia in its industry-based initiative.

The Committee recognises that attempts are being made by industry to reduce inappropriate disposal of pesticide containers. The NSW Environment Protection Authority should conduct a consultation process with industry groups to ensure the success of these initiatives.

Recommendation 14

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence to use or dispose of a pesticide so as to cause harm or damage to people or property. (See Recommendations 20 and 22 for discussion of "harm")

Recommendation 15

The Standing Committee recommends that the NSW Environment Protection Authority cooperate with industry to develop initiatives that encourage responsible container disposal. As part of its review (Recommendation 45), the Standing Committee will consider the Authority's progress in this area.

Recommendation 16

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for inappropriate disposal of a pesticide container.

4.2.5.3 Intentional or negligent pesticide use or disposal resulting in actual or potential harm to persons or property

The main focus of the discussion paper concerning the offence for deliberate or negligent use of pesticides resulting in harm to people or property is to deal with

³⁴ Submission No.37, No.46, Mr Roby, p.4, referring to the Richmond Catchment Management Committee, Empty Chemical Container Collection Project results.

³⁵ Evidence of Mr Howat, Nufarm Australia Ltd, 26 July 1999, p.187.

off-target damage.³⁶ As a degree of intention is required (similar to the current s.37), it is intended that this is a more serious offence attracting a higher penalty than where no intention is required. An offender will be required to prove that “all reasonable precautions” were taken to avoid harm.

A joint submission by environmental groups suggested clear guidance on what “reasonable precautions” should entail by stating that,

... ‘reasonable precautions’ must be given a minimum set of factors which must be considered by all those using pesticides and not be left at the general description of ‘proper and reasonable pesticide application’.

It must be stated in the Act that as a minimum requirement, weather conditions, the proximity of people to the spray area, methods of application to avoid non-target drift, buffer zones, identification of ecologically sensitive areas and occupational health and safety requirements be addressed.³⁷

Recommendation 17

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for the intentional or negligent pesticide use or disposal resulting in harm to people or property. (See Recommendations 20 and 22 for discussion of “harm”)

Recommendation 18

The Standing Committee recommends that the NSW Environment Protection Authority, investigate methods to institute an unwanted chemical container disposal system in urban and rural environments.

4.2.5.4 Intentional or negligent pesticide use or disposal which threatens or harms the environment

The discussion paper proposed that a person will be in breach of the Act where there was a degree of intention to misuse pesticides resulting in harm to the environment.³⁸ It would be an offence where “foreseeable harm” to the environment occurred. As a degree of intention is required (similar to the current

³⁶ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.3, p.4.

³⁷ Submission No.37, No.61, Total Environment Centre, Nature Conservation Council, Inland Rivers Network, Australian Conservation Foundation, National Parks Association and Friends of the Earth, p.3.

³⁸ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.4, p.4.

s.37), it is intended that this is a more serious offence attracting a higher penalty than where no intention is required.

As with the previous provision, an offender will be required to demonstrate that reasonable precautions were taken to prevent harm. Such precautions would include “following proper and responsible pesticide application practice”.

The discussion paper explained that “in framing the offence it needs to be clearly recognised that *some harm to the environment is an unavoidable* consequence of proper and reasonable pesticide application practice” (emphasis added). As indicated by a joint submission from a number of environmental groups³⁹, this statement appears prima facie contradictory to the intention of the provision with respect to what is “harm”.

A serious concern raised by a large majority of submissions was the ambiguity and uncertainty of the terms “harm”, “threatens” and “environment”. Presently, the other States or Territories do not have provisions relating to “harm to the environment.”

In relation to the difficulty of defining “harm”, NSW Agriculture expressed that:

It would be inconsistent, for example, to suggest that any human exposure to a pesticide represents harm or risk of harm when standards of pesticide exposure are already set for potable water, for consumption on foodstuffs (MRL’s, ADI’s) or for airborne exposure (workplace exposure guidelines). Similarly, what level of contamination would the EPA suggest was likely to cause harm or risk of harm to the soil biota, native flora or fauna or other environmental compartments.⁴⁰

A submission from NSW Health advised that one Public Health Unit considered that a risk of harm exists when a person’s exposure exceeds international health criteria such as an acceptable daily intake (ADI) or provisional tolerable weekly intake (PTWI). However, other units suggest that the major difficulties in measuring or assessing such exposure to pesticides is that it may only be for a brief time. Acceptable daily intakes and PTWI’s are based on long term, chronic exposure and even if ADI’s and PTWI’s were exceeded for a short period his need not be an indication of “risk of harm”.⁴¹

³⁹ Submission No.37, No.61, Total Environment Centre, Nature Conservation Council, Inland Rivers Network, Australian Conservation Foundation, National Parks Association and Friends of the Earth, p.3.

⁴⁰ Submission No.37, No.103 NSW Agriculture, p.3.

⁴¹ Submission No.33, NSW Health, p.5.

A number of submissions called for a “scientifically established” clarification of harm.⁴² The NSW Environment Protection Authority in its submission to the Committee recognised the need for a scientific reference point for “harm” where it stated that:

...consideration could be given to a provision that persons may be prosecuted if there is evidence that they have caused excessive pesticide residues in agricultural produce. Excessive residues would be those that exceed maximum residue limits in the National Food Standard Code⁴³. A defence could be provided where pesticide users are able to show that they had only used the pesticide according to label or permit directions⁴⁴

To achieve clarity and avoid confusion with respect to the definitions of “harm”, a number of submissions from agricultural groups, NSW Agriculture and Avcare suggest that consideration be given to either the alternative expressions of “injuriously affects” in s.40 of the Victorian *Agricultural And Veterinary Chemicals (Control Of Use) Act 1992* or “adversely affects” in s.30 of the Tasmanian *Agricultural and Veterinary Chemicals (Control of Use) Act 1995*. For example, s.30(1) of the Tasmanian Act states:

30 (1) A person must not carry out or cause to be carried out agricultural spraying which *adversely affects* any person, plants, stock, agricultural produce, water bodies, groundwater or soil, on premises, or any premises, not owned or occupied by the person carrying out or causing to be carried out the agricultural spraying unless that person has obtained the permission of the owner or occupier of premises...

(2) In this section, “adversely affects”, in relation to plants, stock, agricultural produce, water bodies, groundwater or soil on premises, or any premises, means creating a residue of an agricultural chemical product in excess of the prescribed level in, or on the plants, stock, agricultural produce, water bodies, groundwater, soil or premises.

In the corresponding regulation, clause 45(1) of the *Agricultural and Veterinary Chemicals (Control of Use) Regulation 1996*, the “prescribed level of residue which adversely affects” these resources is:

- the Maximum Residue Limit in the case of stock and agricultural produce;
- the Drinking Water Guidelines in the case of water used as or to provide drinking water for stock, other animals and humans;

⁴² For example, Submission No.37, No.28, Kevin J Martin & Sons, p.1

⁴³ The National Food Standards Code is adopted into NSW law under the NSW *Food Act 1989*.

⁴⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p.4.

- a level determined by the Registrar⁴⁵ for groundwater or soil where a likely contamination of agricultural produce would occur to stock or plants in contact with the soil or groundwater;
- a level determined by the Registrar in the case of premises where it is likely that contamination of agricultural produce might occur from storage, processing or in contact with the premises or where anything on those premises would be rendered unsuitable for its normal use; and
- a level determined by the Registrar for stockfood where a likely contamination of stock fed on that stockfood could result.

Alternatively, the Victorian Act states:

40. (1) A person must not carry out agricultural spraying which injuriously affects-

- (a) any plants or stock outside the target area; or
- (b) any land outside the target area so that growing plants or keeping stock on that land can be reasonably expected to result in the contamination of the stock or of agricultural produce derived from the plants or stock..

(2) It is a defence to a prosecution under sub-section (1)(a) to prove that the plants or stock have no economic value.

However, despite these provisions (and those of Queensland or South Australia), there is no general reference to harm to the “environment” from pesticide misuse. NSW Agriculture is “not convinced” that a workable definition of environment for the purposes of this section was likely.⁴⁶

Neither the discussion paper nor the submission by the NSW Environment Protection Authority seek support for the definition of “harm to the environment” by reference to other pre-existing legislation. Since other jurisdictions do not provide a definition for “harm to the environment” and since consistency in other respects is proposed with the *Protection of the Environment (Operations) Act 1997*, it is presumed that the definition of “harm to the environment” in that Act would apply to the amended *Pesticides Act 1978*. Section 147 of the *Protection of the Environment (Operations) Act 1997* refers to the “Meaning of material harm to the environment” in the context of a duty to notify pollution incidents,

(1) For the purposes of this Part:

(a) harm to the environment is material if:

⁴⁵ The Regulation provides at clause 45(2) that any determination is to be published in the Gazette or newspapers in areas relevant to where a determination by the Registrar is made.

⁴⁶ Submission No.37, No.103 NSW Agriculture, p.3.

- (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
 - (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and
 - (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
- (2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

The definitions to Schedule 1 in the *Protection of the Environment (Operations) Act 1997* provide,

In this Act:...

harm to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.

In its response to concern raised about the term “environment” through its public consultation process, the NSW Environment Protection Authority attempted to provide a clarification of “environment” for the purposes of the Act in its submission to the Committee. The Authority’s submission stated that it could, for example, exclude air, water or noise pollution as these mediums are already protected under the *Protection of the Environment (Operations) Act 1997*.⁴⁷ Additionally, the environment “outside the property boundaries” in which the pesticide is applied would be protected, so that “off-property” harm by a pesticide application would be an offence. However, “within the boundaries of the target property” on which the pesticide is applied, only the harm caused deliberately or negligently to threatened species and critical habitat defined under the *Threatened Species Conservation Act 1995*, and other resident or migrating fauna could be an offence. It may be an offence if reasonable practical measures could have been taken to prevent harm.

An example provided by the NSW Environment Protection Authority in this instance is where an insecticide applied to a field, kills non-target pests, this would not be an offence as there was no reasonable practical measure which could be taken to prevent this harm. If however, the insecticide harms birds that were clearly present and feeding, then practical measures could have been, but were not taken to avoid the harm.⁴⁸

⁴⁷ Submission No.37, Environment Protection Authority NSW, Part 2, p.5.

⁴⁸ Submission No.37, Environment Protection Authority NSW, Part 2, p.5.

It was submitted by Avcare, that despite the intentions of the discussion paper to deal with pesticide misuse consistent with other jurisdictions,⁴⁹ the NSW Environment Protection Authority proposals in their totality go beyond any other Australian legislation in creating penalties for environmental and other damage arising from pesticide misuse.⁵⁰ Avcare submits that, although the discussion paper seeks consistency with the *Clean Waters Act* and the *Waste Minimisation and Management Act*, it is the objective of those Acts to protect certain aspects of the environment and not regulate the use of products that can cause damage. Accordingly, as it is the objective of the *Pesticides Act 1978* to control use of products that can potentially cause damage, the objectives are different and should not be confused.⁵¹

A further concern raised in submissions was that the provision for the protection of the environment does not duplicate or overlap other environmental laws. To address this concern, the NSW Environment Protection Authority will address issues such as providing an exemption from the *Pesticides Act 1978* where a person holds a license under another environmental instrument which permits activities which may harm the environment.⁵²

The Standing Committee considers the impact of pesticide exposure on human health is more severe on children and that special consideration should be given accordingly within the definition of harm.

Recommendation 19

The Standing Committee recommends that the *Pesticides Act 1978* be amended to create an offence for the intentional or negligent pesticide use or disposal that threatens or harms the environment.

Recommendation 20

The Standing Committee recommends that clear and unambiguous definitions be provided for the words “harm” and “environment” in the *Pesticides Act 1978*.

Recommendation 21

The Standing Committee recommends that the *Pesticides Act 1978* reflect the greater sensitivity of children to pesticide exposure within the definition of harm.

⁴⁹ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3, p.3.

⁵⁰ Submission No.40, Avcare, Appendix 5, p.3.

⁵¹ Submission No.20, Avcare, Appendix 5, p.1.

⁵² Submission No.37, Environment Protection Authority NSW, Part 2, p.5.

Recommendation 22

The Standing Committee recommends that in defining the concepts of “harm” and “harm to the environment”, the NSW Environment Protection Authority consider relevant provisions in the *Tasmanian Agricultural and Veterinary Chemicals (Control of Use) Act 1995*, the *Victorian Agricultural And Veterinary Chemicals (Control Of Use) Act 1992* and the *New South Wales Protection of the Environment (Operations) Act 1997*.

4.2.6 Penalty provisions

The current penalty provisions in the *Pesticides Act 1978* for serious pesticide misuse, being failure to follow the label (s.33) or wilfully causing risk of injury (s.37) impose a fine of \$22,000 (200 penalty units) for an individual, or \$44,000 (400 penalty units) for a corporation.

The discussion paper proposes two levels of penalties based on whether there was a failure to follow the label or unintentionally causing harm (see 3.2.5.1 and 3.2.5.2), or where there is an intentional or negligent action causing actual or risk of harm or damage (3.2.5.3 and 3.2.5.4).⁵³ The current penalty under s.37 for wilful or careless misuse would be retained for the proposed lesser unintentional offences being a maximum of \$44,000 for corporations and \$22,000 for individuals. The more serious offences with intent would be in line with Tier 2 offences under the *Environmental Offences and Penalties Act 1989*, being \$60,000 for individuals and \$125,000 for corporations.

Since the release of the discussion paper, the *Protection of the Environment (Operations) Act 1997* was passed which includes substantial increases in penalties for environmental offences to enhance the deterrent value. The equivalent Tier 2 offences carry a maximum penalty of \$120,000 for individuals and \$250,000 for corporations.

In response to this, the NSW Environment Protection Authority in its submission to the Committee, proposed that another option be considered regarding penalty levels to reflect the new legislation. The submission contends,

Failure to institute penalties in the *Pesticides Act* that are more in accordance with the *Protection of the Environment (Operations) Act 1997* would mean that agricultural producers would be subject to substantially different levels of penalties for environmental offences depending on the aspect of their operations caused the problem. It

⁵³ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.6, p.5.

could also be inferred that pesticide misuse is a less serious environmental issue.⁵⁴

The NSW Environment Protection Authority further states that while the more serious offence would apply to intentional or negligent harm, the less serious offence for unintentional harm or failure to follow the label could be set at a correspondingly lower level of \$60,000 for individuals and \$120,000 for corporations. There is no equivalent provision to this in the *Protection of the Environment (Operations) Act 1997*.

A significant number of submissions received from agriculture industry groups expressed concern with respect to penalty levels and requested that consideration be given to situations where a “corporation” may be a small family owned business trading under a corporate name and not a large corporation (both of which are subject to the same maximum penalty). Industry groups also argued that it would not be equitable to penalise family businesses at a penalty commensurate with corporations because they generally have fewer resources.⁵⁵ All Members of the Standing Committee expressed concern that the Court take into account the financial position of families and family owned corporations when issuing penalties for corporations.

One submission from Dow AgroSciences suggested that offence penalties should be reduced significantly where the offender makes a voluntary disclosure about the problem or demonstrably cooperates with officials. It is argued that this would decrease cover-up behaviour and provide for a more efficient management of incidents.⁵⁶

The courts generally give due consideration to such matters as admission of guilt and ability to pay penalties. The establishment of a “maximum” level provides judicial discretion to impose a penalty far less if necessary in the circumstances presented. The Standing Committee recognises the requirement for a stronger deterrent to potential offenders and that agricultural producers should be subject to penalty levels for environmental offences consistent with offenders under other legislation.

Recommendation 23

The Standing Committee recommends that the penalties for serious breaches of the *Pesticides Act 1978* be amended to introduce penalty levels consistent with the *Protection of the Environment (Operations) Act 1997*.

⁵⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p.8.

⁵⁵ For example, Submission No.37, No.83, Macquarie River Food & Fibre, p.1; Submission No. 17, NSW Farmers’ Association, Appendix A, p.6.

⁵⁶ Submission No.9, Dow AgroSciences, p.7; citing M. Mortimer, “Queensland Department of Environment and Heritage Directions in Setting and Enforcing Water Quality Standards”, 30 May 1995.

4.2.7 Minor offences

4.2.7.1 Local Court imposed penalties

Where minor breaches currently occur under the *Pesticides Act 1978*, a prosecution must be lodged in a Local Court pursuant to s.59 of the Act. The maximum penalty a local court may impose for an offence is \$5,500 (s.59(1A)).

The introduction of the *Protection of the Environment (Operations) Act 1997* has heralded maximum fines that may be imposed by a Local Court of \$11,000 (s.215(2)). The NSW Environment Protection Authority's submission to the Committee contends that to maintain consistency with that Act, the penalty should be increased accordingly.⁵⁷

Recommendation 24

The Standing Committee recommends that the *Pesticides Act 1978* be amended so that maximum penalties for minor offences imposed by a Local Court are consistent with the relevant provision under the *Protection of the Environment (Operations) Act 1997*.

4.2.7.2 Penalty infringement notices

Currently, the *Pesticides Act 1978* does not provide for enforcement measures other than prosecution. Where a minor offence does not justify court time, the discussion paper advocates the option to issue penalty notices as used for Tier 3 offences under the *Environmental Offences and Penalties Act 1989*⁵⁸ with a maximum penalty of \$600. The introduction of the *Protection of the Environment (Operations) Act 1997* also made available to authorised officers, the ability to issue penalty notices with a maximum fine of \$1,500.⁵⁹ The *EPA Prosecution Guidelines* identifies offences liable for issue of penalty notices. These Guidelines may be applicable under the *Pesticides Act 1978* in the following instances:

- failing to read instructions on a label;
- using a pesticide contrary to a label;
- using an unregistered pesticide;
- failing to comply with a pesticide order;
- making prohibited claims about a pesticide;
- failing to comply with a direction of an inspector;

⁵⁷ Submission No.37, Environment Protection Authority NSW, Part 2, p.8.

⁵⁸ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.8, p.6.

⁵⁹ Section 222; the offences are listed in Schedule 1 to the *Protection of the Environment Operations (Penalty Notices) Regulation 1999*.

- storing a pesticide other than in a container that bears the registered label; and
- failing to comply with a compliance notice.

The NSW Environment Protection Authority's submission contends that penalty infringement notices save time, avoid legal costs and no criminal conviction is recorded. Further, those aggrieved with being issued a penalty infringement notices may elect to have the matter heard in a court.⁶⁰

A number of submissions from environmental groups, grower industry groups and an agronomist raised concerns with the amount and types of offences categorised as minor particularly with respect to use of an unregistered pesticide.⁶¹

The NSW Environment Protection Authority discussion paper proposed to delegate the power to issue penalty notices to other public authorities such as local councils after further consultation. The majority of submissions received including industry, environment and community groups were opposed to the delegation of the NSW Environment Protection Authority's power. The submissions indicated the concerned that local authorities may not possess the expertise nor be in a position to exercise powers impartially where conflicts of interest may occur within local government.⁶²

During the NSW Environment Protection Authority's own consultation process, it was noted that a "strong opposition" was expressed to the delegation of the NSW Environment Protection Authority's power. Accordingly, the NSW Environment Protection Authority has acknowledged that it will limit consideration of the power to issue penalty infringement notices to the NSW Environment Protection Authority only.⁶³

The Standing Committee recognises that an additional enforcement tool is required where administrative expedience outweighs the gravity of the offence. The Standing Committee concurs with the view that the issue of penalty notices should be undertaken by a designated officer of the NSW Environment Protection Authority.

Recommendation 25

The Standing Committee recommends that the *Pesticides Act 1978* be amended to introduce a system of penalty infringement notices that are clearly defined from offences applicable for serious pesticide misuse. For example, failure to read instructions on a label may draw an offence under both provisions.

⁶⁰ Submission No.37, Environment Protection Authority NSW, Part 2, p.9.

⁶¹ For example, Submission No. 25, Cotton Consultants Australia, p.2; Submission No.37, No.26, Gunnedah Chemical Liaison Committee, p.3.

⁶² For example, Submission No. 17, NSW Farmers' Association, Appendix A, p.7

⁶³ Submission No.37, Environment Protection Authority NSW, Part 2, p.9.

4.2.7.3 Non-punitive options

Many submissions across all sectors raised the need for not only punitive provisions but also for the option of other non-monetary penalties. Such provision would empower the courts to deliver more appropriate penalties with greater flexibility.

Options that may be considered include:

- compulsory training and education of users;
- requirement to conduct an environmental audit;
- requirement to implement measures or activities to remediate occurrences of environmental harm; and
- pay reasonable remediation costs and expenses incurred by a public authority.

It is recognised across all stakeholder groups that appropriate training is the most effective preventative mechanism for reducing pesticide misuse. Some submissions expressed surprise that given the proposed stricter penalties, that this is not backed by suitable education programs⁶⁴ (refer to section 3.4 regarding education and training).

Recommendation 26

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide the NSW Environment Protection Authority and Local Courts with discretionary powers to compel an offender, where appropriate, to undertake penalty measures such as education or remediation in addition to, or instead of fines.

4.2.8 Sentencing guidelines

The *Pesticides Act 1978* does not currently provide guidelines to the Court on matters to consider for determining penalties.⁶⁵ The discussion paper indicates that as a result, low penalties have been imposed for serious misuse of pesticides.⁶⁶

Accordingly, the discussion paper proposes to alleviate this issue by enacting a provision similar to the *Environmental Offences and Penalties Act 1989*, where the following matters may be considered be a Court:

- the harm or likely harm caused to a person or the environment, or damage or likely damage caused to a person's property;

⁶⁴ See for example, Submission No.40, Avicare, Appendix 5, p.2.

⁶⁵ Part 3, Division 2 of the *Pesticides Act 1978* only provides prosecution guidelines.

⁶⁶ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.7, p.6.

- practical measures that may have been taken to prevent, control, abate or mitigate that harm;
- the reasonable foreseeability of the harm that was or could be caused;
- the extent to which the person charged had control over the commission of the offence; and
- whether the person who committed the offence had complied with the order of an employer or supervisor.

The introduction of the *Protection of the Environment (Operations) Act 1997* has not changed the matters to be considered by a court in imposing a penalty.⁶⁷

In addition, the Standing Committee supports the need to consider children's health in the proposed guidelines. In imposing penalties, consideration should be given to offences that are committed where children are "reasonably expected" to be present.

Recommendation 27

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide guidelines to the courts on matters to consider for determining penalties.

4.2.9 Pesticide orders and compliance notices

4.2.9.1 Pesticide orders

The current *Pesticides Act 1978* confers significant powers on the Registrar of Pesticides to make orders to control the application of pesticides and fertilisers by aircraft (ss.49A – 49E). There are no similar provisions specifically relating to orders over pesticide application on the ground.⁶⁸

To remedy the situation, the discussion paper proposes to clarify the powers of the Registrar to make orders relating to the manner of use of a pesticide for both ground and aerial applications.⁶⁹ It is proposed that an order would be made in the following circumstances where it would prevent:

- danger to health of the public;
- undue risk to the environment;
- damage to property; and
- adverse effect on the trade of agricultural produce.

⁶⁷ Section 241.

⁶⁸ There is a general power to make "pesticide orders" under ss.26-28.

⁶⁹ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.9, p.7.

Before any order is made, the NSW Environment Protection Authority may be required to consult with a Pesticide Advisory Committee and where appropriate seek wider community advice.⁷⁰ Orders would be introduced statewide or regionally through the formal gazettal process following consent of the Minister. The orders would not be applied specifically to individuals or properties.

The discussion paper identifies one such order as permitting the use of pesticides at a lower concentration, lower application rate, or at less frequent intervals than specified on the label unless specifically precluded by directions on the label (refer to section 4.2.5.1). However, as stated earlier, the discussion paper also explains that there will be no intention for orders to duplicate or overrule the responsibilities of the National Registration Authority in setting nationally consistent controls on labelling. A submission from the Cooperative Research Centre for Weed Management Systems, contended that it is possible to vary optimal dosage rates depending upon growing and environmental conditions. It is argued that this has the significant benefits of reducing costs, reducing residues and extending the commercial life of herbicides by reducing the selection pressure for herbicide resistance.⁷¹

NSW Health expressed concern however, that permitting lower concentration rates will in effect conflict with the powers of the National Registration Authority as it is not only charged with responsibility for setting nationally consistent controls on directions on labels, but also ensures efficacy of the pesticide when used according to label instructions. The submission queries whether the Registrar would consult with the National Registration Authority and chemical companies before making orders.⁷²

The Australian Beef Association submitted that specific conditions under which aerial or ground spraying should take place should be implemented as a pesticide order. This includes conditions such as wind velocity, humidity, temperature and droplet size.⁷³

Recommendation 28

The Standing Committee recommends that the *Pesticides Act 1978* be amended to empower the NSW Environment Protection Authority, through pesticide orders, to control ground based application of pesticides.

⁷⁰ Submission No.37, Environment Protection Authority NSW, Part 2, p.10.

⁷¹ Submission No.58, Cooperative Research Centre for Weed Management Systems, pp.5-7.

⁷² Submission No.37, No.111, NSW Health, p.2.

⁷³ Submission No.34, Australian Beef Association, p.2.

4.2.9.2 Compliance notices

While pesticide orders have a broader focus, a provision for site specific compliance notices is also proposed where urgent action is required to prevent harm or clean up contamination from pesticides. The *Pesticides Act 1978* does not currently provide the NSW Environment Protection Authority with power to issue compliance notices to individuals or properties. The discussion paper proposes to confer power on the NSW Environment Protection Authority to issue compliance notices requiring action to⁷⁴:

- prevent, prohibit or cease an activity which, if it is allowed to proceed would be likely to harm people, property or the environment; or
- clean up contamination caused by pesticide use.

Examples of situations where a notice would be issued include:

- where an unregistered pesticide is being used or a pesticide is being applied contrary to the label;
- where faulty equipment needs to be fixed or re-calibrated;
- where a pesticide is used in unsafe circumstances (eg. high winds or sensitive sites) – a notice could place time or other restrictions on spray operations;
- where pesticides have been used or stored in a potentially harmful way.

It is proposed that there would be rights of appeal against a notice except for notices requiring clean up action or where urgent action is required to prevent harm.

Part 4 of the *Protection of the Environment (Operations) Act 1997* provides for various “environment protection notices” which cover clean-up, prevention and prohibition actions. In its submission to the Standing Committee, the NSW Environment Protection Authority considered that a similar provision could be inserted in the *Pesticides Act 1978* in terms of the scope of such notices and the constraints on the NSW Environment Protection Authority. A notice could be applied where the NSW Environment Protection Authority “reasonably suspects” that the manner in which the activity is carried out could cause a risk of harm to health, property, the environment and trade.

Recommendation 29

The Standing Committee recommends that the *Pesticides Act 1978* be amended to empower the NSW Environment Protection Authority to issue site specific compliance notices where urgent action is required to prevent harm and/or remediate contamination from pesticides.

⁷⁴ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.9, pp.7-8.

4.2.10 Banning use of unsuitable aircraft

The *Pesticides Act 1978* does not expressly prohibit the use of aircraft that are not endorsed for use by the Civil Aviation Safety Authority Australia. The discussion paper advocates prohibiting the use of any aircraft for agricultural spraying that is not endorsed for spraying by Civil Aviation Safety Authority Australia.⁷⁵ The offence would include attaching spray equipment to prohibited aircraft also. The amendment would leave Civil Aviation Safety Authority Australia with responsibility for determining the suitability of aircraft.

A specific target of the proposed provisions is to prevent the use of ultra light aircraft. The discussion paper claims that such aircraft are unstable and can contribute excessively to spray drift.

Submissions received by the Standing Committee revealed quite disparate views regarding the banning of ultralight aircraft use. Submissions in favour of the ban, particularly from environmental groups and aerial operators expressed concern at the danger such aircraft present with respect to air safety and spray drift and that regulation of aircraft suitability should remain with Civil Aviation Safety Authority Australia.

Agricultural industry groups and ultralight operators on the whole suggested that in appropriate weather conditions for spraying, an ultralight can perform in a competent, responsible and cost effective manner. It was argued that the NSW Environment Protection Authority should be more concerned with the efficacy of application rather than the type of aircraft used. Specifically, the Ricegrowers Association submitted that banning non-endorsed aircraft would constrain innovation in application techniques and that:

The intention [of the Act] should not be to restrict application methods but to ensure that the operator is competent. Therefore aircraft should not be treated separately from other ground-based application methods.⁷⁶

The Standing Committee appreciates the need to not only ensure the safety of pesticide application methods but also that widely varying views have been advanced regarding their use. Further investigation should be conducted by the NSW Environment Protection Authority before a final decision is made.

The Standing Committee expressed the concern that ultra light aircraft retro fitted with pesticide application equipment are not operating in accordance with aircraft manufacturing design.

⁷⁵ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 3.5, p.5.

⁷⁶ Submission No. 37, No.105, Ricegrowers' Association of Australia, p.2.

Recommendation 30

The Standing Committee recommends that aircraft used for aerial spraying purposes must be accredited by the Civil Aviation Safety Authority of Australia as suitable for aerial spraying purposes. Further, that the Civil Aviation Safety Authority of Australia conduct a comprehensive consultation process to evaluate the suitability of aircraft such as ultra light aircraft for pesticide application.

4.2.11 Pesticide licenses

4.2.11.1 Ongoing licences

The changes proposed to licensing arrangements are of administrative and not substantive concern. Presently, if there is a need to vary the conditions of a pesticide license issued to a pilot or aerial operator, it must be cancelled under s.22N and reissued under s.22F. The discussion paper proposes to allow for ongoing licences where amendments to the conditions of a licence may be made without cancellation of the licence.⁷⁷ It is also proposed to introduce appeal provisions for licensees and applicants for licences.

4.2.11.2 Approaches to Licensing

Three approaches to licensing of pesticide applicators exist within the New South Wales pesticide industry. Firstly, urban pest and weed control contractors are licensed by the WorkCover Authority of NSW. Under the *Occupational Health and Safety Act 1983*, the WorkCover Authority of NSW administers the *Hazardous Substances Regulation 1996*.⁷⁸ WorkCover Authority of NSW licences apply to urban pest control and non-agricultural fumigation procedures.⁷⁹

Secondly, ground-based agricultural pesticide applicators are not required to be licensed.⁸⁰ Thirdly, aerial agricultural pesticide applicators are licensed by the NSW Environment Protection Authority. In all other Australian States Public Health Departments administer urban pest control licensing while the Agriculture (Primary Industry) Departments administer agricultural pest and weed control licensing.⁸¹ Queensland and Victoria have made the carrying of Public Liability Insurance compulsory as part of pesticides licensing.⁸²

⁷⁷ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 4.1, p.8.

⁷⁸ Submission No 2, Additional, WorkCover, p.1.

⁷⁹ Submission No 2, Additional, WorkCover, p.2.

⁸⁰ Submission No 28, Rapid Solutions, p. 4.

⁸¹ Submission No 28, Rapid Solutions, p.5.

⁸² Submission No 28, Rapid Solutions, p.5.

Mr Graham Hellier, of Rapid Solutions, Pest and Weed Control Contractors, in his submission supported the licensing of all pesticide applicators:

Clearly there is a very good reason to license Agricultural Contractors as occurs in all other states.⁸³

4.2.11.3 Licensing of urban pest applicators

Rather than splitting the licensing of pesticides between Health and Agriculture, as is done in other states at present, it may be more efficient to place responsibility for licensing with one organisation.

A number of urban pest control companies and a major industry body, the Australian Environmental Pest Managers Association (NSW Branch), recommended the transfer of responsibility for licensing urban pest and weed controllers from the WorkCover Authority of NSW to the NSW Department of Health. Mr Brian Inall, Chairman of the Australian Environmental Pest Managers Association (NSW Branch) stated:

In relation to the administration of pest control licensing, we believe that WorkCover is not the appropriate regulatory authority. We believe that not from the point of view that we are dissatisfied with WorkCover's administration..WorkCover cannot ensure public health best practice it is out of WorkCover's bailiwick and urban pest control works basically hand in hand with public health or in the pursuit of public health objectives.

In relation to national consistency, all other major States are administered by public health authorities, and we feel that, in pursuit of national consistency, that would be a sensible thing to do. This is why we are recommending that licensing in New South Wales be administered by public health, to facilitate compliance with public health best practice.⁸⁴

The Standing Committee acknowledges that a greater consistency in the approach to licensing and administrative efficiencies are likely if the administrative responsibility for licensing all pesticide applicators in New South Wales resided with one State government agency. The Standing Committee considers that the NSW Environment Protection Authority would more appropriately manage the WorkCover Authority of NSW's licensing responsibilities for urban pest and weed controllers. Reasons to substantiate this view relate firstly to the organisational

⁸³ Submission No 28, Rapid Solutions, p.4.

⁸⁴ Evidence of Mr Inall, Australian Environmental Pest Managers Association (NSW Branch), 5 August 1999, p.394.

focus of NSW Department of Health. The Department is largely Area Health Service based with a degree of autonomy between Area Health Units that may not provide for a coordinated, centralised and consistency approach to pesticide applicator licensing. Secondly aerial agricultural pesticide applicators are already licensed by the NSW Environment Protection Authority, which enables greater consistency in licensing of urban and rural pesticide applicators through administration by one government agency. Thirdly administrative efficiencies and set up costs can be avoided by devolving licensing to the NSW Environment Protection Authority that already has a licensing framework established.

Recommendation 31

The Standing Committee recommends that WorkCover Authority of NSW's administrative responsibility for licensing of urban pest and weed controllers be transferred to the NSW Environment Protection Authority. The transfer should not only include the transfer of responsibility from WorkCover Authority of NSW to the NSW Environment Protection Authority but also the corresponding resources including funding, persons or positions, records and data needed to maintain existing responsibilities.

4.2.12 Prosecutions

4.2.12.1 Environment Protection Authority powers

Under s. 59 of the *Pesticides Act 1978*, the consent of the Minister is required before a prosecution may proceed. The discussion paper proposes that proceedings under the *Pesticides Act 1978* should be undertaken with the consent of the NSW Environment Protection Authority, in accordance with the principle in the *Protection of the Environment Administration Act 1991*, that the prosecution process should be independent of Ministerial direction⁸⁵

A few submissions received, including one from the NSW Farmers' Association argued that the responsibility of the Minister should not be delegated:

It is the Parliament which is responsible for the legislative process, not their supporting Departments. Minister's responsible for the implementation of regulations also require feedback first hand, on whether or not a piece of legislation is achieving the desired result.⁸⁶

⁸⁵ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 4.2, p.8.

⁸⁶ Submission No. 17, NSW Farmers' Association, Appendix A, p.8.

4.2.12.2 Third party standing - prosecutions

An issue not canvassed in the discussion paper but which received prominence in submissions from both environment and industry groups was the right for third parties to commence prosecutions as is permitted under s.219 of the *Protection of the Environment (Operations) Act 1997*.⁸⁷ A number of industry groups expressed concern regarding vexatious complainants that would seriously undermine community confidence in the regulation of pesticide use.

The Act permits third parties to institute proceedings for an offence with the leave of the Land and Environment Court. The Court however will not grant leave unless it is satisfied that:

- the NSW Environment Protection Authority has decided not to take any relevant action or has not made a decision on whether to take such action within 90 days after the person requested the NSW Environment Protection Authority to institute the proceedings, and
- the NSW Environment Protection Authority has been notified of the proceedings, and
- the proceedings are not an abuse of the process of the Court, and
- the particulars of the offence disclose a prima facie case of the commission of the offence.

A number of submissions supported a third party complaint mechanism where the NSW Environment Protection Authority would commence action in response to a complaint where necessary.⁸⁸ In correspondence to the Standing Committee, the NSW Farmers Association stated that there were two main factors why the NSW Environment Protection Authority should not be able to launch prosecutions independent of Ministerial direction:

The first is that this is a procedure...that is common in other legislation (such as Prevention of Cruelty to Animals Act) and acts as a discipline on Departments to prevent Ministerial embarrassment. In its absence, the potential exists for somewhat questionable prosecutions to be launched by the EPA that fail, leading to questions about the legislation, and the competence of the Minister and the Department.

The second factor is the propensity for staff within the EPA to initiate prosecutions in a vindictive fashion, where the prosecution is based more on a clash of personalities than on the substance of an alleged breach. If Ministerial approval is not required before a

⁸⁷ For example, Submission No.37, No.106, Richard Jones MLC, p.2.

⁸⁸ For example, Submission No.37, No.26, Gunnedah Chemical Liaison Committee, p.4.

prosecution is launched, there is a much greater degree of power transferred to ground-level inspectorial staff.⁸⁹

In light of the critical prerequisites to initiating a third party prosecution and the judicial consideration required by the Land and Environment Court, it is unlikely vexatious complaints would succeed.

4.2.12.3 Third party standing – restraint of breach or potential breach

The powers of third parties to initiate proceedings to restrain a breach or potential by pesticide users was not raised in the discussion paper but was also the subject of a significant number of submissions from environment and industry groups.

There is currently no expressed third party standing in the *Pesticides Act 1978*. Other environmental legislation including ss.252 and 253 of the *Protection of the Environment (Operations) Act 1997* include injunction powers for either an alleged breach of the Act (or regulations) or in relation to harm to the environment.

In support of such a provision, the NSW Environment Protection Authority has stated:

Community conflict over pesticide use is a major issue particularly in rural NSW, and this ongoing conflict is a significant drain on public resources. Explicit provision for open standing to restrain a breach of the Act would give those members of the community who are dissatisfied with specific lack of compliance with the Act by pesticide users with a mechanism to bring their grievance before the Court.⁹⁰

As with third party prosecutions, concerns were raised by a number of agricultural industry submissions concerning economic loss resulting from vexatious claims by disgruntled members of the community.⁹¹ In addressing these concerns, the NSW Environment Protection Authority has stated that:

To the extent that all applicants would be required to provide rigorous evidence to the Court in order for their claim to succeed and be prepared to pay damages for losses incurred by the other party if their case is unsuccessful, vexatious actions would be discouraged.⁹²

The NSW Farmers' Association opposes the provision of third party restraint powers. In correspondence to the Standing Committee, the Association stated:

⁸⁹ Tabled document, NSW Farmers, dated 19 September 1999.

⁹⁰ Submission No.37, Environment Protection Authority NSW, Part 2, p.12.

⁹¹ Submission No.37, No.91, Mr Haynes, p.1

⁹² Submission No.37, Environment Protection Authority NSW, Part 2, p.12.

While it may be proposed that the initiator of the restraint order would be required to pay compensation, the practical reality of such arrangements seriously disadvantages landholders. Firstly experience in other jurisdictions has shown that the potential threat of a restraint order can be as damaging to a landholder as the reality.

Secondly, activist groups intent on stopping what is otherwise a legal activity have in the past ensured that the restraint proceedings are initiated by an individual with no assets, or by someone who is prepared to use bankruptcy proceedings to avoid paying any subsequent damages. It is also important to bear in mind that damages...may amount to millions of dollars, and even if the individual who launched the prosecution had the assets, the awarding of damages can be a long, drawn-out process that would provide little immediate recompense to farmers.⁹³

It is the view of the NSW Environment Protection Authority that even if the provision were not actually used, it would encourage a more conciliatory approach to conflicts and may assist in resolving long-standing disputes. The third party powers would nevertheless allow for “test” cases to come forward where the NSW Environment Protection Authority has not considered prosecution or where restraint is warranted.⁹⁴

Third party standing for restraining breaches or potential breaches of environmental legislation has existed since the enactment of the *Environmental Offences and Penalties Act 1989*. Provisions under this Act establish two safeguards against vexatious complaints. The first being that the claimant must satisfy the Court that a breach of the *Environmental Offences and Penalties Act 1989* has occurred in a preliminary hearing prior to a defendant being summoned. Secondly the Court may require the claimant to undertake an agreement to pay for damages if the claim is not proven, prior to imposing an injunction. The NSW Environment Protection Authority has advised that only 4 injunctions have been imposed to restrain a breach of the *Environmental Offences and Penalties Act 1989* since the Act’s inception.⁹⁵

4.2.13 Ministerial Powers

Currently, decision making powers with respect to fee variations, insurance approvals, appointment of inspectors, suspensions of licences, appeals, delegation of powers and approvals for destruction of pesticides reside with the Minister. The

⁹³ Tabled document, NSW Farmers, dated 19 September 1999.

⁹⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p.12.

⁹⁵ Correspondence of NSW Environment Protection Authority, 20 September 1999.

discussion paper argues that these are mostly administrative matters that are more appropriately administered by the NSW Environment Protection Authority.⁹⁶

4.2.14 Powers of inspectors

The *Pesticides Act 1978* confers extensive powers to inspectors for entry, search and seizure under ss.53-55 and 72. Section 54 contains a penalty of \$5,000 for obstructing an inspector from entering a property and making inquiries and s.55 imposes a \$2,000 penalty for failure for an accused to provide identification and address.

The discussion paper argues that stronger powers are required by pesticide inspectors to enable them to perform their duties more effectively.⁹⁷ It advocates that similar powers should be given to inspectors as those powers conferred on inspectors in other areas under the NSW Environment Protection Authority's jurisdiction, including the *Waste Minimisation and Management Act 1985* and the *Pollution Control Act 1970*.

Additional powers the discussion paper advocated include allowing inspectors to:

- use reasonable force with the aid of police;
- detain certain articles and substances without actual removal from the identified property;
- make relevant enquiries to ensure compliance with the Act;

Presently, if a person is required under s.53(5) to provide information that may incriminate them, the information cannot later be used in any proceedings against them. There is currently no penalty attached for failure to answer questions in this respect. The discussion paper proposes to create an offence for failure to answer questions of inspectors after they are informed that it is an offence for failing to answer. The privilege from self-incrimination would remain.

This proposed amendment prompted serious concerns from a number of submissions regarding whether the powers of inspectors would exceed those of police. In particular, suggestions were made that a person should have the right to seek legal advice as would occur in a normal criminal matter.⁹⁸ The Roads and Traffic Authority sought clarification that power of entry will not be exercised prior to written notice being given and suggested that inspectors comply with the provisions of the *Search Warrants Act 1985*.⁹⁹

⁹⁶ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 4.2, p.8.

⁹⁷ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 4.3, p.9.

⁹⁸ Submission No.37, No.21, Mr Hamparsum, p.1

⁹⁹ Submission No.37, No.100 Roads and Traffic Authority, p.1.

In relation to this concern, s. 53(1) of the *Pesticides Act 1978* already empowers inspectors to enter any place except a dwelling-house (unless imminent danger to a persons health is suspected) without the need for a search warrant or a police officer present. If required to enter a dwelling-house on reasonable grounds that a breach of the Act may occur, or has occurred, s.72 of the Act requires an inspector to apply for a search warrant and in that instance an inspector must be accompanied by a police officer.

The proposal to empower inspectors to use reasonable force with the aid of police is to facilitate an inspector's duties where an offender impedes an investigation, for example the ability to enter premises where a gate may be deliberately locked. As the presence of a police officer is required in such situations, an independent party is present and therefore inspector powers would not exceed police powers.

It is also proposed to extend the length of time seized property may be held by the NSW Environment Protection Authority from 6 months (s.62) to 12 months or until conclusion of proceedings. It is intended to permit a Local Court to not only extend the seizure period but to also order the return of the property to the owner upon application. This would provide seizure powers consistent with those in the *Stock Medicines Act 1989* and the *National Parks and Wildlife Act 1974*.

With the introduction of the *Protection of the Environment (Operations) Act 1997*, the NSW Environment Protection Authority submission further supported the following additional powers and responsibilities to inspectors¹⁰⁰:

- an offence to not give name and address;
- the ability to serve a notice on an occupier requiring assistance to be given; and
- powers to be exercised at a reasonable hour, except in an emergency.

In its submission, the Victorian Department of Natural Resources and Environment expressed concern that the discussion paper did not raise the issue of possible inter-state mutual recognition of licences for pilots and reciprocal powers for interstate inspectors when pursuing investigations across borders. Investigations into pesticide misuse from aerial spraying may lead to situations where the offender operates from interstate and the collection of information relating to offences currently stops at the state borders.¹⁰¹

The Standing Committee recognises that while the powers of inspectors are already extensive more powers are required in situations where an offender actively impedes an investigation.

¹⁰⁰ Submission No.37, Environment Protection Authority NSW, Part 2, p.11.

¹⁰¹ Submission No.37, No.88 Natural Resources and Environment, p.1.

Recommendation 32

The Standing Committee recommends that the *Pesticides Act 1978* be amended to provide inspectors with stronger powers to permit them to more effectively conduct their duties.

Recommendation 33

The Standing Committee recommends that the NSW Environment Protection Authority consult with corresponding Commonwealth, State and Territory agencies with regard to inter-state mutual recognition of licences for pilots and reciprocal powers for interstate inspectors when pursuing investigations across borders.

Recommendation 34

The Standing Committee recommends that the NSW Environment Protection Authority increase the number of pesticide inspectors servicing New South Wales and that the NSW Government provide additional funding to the Authority to meet such costs.

4.2.15 Shared liability

4.2.15.1 Commercial applications

Before pesticide application occurs, a decision making process usually occurs between the grower (occupier), a consultant or agronomist and the pesticide applicator (eg. the pilot in an aerial spraying operation).

As the applicator is directly responsible for application of the pesticide, if spray drift occurs, the sprayer is prima facie liable for an offence under s.37 for misuse since that person committed the physical act. It may be however that the misuse occurred due to insufficient information provided by the grower or consultant or the sprayer is directed to spray in inappropriate weather conditions or circumstances. It is apparent that there may be joint culpability between the parties.

However, the *Pesticides Act 1978*, does not provide for shared liability in contractual arrangements. Under s.62 of the Act, employers are jointly liable for offences committed by employees. This employer liability however does not extend to situations with contractor arrangements. Therefore the grower and the consultant would avoid liability for an offence. Similarly, an aerial agricultural chemical operator who contracts with a pilot to conduct spraying would also not be liable where the pilot commits an offence.

Consequently, the discussion paper proposes to legislate for the liability of¹⁰²:

- Employers, including spray operators, for the offences committed by their contractor's, agents and employees; and
- Growers for the offences of persons contracted (or the employees, contractors or agents of the contracted person) to apply pesticides to the grower's property. In the case of the grower, it would be a defence that, the offence committed was due to causes over which the grower had no control and the grower took reasonable precautions and used due diligence to prevent the offence being committed.

Noticeably, the discussion paper does not make a clear reference to the liability of consultants or agronomists who are contracted to provide specialist advice and direction on optimal pesticide application upon which the grower relies. The submission from the NSW Environment Protection Authority clarified this issue by stating:

...a provision should be considered which ensured that the occupier or consultant would not be liable if the offence occurred as a result of causes beyond their control and that they took reasonable precautions to try to prevent the offence.¹⁰³

The NSW Environment Protection Authority submission indicates that where a consultant is engaged, the grower is not necessarily excluded from liability. It contends that,

In rural areas, farmers can be expected to be aware of the requirements for pesticide use and bring such matters to the attention of contractors.¹⁰⁴

In its own consultation process, the NSW Environment Protection Authority acknowledged broad support (including aerial applicators) for the extension of liability to occupiers of land and consultants. It was demonstrated that the liability would create a responsibility for the occupier to communicate relevant information to the pesticide applicator concerning surrounding environmentally sensitive areas or crops and prevent undue commercial pressure being applied to applicators.

A number of submissions raised concerns at the extent of liability for occupiers, employers or growers for the actions committed by contractors where the grower relies on the expertise of the contractor. Such a view was raised by independent agricultural consultancy services,

¹⁰² Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 4.4, p.9.

¹⁰³ Submission No.37, Environment Protection Authority NSW, Part 2, p.6.

¹⁰⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p.6.

It is important to clearly define the boundaries of liability for the application of pesticides.¹⁰⁵

The Avcare submission suggested that where a landholder relies on the expertise of others, particularly contractors, the proposed defence should involve the landholder proving:

- There was no control over the pesticide application process; and
- reasonable precautions and due diligence was applied to prevent the offence being committed.¹⁰⁶

This approach would be similar to the defences contained in s. 62 of the *Tasmanian Agricultural and Veterinary Chemicals (Control of Use) Act 1995*.

Recommendation 35

The Standing Committee recommends that the *Pesticides Act 1978* be augmented to provide for joint or shared liability of all parties responsible for an offence where a breach of the Act occurs. To ensure equitable and effective implementation of this concept, the Standing Committee proposes the following:

- **All parties involved in the application of a pesticide which results in the commission of an offence may be liable under the *Pesticides Act 1978*;**
- **The *Pesticides Act 1978* should be amended to clearly define the boundaries of responsibility of each party for the application of pesticides;**
- **The parties should include the grower or occupier who is responsible for the application target area, the consultant or agronomist responsible for providing specialist advice and direction on the use of a pesticide, the pesticide applicator including the pilot in an aerial spraying operation or ground based operator, and any employee, employer or contractor of the parties responsible for the offence;**
- **In each case, it may be a defence that, the offence committed was due to causes over which the party had no control, took all reasonable precautions and used due diligence to prevent the offence being committed.**

4.2.16 Record keeping

Currently under s.49B the *Pesticides Act 1978*, only aerial operators must keep records of pesticide use. The NSW Environment Protection Authority has indicated that where there has been a risk to public health, damage to property or a residue violation in produce, the information collected from users does not only

¹⁰⁵ Submission No.37, No.87 Independent Agricultural Services, p.5.

¹⁰⁶ Submission No.40, Avcare, Appendix 5, p.8.

assist in investigating complaints of pesticide misuse, but is also critical for use by medical practitioners and regulatory authorities to prevent health risks and adverse impacts on trade.¹⁰⁷

Under reg.6 of the Victorian *Agricultural And Veterinary Chemicals (Control Of Use) Regulations 1996*, all non-professional users of Schedule 7 and certain prescribed agricultural chemical products are required to maintain detailed written records of pesticide applications. In addition to these record keeping measures, reg.7 requires professional aerial and ground operators to record further details for all applications of agricultural chemical products.

A number of submissions from various groups indicated the need for record keeping to provide information:¹⁰⁸

- where risks must be monitored;
- to the public about chemical burden on the environment;
- about the potential exposure of pesticides to the community; and
- for direct access of records by the public.

The NSW Environment Protection Authority supports the requirement for all commercial users of pesticides, including growers, to keep records of pesticide applications and that these records should be available for inspection or copying by the NSW Environment Protection Authority. The NSW Environment Protection Authority has implied that it is not willing to support providing the community with direct access to records.

The record keeping requirement would be consistent with a number of departmental and industry initiatives. Departmental initiatives include the voluntary requirements of the WorkCover, *Codes of Practice for the Safe Use and Storage of Pesticides* and NSW Agriculture's advisory booklet on the principles of *Spray Drift Management*. Industry initiatives incorporating record keeping include the wine industry's *Winecare* program, the agricultural industry *Cattlecare* and *Flockcare* programs.

At the Dubbo hearings of the Committee, Mr Peter Howat of Nufarm Australia, (Australia's largest chemical supplier) was asked for his view on the registration of pesticide users at the point of sale. He stated that,

Certainly, for schedule 7 poisons, I believe it is something that we should do, and we do do now. For the remainder of the products, I don't believe so. I think, with the courses that we have, both in the accreditation for resellers and for the farm care course, I don't believe

¹⁰⁷ Submission No.37, Environment Protection Authority NSW, Part 2, p.7.

¹⁰⁸ Submission No.37, No.82, Ms Cranny, p.2; No. 116, Environmental Defender's Office, p.6

we need to go further than that in terms of registration for every usage.¹⁰⁹

The Environmental Defender's Office advocates that full reporting of agricultural chemical use be required by both individual pesticide users and commercial pest control operators, that is, those in the business of pest control for hire, ground and aerial applicators, structural operators and professional gardeners. This would involve monthly or quarterly reports on pesticide use to the NSW Environment Protection Authority. As part of this scheme, every such commercial pesticide operator would be required to obtain an operator identification number from the NSW Environment Protection Authority so that it can track the quantity of regulated pesticides applied each period. Individual pesticide users would only require such identification where amounts of regulated pesticide used exceed a set threshold. Under the scheme, commercial pest control operators would be required to report the use of pesticides within seven days of completion of the application.¹¹⁰ The information collected would assist the NSW Environment Protection Authority in collecting relevant information for management with respect to risk assessment in areas, community health, worker health and safety, water contamination and pest management in specific regions.

A record keeping initiative implemented by a number of aerial spray operators is the use of Global Positioning Satellite (GPS) marking systems. Mr Peter Middlebrook of Middlebrook Air Services gave evidence to the Committee that since the installation of this system in his aircraft, not only has accuracy of application improved to within a metre, but also that,

...complaints have decreased by 80 per cent, because we could prove that is where we were, and we could say that was a vexatious complaint. Before that, we had to go through every complaint and justify.

Mr Middlebrook advised that a complainant cannot allege falsification of records as there is no physical way of altering the geographical position on earth.¹¹¹ The initial system cost \$50,000 with software and subsequent units cost between \$28,000 and \$30,000. Previously, whenever a complaint was made, two staff were tied up for three to four days assisting the NSW Environment Protection Authority until all the facts were collected.¹¹² Undergoing less investigations would mitigate the initial capital outlay.

¹⁰⁹ Evidence of Mr Howat, Nufarm Australia Ltd, 26 July 1999, p.191.

¹¹⁰ Submission No.37, No.111 Environmental Defender's Office, p.6.

¹¹¹ Evidence of Mr Middlebrook, Middlebrook Air Services, 27 July 1999, pp.248-249.

¹¹² Evidence of Mr Middlebrook, Middlebrook Air Services, 27 July 1999, p.249.

Recommendation 36

The Standing Committee recommends that the *Pesticides Act 1978* be amended to require all statutory, professional and commercial users of pesticides, including primary producers, keep records of pesticide applications and that these records should be available for inspection and/or copying by the NSW Environment Protection Authority. Accordingly the NSW Environment Protection Authority should develop a proforma document for recording relevant information.

Recommendation 37

The Standing Committee recommends that the NSW Environment Protection Authority be empowered to provide records of pesticide applications for research purposes to other statutory bodies including NSW Health and the Department of Urban Affairs and Planning.

Recommendation 38

The Standing Committee recommends that aerial applicators be strongly encouraged implement Global Positioning Satellite marking systems as a record keeping device for use by aerial applicators. The Standing Committee recognises that such systems would not only provide irrefutable and time-saving evidence to investigators, but would also benefit applicators in defence of offences arising from pesticide applications.

Recommendation 39

The Standing Committee recommends that areas identified for aerial pesticide application be validated by a Global Positioning Satellite marking system (handheld or other).

4.2.17 Liability in domestic applications

The discussion paper did not include the issue of liability for offences in residential situations. A criticism made of the discussion paper by several organisations including the Environmental Defender's Office¹¹³ was that in primarily focussing on agriculture, it omitted to explicitly consider the problems associated with the use and disposal of domestic and urban pesticides.

In its submission, the NSW Environment Protection Authority considers the issue of occupiers of land used exclusively for residential purposes.¹¹⁴ The submission

¹¹³ Submission No.37, No.116 Environmental Defender's Officer, p.3.

¹¹⁴ Submission No.37, Environment Protection Authority NSW, Part 2, p.6.

proposes that an occupier should not be liable unless the occupier gave a direction to the applicator and that the occupier knew it would result in an offence being committed. The exclusion of liability would recognise the substantial knowledge gap between pest control operators and the persons who engage them in residential areas.

Recommendation 40

The Standing Committee recommends that the NSW Environment Protection Authority conduct a public education program in the use, management and disposal of pesticides in non-farming situations.

4.2.18 Statutory Advisory Committee

The discussion paper recognised that there are a significant number of interest groups concerned with pesticides and the responsibilities of government and industry.¹¹⁵ Accordingly, a statutory advisory committee was proposed to provide a source of community feedback to the Minister and the NSW Environment Protection Authority on pesticide policies and management. A slightly revised version of the proposed membership of this advisory committee was advanced to the Standing Committee in a subsequent submission by the NSW Environment Protection Authority. The submission suggests a committee chaired by the NSW Environment Protection Authority with 12 members with expertise and representation as follows:

- Environment and community: environmental impact of pesticide application, catchment management, promoting ecologically sustainable development, and local government
- Industry: pesticide product supply and management, pest control operators' practices, the use of pesticides in agriculture, aerial pesticide application practices; and
- State government: NSW Agriculture, WorkCover NSW, NSW Health, Department of Urban Affairs & Planning.¹¹⁶

It is also suggested that a nominated representative from NSW National Parks and Wildlife, Department of Land and Water Conservation and Rural Lands Protection Boards and a representative with experience in the use and exposure of pesticides by consumers could be invited from time to time as required to provide relevant input on specific issues. It is argued that this representation would provide a balance of government, industry, community and environment representatives.

¹¹⁵ Improving Pesticide Management in NSW: Discussion paper, Environment Protection Authority, Item 5, p.10.

¹¹⁶ Submission No.37, Environment Protection Authority NSW, Part 2, p.6.

Almost all submissions received which commented on advisory committees were positive about the need to establish such a body. Various views were advanced on the membership of the advisory committee. Significant support across interest groups was received for the involvement of representatives from catchment management organisations and rural lands protection boards. Some submissions also suggested that direct stakeholders only be included and that community representatives without expertise in pesticide management should be excluded.

Recommendation 41

The Standing Committee supports the establishment of a statutory advisory committee in accordance with the revised model proposed by the NSW Environment Protection Authority.

Recommendation 42

The Standing Committee recommends that the NSW Environment Protection Authority review and report on the membership and structure of the statutory advisory committee in 12 months of its establishment to determine its effectiveness and the level of stakeholder satisfaction.

4.2.19 Notification of neighbours

The *Pesticides Act 1978* does not currently require pesticide users to notify neighbours of spraying operations and the discussion paper did not raise this as an issue for consideration.

The NSW Farmers' Association has recognised that many of the problems that arise in communities regarding pesticides can be attributable to the lack of communication between the user of pesticides and their neighbours.¹¹⁷ It advocates that although pesticide users should be encouraged to take all reasonable steps to inform their neighbours of impending pesticide application, there should be no legal compulsion to do so.

In contrast, a number of submissions including the Environmental Defender's Office considered that it is essential that the community receive adequate notification prior to the application of significant quantities of scheduled pesticides by either air or ground application for effective pesticide regulation.¹¹⁸ The submissions suggested that it be a duty of the person intending to use pesticide to notify neighbouring properties in writing between 24 and 48 hours prior to application.

¹¹⁷ Submission No.37, NSW Farmers' Association, p.3.

¹¹⁸ Submission No.37 No. 116 Environmental Defender's Officer, p.15; No.39, Ronda Kelson, p.1.

The importance of a regulated notification was illustrated in the Dubbo hearings of the Inquiry. Evidence was received that organic producers are often situated adjacent to conventional producers and as there is no formal notification process, the onus is on an organic producer to put up indicators to measure the level of drift in an effort to maintain certification. Legally there is nothing to protect organic growers.¹¹⁹

The Standing Committee recognises that certain chemicals possess serious risks of injury or damage from chemical trespass and that these risks should be evaluated and regulated by the National Registration Authority.

Recommendation 43

The Standing Committee recommends that the NSW Environment Protection Authority consult with the National Registration Authority to ensure labels on pesticides incorporate notification requirements where they are not already provided and where appropriate.

Recommendation 44

The Standing Committee is concerned to ensure that an additional obligation for notification with respect to labelling (see Recommendation 43) be required where pesticide application is planned near schools, bus routes and environmentally sensitive areas or where a reasonably foreseeable risk of chemical trespass may occur.

4.3 Concluding comment

The Standing Committee recognises that a number of regulatory amendments have been proposed for the *Pesticides Act 1978* by the NSW Environment Protection Authority in its discussion paper and by the Standing Committee in this report. The Committee is also mindful of the importance and sensitivity of pesticide issues to the community. In light of these matters, the Committee foresees benefits being achieved through maintaining a watching brief over the implementation of amendments to the *Pesticides Act 1978*. The Standing Committee canvassed this concept with the NSW Environment Protection Authority during the inquiry process. Dr Neil Shepherd, Director-General, NSW Environment Protection Authority made the following comments regarding this issue:

The earliest one can realistically review a piece of legislation, particularly one that is complex and controversial, would be three to four years. Then you can have a meaningful review. Anything

¹¹⁹ Evidence of Ms Beverley Smiles, Central West Environment Council, 26 July 1999, p.174.

earlier than that means the thing has not had time to bed down at all. I recommend strongly that you suggest a longer period for the formal review but we would not have a difficulty coming back on an annual basis and saying this is how it is working, these are the things we think are still issues, and obviously there is an opportunity then for you to get other advice.¹²⁰

Recommendation 45

The Standing Committee on State Development will:

- **monitor the implementation of amendments to the *Pesticides Act 1978* and the impacts of such amendments for a four year period (until 30 September 2003);**
- **accept and consider any representations made to the Committee concerning amendments to the *Pesticides Act 1978* during that period; and**
- **table any additional report in the Legislative Council from time to time.**

Recommendation 46

The Standing Committee recommends that the NSW Environment Protection Authority provide to the Standing Committee on State Development annual reviews outlining the progress and impact of any amendments to the *Pesticides Act 1978*. The first review should commence from enactment of the amendments until 30 September 2000, with reviews conducted annually thereafter to and including 30 September 2003.

Recommendation 47

The Standing Committee recommends that NSW Agriculture provide to the Standing Committee on State Development annual reviews that identify impediments and enhancements to productivity and competitiveness experienced by the New South Wales agricultural industry emanating from amendments to the *Pesticides Act 1978*. The first review should commence from enactment of the amendments until 30 September 2000, with reviews conducted annually thereafter to and including 30 September 2003.

¹²⁰ Evidence of Dr Shepherd, NSW Environment Protection Authority, 21 June 1999, p.86.

5 ALTERNATIVES TO THE USE OF PESTICIDES

5.1 Avoiding pesticide use

A number of submissions and public hearing evidence received by the Standing Committee questioned the need to use pesticides at all in the urban or agricultural landscape. Concerns largely stemmed from a lack of information available regarding the toxicity and impacts that pesticides have on the environment, persons or property. Issue was raised with the failure to adopt the “precautionary principle”. The precautionary principle has been incorporated into a number of international conventions operated by the United Nations Conference on Environment and Development including:

- The Rio Declaration on Environment and Development;
- Convention on Biological Diversity; and
- Framework Convention on Climate Change.

The precautionary principle as defined in The Rio Declaration on Environment and Development states:

In order to protect the environment, the precautionary principle approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.¹

Ms Jillian Cranny, representative of the National Toxics Network and North Coast Environment Council raised the notion of ecologically sustainable development principles and the precautionary principle in evidence to the Standing Committee:

...through a lack of political will to set reduction targets is why innovations in organic and integrated pest management have been starved of support and funding. I call on this Committee to uphold those ESD principles and specifically the precautionary principle and inter-generational equity.²

¹ “United Nations Conference on Environment and Development: The Rio Declaration on Environment and Development”, *International Legal Materials* – American Society of International Law, USA, v31, No.4, July 1992.

² Evidence of Ms Cranny, National Toxics Network, North Coast Environment Council, 5 August 1999, p.410.

5.1.1 Organic farming techniques

A number of industry groups in public hearing evidence before the Standing Committee expressed a desire to reduce pesticide use or avoid pesticide application altogether, as a means of:

- promoting “clean green” industries and products;
- avoiding risk to the environment and personal health; and
- reducing the financial burden of purchasing pesticides.

Industry groups, in outlining reasons for not selecting alternative products for pesticide control such as neem or garlic, indicated that these products did not work in isolation as effectively as pesticides.

Mr Neil Treverrow, Technical Specialist Tropical Fruit, NSW Agriculture stated in evidence to the Standing Committee his understanding of the effectiveness of the current alternatives to pesticides.

In terms of looking at some of the alternative treatments in various projects on integrated best management that the industry has funded and investigated, there are compounds like neem that use that. A recently concluded nematode management project went through a suite of what are seen as potentially organic style treatments. Those opportunities have been looked at; they have not been ignored. In general, they have not been highly effective either. I think that, rather, the direction that the industry is heading in is towards a more holistic approach to the growing of the crop and minimising the current use of pesticides. I have not found any of these alternatives which can stand alone.³

Alternatively, the Standing Committee heard evidence of the successful production and sale of organic agricultural commodities for domestic and export markets as part of its inquiry into the international competitiveness of agriculture in New South Wales. These primary producers had received accreditation through industry representative bodies such as National Association for Sustainable Agriculture Australia (NASAA), or the Biological Farmers of Australia (BFA).

The Standing Committee heard evidence from Mr Denis O’Leary, a primary producer who detailed his experiences with respect to developing organic wheat and beef cattle for domestic and export markets. Mr O’Leary outlined a number of various approaches that he undertook to eliminate the use of pesticides. The following extract outlines Mr O’Leary’s perspective on weed management:

Weeds are really telling you that you have got a sick soil. If you can balance the soil, that is a solution. For example, nutgrass was a problem. We found out that if you just put dolomite lime on that

³ Evidence of Mr Treverrow, NSW Agriculture, 4 August 1999, p.329.

country, the calcium stops the nutgrass from growing. There are so many answers that are so simple that people just overlook them.⁴

Mr Howard Rubin, President, Organic Herb Growers Association discussed with the Standing Committee, during its inquiry into the international competitiveness of agriculture in New South Wales, the ease of herb production the advantages of organic production.

...the beauty of herbs are that most of them I used to grow organically and that is why organic herbs have really been able to take off quicker than some of your brassica crops or your other broad acre crops which are very much prone to insects. Herbs are actual natural insect repellents so they do not really attract the bugs...⁵

...one of the things about an organic production system is that you do not really have any monocultures. So whenever we tell our growers what they should be putting out we would always have them growing at least six different varieties, therefore they have some protection about fluctuations in the market. Perhaps one year they are not going to sell their echinacea crops but they will sell their skull-cap, or they will not sell their rosemaries, but they will sell their basils, or even from week to week there will be fluctuations in that market. So we build that in for both organic growing techniques and as well for market protection.⁶

The Standing Committee recognises the benefits that may be achievable in non pesticide approaches to the control of pests presently being examined through research. Of note is a CSIRO research program, documented in July 1999 by ABC TV News, that is investigating the use of a naturally occurring fungus to control termites and locusts. Contact by termites and locusts with the fungus allow spores to establish an infection inside the pest causing death. This has potential to control pesticides and locusts without use of pesticides.⁷ The Standing Committee understands that the release of this product is subject to further testing over the next few years.

Recommendation 48

The Standing Committee recommends that NSW Agriculture support research with increased funding into alternative methods to control and eradicate pests, plant disease and weeds other than by pesticide application.

⁴ Evidence of Mr O'Leary, 12 June 1998, p.114 (Inquiry into the international competitiveness of agriculture in New South Wales).

⁵ Evidence of Mr Rubin, Organic Herb Growers Association, 19 October 1998, p.433, (Inquiry into the international competitiveness of agriculture in New South Wales).

⁶ Evidence of Mr Rubin, Organic Herb Growers Association, 19 October 1998, p.434, (Inquiry into the international competitiveness of agriculture in New South Wales).

⁷ ABC TV News, 13 July 1999, reporter Ms Kennedy.

DISSENTING RECOMMENDATIONS AND STATEMENT

The Hon Ian Cohen, MLC, The Greens

Recommendation 4:

The Greens recommend, as a matter of urgency, that priority areas for Regional Agricultural Plans be agreed upon by the Ministers for Environment and Planning. For example, the expansion of cotton in the Lachlan area.

Recommendation 6:

The Greens believe it should be mandatory for commercial users to undertake training since a large percentage of applications take place by people in the commercial category, it is essential to provide a clear recommendation about the need for training.

Recommendation 38:

The Greens recommend GPS systems must be on-board aircraft used for aerial application of pesticides.

Recommendation 41:

The Greens believe that, in addition to the EPA's model for the Statutory Advisory Council, the Council should not be subject to the control and direction of the Minister in respect of the contents of any report or advice given by the Council to the Minister and will independently report to Parliament.

Third Party Rights (refer to 4.2.12.2 and 4.2.12.3)

Third Party Rights are an established part of new environmental legislation. Since their

introduction in 1979 with the Environmental Planning and Assessment Act, there have been claims of a flood of vexatious litigation. However, with Third Party Rights in place in various legislation in NSW, no such flood of litigation has occurred.

Third Party Rights must occur at two levels in relation to the Pesticides Act. Firstly, to restrain breaches of the Act, in particular where the Environmental Protection Authority fails to act and significant damage has been caused to persons, property or the environment. Secondly, to ensure the proceedings under the Act are correctly implemented.

Third Party Rights in the Pesticides Act are essential as a safety net for the community to encourage the enforcement of the Act by the EPA. Provision of these rights will ensure improved community and environmental health and will lead to responsible use of pesticides.

Prior Notification of Pesticide Use (refer to 4.2.19)

Recommendation 43

Prior notification of intended pesticide application is a community right-to-know issue. It addresses the rights of the community and the environment to avoid or be protected from exposure to pesticides. Notification is the precautionary principle in action, and must be applied given the ongoing discovery of serious, unanticipated health and environmental impacts of pesticides.

Precedents for prior notification of pesticide application are firmly established in other countries such as the USA (refer to Pesticides and You, Vol 18, No. 3 1998-1999). The issue of notification should not be deferred to the National Registration Authority.

Aerial Spraying

Evidence given to the Standing Committee which suggests that schools and school bus routes in NSW have been aerially sprayed with agricultural chemicals are extremely concerning. Children are highly susceptible to the impacts of pesticide exposure. Risk of harm, or proof of actual harm, is not the issue in this instance, the Greens seek to ban such applications. In the USA, six states have recognised the importance of controlling pesticide drift near schools by restricting and banning pesticide use in areas neighbouring a school or child care centre (refer to Pesticides and You, Vol 18, No. 3

1998-1999).

Licensing of Ground Rigs (refer to 4.2.11)

Since a large percentage of pesticide applications in agricultural areas are carried out using ground rig operations, pesticide spray drift associated with such applications can result. The Greens recommend the licensing of ground rigs. This will ensure a more comprehensive compliance with safety standards, which in turn minimises the risks associated with pesticide application.

SUBMISSIONS TO THE INQUIRY

SUBMISSION No	AUTHOR	RECEIVED
0001	The Hon Dr Arthur Chesterfield-Evans MLC Member Australian Democrats	26 November 1998
0002	Mr Ross Hampton WorkCover New South Wales	2 December 1998
0003	Mr Ray Mezieres Private Citizen	11 January 1999
0004	Mr Quentin Farmar-Bowers Private Citizen	27 December 1998
0005	Mr Peter Weatherstone Executive Officer Aerial Agricultural Association of Australia Ltd	12 January 1999
0006	Mrs Jean McKillop Private Citizen	14 January 1999
0007	The Hon Ernie T Page BE BCOMM MP Minister for Local Government to May 1999	22 January 1999
0008	Mr Reg Smith President New South Wales Dairy Farmers' Association Ltd	25 January 1999
0009	Mr Don Heussler Director - Government & Environmental Affairs Dow AgroSciences Australia Ltd	27 January 1999
0010	Ms Lesley Goddard Director Goddard Spraying Services Pty Ltd	27 January 1999
0011	Mr John Paul Trounce Private Citizen	28 January 1999

LIST OF SUBMISSIONS

SUBMISSION NO	AUTHOR	RECEIVED
0012	Mr Salvatore Caruana Private Citizen	28 January 1999
0013	Mr Malcolm Johnson Private Citizen	29 January 1999
0014	Mr Joe Friend JP BSCAGR Consultant Pacific Neem	29 January 1999
0015	Mr Alex Walker Managing Director Sydney Water	29 January 1999
0016	Ms Rose Tongmar Private Citizen	1 February 1999
0017	Mr Brad Williams Director - Intensive Industries New South Wales Farmers' Association	1 February 1999
0018	Mr Desmond Carpenter Private Citizen	1 February 1999
0019	Ms Shirley Jeffrey Private Citizen	1 February 1999
0020	Mr Rob Doolan Consultant Balanced Systems Planning Consultants	1 February 1999
0021	Mr Noel Selway President Faulconbridge Residents Association Inc	2 February 1999
0022	Ms Jenny Coman Council Member Byron Shire Council	2 February 1999
0023	Mr Ron Warburton Private Citizen	2 February 1999
0024	Mr Stan Scanlon Private Citizen	2 February 1999
0025	Mr Jon Baker Executive Officer Cotton Consultants Australia Inc	1 February 1999

SUBMISSION No	AUTHOR	RECEIVED
0026	Ms Jo Immig Toxic Chemicals Campaigner Total Environment Centre Inc	5 February 1999
0027	Mr Don & Mrs Ann Want Private Citizens	5 February 1999
0028	Mr Graham Hellier Managing Director Rapid Solutions	5 February 1999
0029	Mr David Rowland General Manager of Properties New South Wales Department of Education & Training	8 February 1999
0030	Ms Marianne Lloyd-Smith Co-ordinator National Toxics Network	8 February 1999
0031	Mr Mark Philip Lyden Private Citizen	8 February 1999
0032	Mr Colin Skinner Managing Director Colin Skinner Pest Control	8 February 1999
0033	Mr Michael Reid Director-General New South Wales Health	9 February 1999
0034	Mr John Carter Chairman Australian Beef Association	15 February 1999
0035	Mr Terry Ogg Chief Executive Officer Rail Services Australia	17 February 1999
0036	Mr Jack Garside General Manager Narromine Shire Council	29 February 1999
0037	Dr Neil Shepherd Director-General Environment Protection Authority New South Wales	4 March 1999

LIST OF SUBMISSIONS

SUBMISSION NO	AUTHOR	RECEIVED
0038	Mr Brian Inall Chairman Australian Environmental Pest Managers Association Ltd (New South Wales Branch)	1 March 1999
0039	Mrs Elizabeth Woods Private Citizen	5 March 1999
0040	Mr Colin Sharpe Director - Scientific & Regulatory Affairs (Crop Protection) Avcare	8 March 1999
0041	Mr David Ridley General Manager - Forest Policy and Programs State Forests of New South Wales	22 March 1999
0042	Mr Phillip & Mrs Colleen Drew Private Citizens	26 May 1999
0043	Mr J J Austin Acting General Manager Walgett Shire Council	1 June 1999
0044	Dr Kevin Sheridan Director-General New South Wales Agriculture	15 June 1999
0045	Ms Teena Sambrook Private Citizen	16 June 1999
0046	Mr Wally Jones Private Citizen	16 June 1999
0047	Mrs V Moses Private Citizen	16 June 1999
0048	The Hon Gary Punch Chief Executive Australian Cotton Industry Council	17 June 1999
0049	Ms Brenda Myers Private Citizen	18 June 1999
0050	Ms Heather Teakle President Mullumbimby Creek Progress Association	23 June 1999

SUBMISSION No	AUTHOR	RECEIVED
0051	Ms Vicki Doubleday Secretary Gunnedah Environment Group Inc	28 June 1999
0052	Ms Susan Marshall Private Citizen	29 June 1999
0053	Mr Jim Hourigan Private Citizen	12 July 1999
0054	Mr Terry Parkhouse President North Coast Environment Council Inc	12 July 1999
0055	Ms Amanda Pahl Secretary Mudgee District Environment Foundation	19 July 1999
0055	Ms Bev Smiles Secretary Central West Environment Council	19 July 1999
0056	Ms Margaret Dalitz Private Citizen	16 July 1999
0057	Dr Lilliana Corredor Private Citizen	17 July 1999
0058	AsPro Richard T Roush Director - Co-operative Research Centre for Weed Management Systems Waite Institute, University of Adelaide	23 July 1999
0059	Mr Peter Middlebrook Proprietor Middlebrook Air Services Pty Ltd	26 July 1999
0060	Ms Val Scanlon Private Citizen	23 July 1999
0061	Mr John Clarke & Associates Class members - Aboriginal Studies Certificate III Lake Cargelligo College of TAFE	28 July 1999
0062	Cr Geoff Marshall Mayor Gunnedah Shire Council	27 July 1999

LIST OF SUBMISSIONS

SUBMISSION NO	AUTHOR	RECEIVED
0063	Ms Jenny Czesny Secretary Lachlan River Families for a Safe Environment	29 July 1999
0064	Mr Mike Slack-Smith Chairman Narrabri Rural Lands Protection Board	27 July 1999
0065	Mr W J Lander Private Citizen	30 July 1999
0066	Dr Frances Parker Faculty of Social Inquiry University of Western Sydney	2 August 1999
0067	Ms Patricia Bartholomew Private Citizen	2 August 1999
0068	Mr John Rogers Secretary North Coast Low-Chill Stonefruit Growers' Association Inc	5 August 1999
0069	Mrs Clare Gaudron Honorary Secretary North Coast Oilseeds Growers Association Inc	6 August 1999
0070	Dr Archie Kalokerinos Private Citizen	3 August 1999
0071	Ms Jillian Lyons Private Citizen	8 August 1999
0072	Cr Ewan Tolhurst General Manager & Environmental Manager Bogan Shire Council	10 August 1999
0073	Mr Sam Haddad Executive Director Sustainable Development Department of Urban Affairs and Planning	18 August 1999
0074	Mr Tony Vlatko Private Citizen	19 August 1999

WITNESSES BEFORE THE COMMITTEE

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
Monday 21 June 1999	<p>Mr Jeff Angel Director Total Environment Centre</p> <p>Ms Jo Immig Toxic Chemicals Campaigner Total Environment Centre</p> <p>Dr Richard Sheldrake Deputy Director-General New South Wales Agriculture</p> <p>Mr Roger Toffolon Program Leader – Agricultural and Veterinary Chemicals New South Wales Agriculture</p> <p>Dr Richard Spurway Program Manager – Fibre, Oils and Specialty Products and Program Manager – Education and Training New South Wales Agriculture</p> <p>Mr John Williams Regional Director, North New South Wales Agriculture</p> <p>Mr Michael Nicholls Chairman – Agricultural Chemicals Committee NSW Farmers' Association</p> <p>Mr Brad Williams Director, Intensive Industries NSW Farmers' Association</p>

LIST OF WITNESSES

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
	Ms Amy Tucker Assistant Director, Intensive Industries NSW Farmers' Association
	The Hon Gary Punch Chief Executive Cotton Australia
	Mr Mike Logan Director Cotton Australia
	Mr Gary Fitt Chief Executive Officer Cotton Research Centre
	Mr Lindsay Keenan NSW Director Aerial Agricultural Association of Australia
	Mr Peter Weatherstone Executive Officer Aerial Agricultural Association of Australia
	Dr Neil Shepherd Director-General NSW Environment Protection Authority
	Ms Sue Dawson Acting Assistant Director-General, Environmental Policy NSW Environment Protection Authority
	Mr Mark Gorta Manager, Chemicals Policy NSW Environment Protection Authority
Monday 26 July 1999	Mr Sam Amey Community Representative Citizens Against Pollution

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
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	Mr Richard Noss Community Representative Citizens Against Pollution
--	---

	Mr David Yeo Community Representative Citizens Against Pollution
--	--

	Mr Peter Cone Senior Area Manager Cotton Australia
--	--

	Mr John Furney Primary Producer
--	------------------------------------

	Mr Doug Herd Director, Environmental Services Dubbo City Council
--	--

	Mr Paul Anderson Manager, Building and Development Dubbo City Council
--	---

	Mr John Davis Manager, Environment and Health Dubbo City Council
--	--

	Mr Greg Geoghegan Manager, Strategic Planning Dubbo City Council
--	--

	Ms Shirley Jeffery Private Citizen
--	---------------------------------------

	Mr Andrew Montgomery Private Citizen
--	---

	Ms Barbara Eldershaw Private Citizen
--	---

LIST OF WITNESSES

DATE OF APPEARANCE

**NAME, POSITION AND ORGANISATION
REPRESENTED**

Mr Bob Meadley
Director Environmental Services
Narromine Shire Council

Mr Johannes Honnef
Planning Officer
Narromine Shire Council

Ms Amanda Pahl
Secretary
Mudgee District Environment Foundation

Ms Bev Smiles
Secretary
Central West Environment Council

Mr Peter Howat
Research and Development Manager for Australia
Nufarm

Tuesday 27 July 1999

Ms Vicki Doubleday
Secretary
Gunnedah Environment Group

Len Sanders
Gunnedah Environment Group

Ms Sandra Strong
President
Gunnedah Chemical Liaison Committee

Mr Sam Leys
Gunnedah Chemical Liaison Committee

Mr Ian Grant
Executive Officer
Liverpool Plains Land Management Committee

Ms Christine Robertson
Director
New England Public Health Unit

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
	<p>Dr Lyn Fragar Director Australian Centre for Agricultural Health and Safety</p>
	<p>Mr Peter Middlebrook Proprietor Middlebrook Air Services</p>
	<p>Cr Geoff Marshall Mayor Gunnedah Shire Council</p>
	<p>Mr Mike Slack-Smith Chairman Rural Lands Protection Board (Narrabri)</p>
	<p>Ms Eslyn Johns Administration Officer Rural Lands Protection Board (Narrabri)</p>
Wednesday 4 August 1999	<p>Cr Richard Staples Councillor Byron Shire Council</p>
	<p>Ms Kath Vail Committee Member Poison Watch</p>
	<p>Mr Stan Scanlon Committee Member Conservation of North Shores (CONOS)</p>
	<p>Mr Rod Fayle President Australian Macadamia Society Limited</p>
	<p>Mr Don Want Private citizen</p>
	<p>Mrs Ann Want Private citizen</p>

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
	Mr Ian Campbell Consultant Banana Industry Committee
	Mr Neil Treverrow NSW Agriculture
	Dr John Beard Director, Northern Rivers Institute of Health and Research NSW Department of Health, North Coast Public Health Unit
Thursday 5 August 1999	Ms Kate Hughes Private Citizen
	Mr Claude Gauchat Executive Director Avcare
	Mr Colin Sharpe Director, Scientific and Regulatory Affairs (Crop Protection) Avcare
	Mr Vernon Keighley General Manager Agsafe
	Mr Peter Mullins Executive Officer Rural Lands Protection Board State Council
	Ms Alison Nowland Environmental Co-ordinator Rural Lands Protection Board State Council
	Dr John Keniry Chairman NRA

DATE OF APPEARANCE	NAME, POSITION AND ORGANISATION REPRESENTED
	Dr Alison Turner Chief Executive Officer NRA
	Mr Greg Hooper Deputy Chief Executive Officer NRA
	Mr Brian Inall NSW Branch Chairman Australian Environmental Pest Managers Association (AEPMA) (New South Wales Branch)
	Mr Malcolm Trotter Member of the NSW State Council Australian Environmental Pest Managers Association (AEPMA) (New South Wales Branch)
	Ms Jillian Cranny Member National Toxics Network North Coast Environment Group Toxin Action Network (North Coast NSW)

Appendix A

1. INTRODUCTION

The *Pesticides Act* is 20 years old. Changes to the context within which pesticide management is taking place have led to the need to consider some refinements to the Act to remove duplication and improve the efficiency and effectiveness of the management of pesticide use.

Specifically, a national scheme for registering pesticides has been introduced. This changes the nature of what needs to be done at the State government level.

Secondly, there is a need to be aware that areas that were traditionally dominated by agricultural uses are now increasingly surrounded by other land uses and activities that may be incompatible with traditional use of pesticides. Partly because of these land use changes, there has also been a shift in community expectations about the use of pesticides. While the role of pesticides in supporting agricultural and other industries is well understood, there have been cases where residues in livestock and produce have caused trade difficulties. There is also a growing awareness of the potential for impacts on human health, property or the environment if pesticides are not used with the utmost care. Many Australian and overseas jurisdictions have found the need to respond with firmer regulation of pesticide use.

Finally, it is clearly recognised that pesticide use must be consistent with the principles of ecologically sustainable development. The framework of pesticide management needs to involve these principles and allow for accommodation of rapid changes in the knowledge of the impacts of pesticides, their application and alternatives to their use.

Amendments to the Act are therefore needed to ensure that:

- there is consistency with the new national scheme;
- emerging best practice approaches to pesticide management are promoted;
- the enforcement and licensing system is efficient and transparent; and
- mechanisms are provided to allow the key interest groups to contribute to the ongoing development of approaches to pesticide management.

This discussion paper outlines proposed changes to the Act so that all sectors of the community can consider and comment on the proposed reforms before legislation is drafted.

It should be noted that submissions will be welcomed on the proposals and their expected impact on communities and individuals. The closing date for discussions and for receipt of submissions is the 8th August 1997. In addition, organisations, groups or individuals may wish to contact the EPA below to discuss the proposals.

Submissions may be sent to:

Mark Gorta
Manager, Chemicals Policy Section,
NSW EPA
PO Box 1135
CHATSWOOD NSW 2057
Phone: 02 9325 5795
Fax 02 9325 5788

2. FITTING IN WITH THE NATIONAL REGISTRATION SCHEME

The national registration scheme for pesticides is detailed in the Commonwealth Agricultural and Veterinary Chemicals Code. A National Registration Authority for Agricultural and Veterinary Chemicals has been established to evaluate and register agricultural and veterinary chemicals and control their supply up to the point of sale.

In evaluating a pesticide for registration, the National Registration Authority (NRA) takes account of issues relating to the effectiveness of the pesticide and its impact on human health and safety, the environment, property and international trade. The NRA also approves product labels and this requires adequate instructions on the use, handling and disposal of the product.

In 1994, the introduction of the *Agricultural and Veterinary Chemical (NSW) Act* made the Commonwealth Agricultural and Veterinary Chemicals Code apply to New South Wales. This Act provides an up-to-date approach to dealing with issues associated with the registration and sale of pesticides and introduces some new definitions. The consequently outmoded provisions of the *Pesticides Act 1978* need to be removed to avoid duplication and confusion. The sections of the *Pesticides Act* that would be removed on this basis would be 8-22, 29, 30(1), 34-36, 38, 41, 42(1) and 44.

3 ENSURING PROPER USE OF PESTICIDES

Concerns have been expressed over the use and impacts of agricultural chemicals. These concerns include risks to marketing and trade, human health and the environment. There has been a particularly high level of industry concern about the contamination of agricultural produce by pesticide residues and the consequent trade implications.

Regulation of pesticides at the point where they are applied is a key part of ensuring that people, property and the environment are protected. Several Australian jurisdictions have recently strengthened or are currently strengthening the controls on the use of pesticides in legislation. Victoria has introduced the *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* and Regulations (1996), Tasmania has introduced the *Agricultural and Veterinary Chemicals (Control of Use) Act 1995*, and South Australia, the Northern Territory and New Zealand are currently considering appropriate legislation.

Misuse of pesticides occurs when people do things with pesticides that:

- are contrary to a label or pesticide permit or order directions;
- cause a risk of harm or actual harm to people or damage to property; or
- cause a risk of harm or actual harm to the environment.

Label directions are the means by which pesticide users receive specific directions for use of a particular pesticide. These directions are based on the expertise of the supplier and government agencies and are approved by the National Registration Authority (NRA) after advice from a range of government agencies. Queensland, South Australia and Tasmania have stringent requirements to follow labels.

Dealing with off-target damage, drift and overspray concerns have been key elements of all recently developed pesticide legislation in other jurisdictions.

The new Tasmanian legislation makes it an offence to cause draft that adversely affects persons or a broad range of things that are not owned or occupied by the person spraying. Under the legislation, it is an offence to cause actual harm to the environment or crops/livestock, and prosecution is sought where the use of the area or crop is restricted following pesticide damage. It is a defence under the legislation if the effect could not have been anticipated by the pesticide user.

In Victoria, the *Agricultural and Veterinary Chemicals (Control of Use) Act 1992* makes it an offence to carry out agricultural spraying that "injuriously affects" off-target plants, stock or lands. A major concern is

to ensure that pesticide misuse does not contaminate agricultural produce and disrupt domestic and export trade.

In Queensland, it is an offence under *the Agricultural Chemicals Distribution Control Act* to aeri ally spray any pesticide or ground spray herbicides in such a way as to cause loss or damage by drift to crops or livestock. In New Zealand it is an offence to cause plant damage on third party properties.

The following measures are proposed to deal with misuse of pesticides in ways that are consistent with other jurisdictions and avoid costly problems for industry and the community.

3.1 PROMOTING USE OF PESTICIDES IN ACCORDANCE WITH DIRECTIONS.

There is general agreement that following label directions is the minimum standard of behaviour required of pesticide users. Failure to follow such directions could lead to serious harm to persons, property or the environment, even though the harm may not be intended. The present requirement in the *Pesticides Act 1978* only goes part of the way to discouraging this practice because it has to be clear that the label was wilfully or carelessly disregarded.

Therefore, it is proposed to follow the example of other States by requiring that a person must not use a pesticide contrary to directions on permits or labels. The offence would occur if the directions were disregarded, whatever the user's intentions, ie.. users of pesticides must follow directions explicitly. Under this proposal, it would not be a defence for a person to say that s/he had not read or was not provided with the registered label.

The proposed provision would encourage greater compliance by showing the community and the Courts the importance of following such directions.

3.2 ENCOURAGING GREATER CARE IN PESTICIDE USE OR DISPOSAL TO PREVENT EVEN UNINTENTIONAL ACTUAL HARM OR DAMAGE.

It is recognised that ensuring that people follow label directions is not a foolproof means of ensuring appropriate pesticide use. It is not practical for label directions to cover all circumstances. For instance, a label cannot cover all weather conditions that may cause off-target drift and often assumes that the pesticide will be used in rural areas, not areas characterised by mixed development.

A person may diligently follow directions about the use of a pesticide but may fail to take account of other relevant and readily knowable considerations and therefore cause harm to people or property. It is important to encourage those using such sensitive products as pesticides to exercise proper care and thought when doing so and to be aware of the risks and the factors that increase risk.

It is therefore proposed to make it an offence for a person to use or dispose of a pesticide so that it causes actual harm or damage to people or property. The person would be able to be prosecuted even if they did not intentionally cause the harm or damage unless the person was following specific instructions on a label, order or permit about ways to avoid this.

This approach is the same as that which applies to the pollution of water (under the *Clean Waters Act 1970*) and the dumping of waste (under the *Waste Minimisation & Management Act 1995*). It is worthwhile noting that the offence will attract a lower penalty than that which applies to offences where harm or damage is intentional or negligent.

3.3 TAKING STRONG ACTION ON INTENTIONAL OR NEGLIGENT PESTICIDE MISUSE WHICH RESULTS IN ACTUAL OR POTENTIAL HARM TO PEOPLE OR PROPERTY.

As noted above, dealing with off-target damage concerns has been a key element of recent developments with pesticide legislation in other States.

Pesticide users need to follow label directions, and also take all the reasonable precautions that a careful person would take to prevent causing harm from their use of a pesticide. This means taking into account factors including weather conditions, the proximity of people to the spray area, practical measures to avoid damage to non-target crops, and methods of application that minimise drift.

Unfortunately, some people negligently fail to take reasonable precautions or deliberately cause harm to people or property with pesticides. It is, therefore, proposed that it be an offence for a person to intentionally or negligently use or dispose of a pesticide to cause actual harm (or risk of harm) to people or property.

3.4 TAKING STRONG ACTION ON INTENTIONAL OR NEGLIGENT PESTICIDE MISUSE WHICH THREATENS OR HARMS THE ENVIRONMENT.

It is proposed to discourage harm to the environment caused by pesticide misuse by providing that a person must not intentionally or negligently

use or dispose of a pesticide to cause actual harm or risk of harm to the environment.

In framing the offence it needs to be clearly recognised that some harm to the environment is an unavoidable consequence of proper and responsible pesticide application practice. For example, an insecticide applied to a field may not only kill the target pests, but may also kill other insects. An offence would not be committed where such harm to the environment occurs. For this reason, a person will only be in breach of the provision for misuse of the pesticide where foreseeable harm to the environment occurred, and the person intentionally or negligently caused that harm by not taking reasonable precautions to prevent that harm. Reasonable precautions would include following proper and responsible pesticide application practice. The Act amendments would also need to recognise that some activities are authorised under other New South Wales legislation, eg, the application of herbicides to control aquatic weeds when the application is authorised under the *Clean Waters Act 1970*.

3.5 BANNING THE USE OF UNSUITABLE AIRCRAFT

It is also recognised that we need to take stronger action to prevent known problems. In particular, ultra light aircraft are often used to spray pesticides but those aircraft are relatively unstable and can contribute to excessive spray drift. They have not been endorsed for agricultural spraying by the Civil Aviation Safety Authority Australia and cannot comply with the insurance requirements of the Act.

It is therefore proposed to amend the Act to more effectively prevent their use by prohibiting:

- The use of any aircraft that has not been issued with an airworthiness certificate for aerial spraying from the Civil Aviation Safety Authority Australia;
- The attachment or use of pesticide application equipment on these aircraft;
- The sale of such equipment for use on these aircraft; or
- The sale of these aircraft with such equipment attached.

3.6 PROVIDING APPROPRIATE PENALTIES.

It is important that the level of penalties associated with the misuse of pesticides be appropriate. Within this, there is a strong case for imposing higher penalties where someone has acted intentionally.

The penalty for the offence of failure to follow the label or unintentionally causing harm (see 3.1 and 3.2 above) could therefore remain at the current level (maximum of \$40,000 for corporations and

\$20,000 for individuals). These penalty levels are in line with those existing for similar offences elsewhere. Victoria has penalties of \$40,000 for companies and \$20,000 for persons for spray drift which injuriously affects plants, stock or land outside the target area. South Australia has a \$40,000 and \$20,000 penalty also for use contrary to the label. The maximum fine for penalty notices (see 3.8 below) is proposed to be \$600 but lower levels may apply for certain offences.

It is proposed to provide a maximum penalty of \$125,000 for corporations and \$60,000 for individuals that “intentionally or negligently cause actual or risk of harm or damage” (see 3.3 and 3.4 above). The proposed penalty for such offences is the same penalty as Tier 2 offences under *the Environmental Offences and Penalties Act 1989*. Under that Act there are three levels of seriousness of offences. The most serious is the Tier 1 offence for wilful and negligent harm to the environment.

The penalty for use of an inappropriate aircraft (see 3.5 above) is proposed to be \$40,000 for corporations and \$20,000 for individuals. This is the same as for the current offence of use of an aircraft that does not conform to licence conditions under the Pesticides Act.

3.7 PROVIDING GUIDANCE IN SENTENCING

It is also of concern that the *Pesticides Act* currently provides no guidance to the Court on matters to consider when imposing a penalty. In some cases, low penalties have been imposed for matters involving a serious misuse of pesticides, for example when a Court has focused solely on the conduct and record of the defendant.

It is proposed to overcome this problem by including a similar provision to that in the *Environmental Offences and Penalties Act 1989* which allows the Court to consider the following matters in sentencing:

- The harm or likely harm caused to a person or the environment, or the damage or likely damage caused to a person’s property’
- The practical measures that may have been taken to prevent, control, abate or mitigate that harm’
- The reasonable foreseeability of the harm that was or could be caused;
- The extent to which the person charged had control over the commission of the offence; and
- Whether the person who committed the offence had complied with the order of an employer or supervisor.

3.8 EFFICIENT MANAGEMENT OF MINOR OFFENCES

Currently under the *Pesticides Act* prosecution in the Local Court is needed to take action over minor breaches of the Act.

Penalty notices are now a widely accepted enforcement tool in environmental legislation. They provide an efficient way of managing the minor offences that do not justify Court time.

Offenders may either pay the fine or contest the matter in the Local Court. Penalty notices are routinely used for Tier 3 offences under the *Environmental Offences and Penalties Act 1989*. Examples include the use of penalty notices regarding the pollution of waters and dumping waste on land. Victoria has provision for penalty notices in its pesticide legislation.

It is therefore proposed to introduce penalty notices for minor pesticide offences to deal more efficiently and effectively with these offences. The Environment Protection Authority Prosecution Guidelines (EPA 1996) clarify when such notices would be used.

It is therefore proposed to introduce penalty notices for minor pesticide offences to deal more efficiently and effectively with these offences. The EPA Prosecution Guidelines (EPA 1996) clarify when such notices would be used.

The offences where it is proposed penalty notices could be issued are:

- Failing to read instructions on a label;
- Using a pesticide contrary to a label;
- Using an unregistered pesticide;
- Failing to comply with a pesticide order;
- Making prohibited claims about a pesticide;
- Failing to comply with a direction of an inspector;
- Storing a pesticide other than in a container that bears the registered label; and
- Failing to comply with a compliance notice.

It is proposed that the legislation provide the option of delegating to other public authorities the power to issue penalty notices but actual delegation beyond the EPA would not occur without further consultation.

3.9 PREVENTING PESTICIDE MISUSE AND ENSURING TIMELY CLEAN UP OF CONTAMINATION

At present the registrar of Pesticides has wide powers to make orders to control the use of pesticides from aircraft. There are, however, also circumstances, where controls over pesticide use on the ground may be

required and it would seem more appropriate to be clear about the circumstances in which such orders would be issued by the Registrar.

It is therefore suggested that there be the opportunity for the Registrar of Pesticides to make orders relating to the manner of use of a pesticide for both ground and aerial applications. An order would only be able to be made if it would prevent danger to health of the public, undue risk to the environment, damage to property or an adverse effect on the trade of agricultural produce. Such orders are not intended to duplicate or overrule the powers of the National Registration Authority in setting nationally consistent controls on individual pesticides through placing directions for use on labels.

One proposed application of such an order would be to allow people to use pesticides at a lower concentration, lower application rate, or at less frequent intervals than specified on the label – unless this is specifically precluded by directions on the label. Use at lower rates is currently unlawful because of the requirement to follow label directions. People wishing to use lower rates currently need to obtain a permit to allow such use and this is inefficient.

It is proposed that orders would be made on a statewide or regional basis rather than directions on individual persons or properties. It is intended that orders only be made with the consent of the Minister for the Environment and they will be formally instituted through the gazettal process.

It is also proposed to allow the EPA to issue compliance notices to individual persons or properties which could require action to:

- Prevent, prohibit or cease an activity which, if it is allowed to proceed would be likely to harm people, property or the environment; or
- Clean up contamination caused by pesticide use.

Circumstances where compliance notices would be able to be issued include:

- Where an unregistered pesticide is being used or a pesticide is being used contrary to label.
- Where faulty equipment needs to be fixed or re-calibrated. A notice could require repairs or calibration prior to use.
- Where a pesticide is used in unsafe circumstances (eg in high wind near a vulnerable area) or there is a history of disregarding the sensitivities of pesticide use at a particular site (eg next to a school, near residential properties etc) a notice could place time or other specific application restrictions on spray operations to prevent harm.

- Where pesticides have been used or stored in a way that may be harmful, a notice could require clean up or removal of pesticide residues or containers from a place; or require a pesticide to be stored in an approved container.

It is important to distinguish between the role of these site specific compliance notices and the statewide or regional focus of pesticide orders. Rights of appeal against a notice issued would be provided but they would not apply for notices that require clean up action or where urgent action is required to prevent harm.

The proposed compliance notice powers are used extensively in other environmental legislation, eg compliance notices under the Clean Waters Regulation have been used since 1987.

4 IMPROVING EFFICIENCY AND TRANSPARENCY OF THE SYSTEM.

4.1 PESTICIDE LICENCES

The *Pesticides Act* currently has no provision for amending a licence or conditions on a licence issued to a pilot or operator, during the term of a licence. Currently, licences would need to be cancelled and reissued if there was a need to vary a licence or change conditions on licences. It is proposed to allow for such amendments to be made. This would be consistent with provisions in the *Pollution Control Act 1970* and the *Waste Minimisation & Management Act 1995*. On a similar basis to the above Acts, it is proposed to introduce appeal provisions for licensees and applicants for licences.

4.2 MINISTERIAL POWERS

Currently the minister must give consent to prosecutions under the *Pesticides Act 1978*. Under its other environmental legislation the Minister's consent is not required to commence prosecutions. This reflects the principle embodied in the *Protection of the Environment Administration Act 1991* that the decision to prosecute should be fully and explicitly independent of Ministerial direction. It is therefore proposed that the proceedings for offences under the Act may be commenced with the consent of the EPA. The prosecution process will conform to the EPA's published Prosecution Guidelines (EPA 1996) and be separated from Ministerial direction.

Currently the Minister has powers to: waive or remit fees, approve insurance, appoint analysts and inspectors, consent to suspension of licences, consider appeals, delegate powers and approve the destruction or rendering harmless of a pesticide. These are administrative matters or decision making powers that more appropriately reside with the EPA or,

in some cases, the Director-General of the EPA. It is proposed to make such changes.

4.3 STRONGER POWERS FOR INSPECTORS

It is vital that pesticide inspectors are given powers which enable them to perform their functions safely and effectively and that these powers are in line with inspectors' powers under the other statutes administered by the Environment Protection Authority such as the *Waste Minimisation & Management Act 1995* and the *Pollution Control Act 1970*.

Proposed amendments would enable an inspector to:

- Use reasonable force with the aid of the police;
- Enter any place (except a dwelling-house) to examine pesticide application equipment'
- Seize articles and substances as provided under the Act, without the need to remove them from the premises in which they are found;
- Make inquiries where this is relevant to ensure compliance with the Act.

Another proposed amendment is to make it an offence to fail to answer questions, provided that the inspector has first informed the person that such failure is an offence. The privilege against self-incrimination would be maintained with respect to these powers.

It is also proposed to extend the time for which seized property may be retained, from six to twelve months or until enforcement proceedings are finalised. In addition, a Local Court could extend this time, or, on the application of the owner, order the return of the property at any time. The reason for these proposed specific changes is that enforcement proceedings can take considerably more than six months to complete. The *Stock Medicines Act 1989* and the *National Parks & Wildlife Act 1974* provide property seizure periods of 12 months and two years respectively.

4.3 CLEARER LIABILITY FOR ACTS OF EMPLOYEES AND CONTRACTORS

Employers are currently liable for offences committed by the employees, with some limited defences available to employers. Employer liability does not extend, for example, to an aerial operator who has contracted with a pilot to apply pesticides, or to a grower who has engaged a contract sprayer, which results in the contractor committing an offence. In many situations the operator or grower remains in control of the spray application, and the pilot or contractor is following the instructions given. Currently, in such situations, the pilot or contract sprayer could be prosecuted for misuse offences, while the aerial operator and grower may escape liability. It is proposed to amend the Act so that:

- Employers, including spray operators, will be liable for offences committed by their contractors, agents and employees; and
- Growers who contract with another person to apply pesticides to the grower's property will be liable for the offences committed by the other person (or the other person's employees, contractors or agents). A grower would have a defence to any such prosecution if the grower can prove that the offence committed was due to causes over which the grower had no control and took reasonable precautions and used due diligence to prevent the offence being committed.

5 ONGOING POLICY DEVELOPMENT IN PESTICIDE MANAGEMENT

Many groups and individuals have an interest in pesticide management and the roles and responsibilities are spread between State and local government and industry. These parties need to be drawn together to provide a mechanism for considering issues and advising on options for action.

A statutory advisory committee is therefore proposed to provide a source of community advice to the Minister and the EPA on pesticide management policies and issues and, in particular, on approaches aimed at reducing the risks from pesticide use.

The following membership is suggested.

Community and industry representation with expertise in:

- Pesticide product supply and management
- Pest control operators' practices
- Environmental impact of pesticide application
- The use of, and the exposure to, pesticides by consumers and
- Rural pesticide application practices.

Local government representation with expertise on the implications of pesticide use in local contexts and the mechanisms available to manage these.

State government representation as follows:

- Regulation of pesticide use (EPA)
- Agricultural use and impact of pesticides (Nsw Agriculture)
- Occupational health and safety and the regulation of pest controllers (WorkCover NSW)
- Impact of pesticides on public health (NSW Health)

- Impact of pesticides on wildlife (NSW National Parks and Wildlife Service)
- Impact of pesticides on land and water conservation (Department of Land & Water Conservation) and
- Management of interactions between different land uses (Department of Urban Affairs & Planning).

Appendix B



**STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council**

**INQUIRY INTO THE INTERNATIONAL COMPETITIVENESS
OF AGRICULTURE IN NSW**

TERMS OF REFERENCE

International Competitiveness of Agriculture in NSW

(Reference received 20 July 1995, amended 21 May 1998)

That the Standing Committee on State Development inquire into and report on the role of Government in facilitating the international competitiveness of agriculture in New South Wales, including:

- innovation and diversification of the industry, including the development of new products and the application of new technology;
- business enhancement services (for example, marketing and market intelligence, industry links/network, and leadership);
- regulatory impediments, and inter and intra government coordination;
- cost structures of the industry (for example, transport costs, packaging costs, state taxes and charges, and utility charges);
and

- the development of sustainable management of agricultural resources.

Appendix C



STANDING COMMITTEE ON STATE DEVELOPMENT Parliament of New South Wales, Legislative Council

Minutes No. 126

Thursday 12 November 1998
at Parliament House, Sydney at 1:00 pm

Members present
Mr Kelly (in the Chair)

Mr Cohen

Mr Obeid

Mr Johnson

Dr Pezzutti

Mr Macdonald

The Chairman declared the meeting open.

The Committee deliberated.

Resolved, on the motion of Mr Macdonald:

That the minutes of meeting numbers 111 to 125 be accepted.

The Committee deliberated.

Resolved, on the motion of Mr Johnson:

That, pursuant to the provisions of section 4 of the Parliamentary Papers (Supplementary Provisions) Act 1975 and under the authority of Standing Order No 252, the Committee authorises the Clerk of the Committee to publish all corrected transcripts of evidence given by witness and documents tabled by witnesses who have appeared before the Committee, and all submissions

provided to the Committee, in relation to the agriculture inquiry.

The Committee deliberated.

The Chairman made a statement about his intent to write to all Members and officers of the Committee seeking written advice as to whether they were responsible for information about findings of the Committee's *Interim report on the provision and operation of air services in New South Wales* being provided to Mr Photios prior to the tabling of the report.

The Committee deliberated.

Resolved, on the motion of Mr Cohen:

That the Chairman write to the Editor of The Express in relation to an article that appeared in the newspaper on 16 October 1998 entitled 'Findings fuel EIS demands' asking that the newspaper correct inaccuracies in the article by including an accurate account of the findings contained in the Interim report on provision and operation of rural and regional air services in New South Wales in the newspaper, including an acknowledgment of the inaccuracy of the previous article.

The Committee deliberated.

Resolved, on the motion of Mr Cohen:

That the Chairman write to the Minister for the Environment seeking clarification of terms of reference forwarded to the Committee relating to the use and management of pesticides.

Resolved, on the motion of Mr Cohen:

That the terms of reference for the pesticides inquiry, along with a call for submissions in relation to the inquiry, be advertised widely throughout the state, in both metropolitan and regional newspapers.

The meeting adjourned at 1.30 pm until 1:00 pm on Thursday, 19 November 1998.

Anna McNicol
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 127

Thursday 19 November 1998
at Parliament House, Sydney at 1:00 pm

Members present
Mr Kelly (in the Chair)

Ms Gardiner
Mr Johnson

Dr Pezzutti

The Chairman declared the meeting open.

Apologies were received from Mr Cohen, Mr Macdonald and Mr Obeid.

The Committee deliberated.

Resolved, on the motion of Dr Pezzutti:

That the minutes of meeting numbers 110 to 126 be accepted.

The Committee deliberated.

Resolved, on the motion of Dr Pezzutti:

That, in relation to the matter of the media release issued under the name of Michael Photios MP on 24 September 1998, and in light of advice from Dr Pezzutti that the Clerk of the Parliaments had suggested an amendment to the advice prepared by the Clerk to the Committee and in light of the fact that the Chair had not received responses to all his requests for information from Members, the Committee defer consideration of this matter.

The Committee deliberated.

Resolved, on the motion of Dr Pezzutti:

That, in relation to the reference received from the Minister for the Environment relating to the use and management of pesticides in New South Wales, the Minister be asked whether it would be acceptable for the inquiry to be referred to as "Inquiry into the use and management of agricultural chemical products in New South Wales".

The Committee deliberated.

Resolved, on the motion of Ms Gardiner:

That the terms of reference for the inquiry into pesticides be advertised in print media throughout the state, along with a call for submissions in relation to the inquiry, with a closing date for submissions of 31 January 1999.

The Committee deliberated.

The meeting adjourned at 1.40 pm sine die.

Anna McNicol
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 1

Thursday 17 June 1999

At Parliament House at 2.30 pm

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Mr Macdonald

2. Apologies

Dr Pezzutti

3. Procedural Motions

Resolved, on motion of Mr Cohen, that the following motions be agreed to in globo:

That arrangements for the calling of witnesses and for visits of inspection be left in the hands of the Chair and Director after consultation with the Committee.

That press statements on behalf of the Committee be made only by the Chair, if possible after consultation with the Committee.

That persons with specialist knowledge may be invited to assist the Committee.

That the Director be empowered to advertise and/or write to persons, bodies and organisations inviting written submissions relative to the terms of reference.

That the Chair and Director make arrangements for travel and visits of inspection for the Committee as a whole.

That, unless otherwise ordered, transcripts of evidence taken by the Committee be not made available to any person, body or organisation (other than Committee Members); provided that each witness will be given a proof copy of their evidence for correction and return to the Director.

4. Tabled Documents

4.1 Submissions

The Chair tabled 48 submissions sent to the Committee in relation to its pesticides inquiry, listed in Attachment 1.

4.2 Correspondence Received

The Chair tabled one item of correspondence received:

Letter from the Hon Ian Cohen MLC to the Chair, dated 16 June 1999, requesting that the Committee hold a hearing in relation to the pesticide inquiry at Lismore.

4.3 Correspondence Sent

The Chair tabled 20 items of correspondence sent:

Letter from the Chair to the Hon Bob Debus, Minister for the Environment, dated 9 June 1999, relating to the pesticides public hearing on 21 June 1999.

Letter from the Chair to the Hon Richard Amery, Minister for Agriculture and Minister for Land and Water Conservation, dated 16 June 1999, relating to the pesticides public hearing on 21 June 1999.

Letters from the Director to various persons who were scheduled to give evidence at the pesticides public hearing on 21 June 1999, dated 11 and 15 June 1999, relating to their appearance. (see attachment 2 for names)

5. Pesticides Inquiry

It was agreed that the Committee would hold pesticide inquiry hearings on 26 July 1999 (Dubbo), 27 July 1999 (Gunnedah), 4

August 1999 (Lismore) and 5 August 1999 (Sydney).

6. Agriculture Inquiry

The Chairman advised that the pesticides inquiry would take precedence over the agriculture inquiry.

7. Adjournment

The meeting adjourned at 3.25 pm until Monday, 21 June 1999 at 9:30 am.

Anna McNicol
Director

ATTACHMENT 1

Submissions received relating to pesticides inquiry

Submission 1 – Hon Dr Arthur Chesterfield-Evans MLC, dated 26 November 1998

Submission 2 – WorkCover NSW, dated 1 December 1998

Submission 2 (Supplementary) - WorkCover NSW, dated 2 February 1999

Submission 3 – Mr Ray Mezieres, dated 3 January 1999

Submission 4 – Mr Quentin Farmar-Bowers, dated 27 December 1998

Submission 5 – Aerial Agricultural Association of Australia Ltd, dated 7 January 1999

Submission 6 – Mrs Jean McKillop, dated 13 January 1999

Submission 7 – The Hon Ernie Page MP (then Minister for Local Government), dated 21 January 1999

Submission 8 – NSW Dairy Farmers' Association Ltd, dated 22 January 1999

Submission 9 – Dow AgroSciences Australia Ltd, dated 18 December 1998

Submission 10 – Goddard Spraying Services Pty Ltd, dated 27 January 1999

Submission 11 – Mr John Paul Trounce, dated 23 January 1999

Submission 12 – Mr Salvatore Caruana, dated 22 January 1999

Submission 13 – Mr Malcolm Johnson, dated 29 January 1999

Submission 14 – Pacific Neem, dated 21 January 1999

Submission 15 – Sydney Water, dated 27 January 1999

Submission 16 – Ms Rose Tongmar, dated 26 January 1999

Submission 17 – NSW Farmers' Association, dated 28 January 1999

Submission 18 – Mr Desmond Carpenter, dated 25 January 1999

Submission 19 – Ms Shirley Jeffrey, dated 25 January 1999

Submission 20 – Balanced Systems Planning Consultants, dated 31 January 1999

Submission 21 – Faulconbridge Residents Association Inc, dated 1 February 1999

Submission 22 – Cr Jenny Coman (Byron Shire), dated 26 January 1999

Submission 23 – Mr Ron Warburton, dated 27 January 1999

Submission 24 – Mr Stan Scanlon¹, dated 4 January 1999

Submission 25 – Cotton Consultants Australia Inc, dated 1 February 1999

Submission 26 – Total Environment Centre Inc², dated 2 February 1999

Submission 27 – Mr Don & Mrs Ann Want, dated 4 February 1999

Submission 28 – Rapid Solutions, dated 4 February 1999

Submission 29 – NSW Department of Education & Training, dated 5 February 1999

¹ Private & confidential

² With Nature Conservation Council, National Parks Association (NSW) & Friends of the Earth (NSW)

- Submission 30 – National Toxics Network, dated 7 February 1999
- Submission 31 – Mr Mark Philip Lyden, dated 2 February 1999y
- Submission 32 – Colin Skinner Pest Control, dated 29 January 1999
- Submission 33 – NSW Health, dated 1 February 1999
- Submission 34 – Australian Beef Association, dated 10 February 1999
- Submission 35 – Rail Services Australia, dated 9 February 1999
- Submission 36 – Narromine Shire Council, dated 8 February 1999
- Submission 37 – Environment Protection Authority, dated 3 March 1999
- Submission 38 – Australian Environmental Pest Managers Association Ltd, dated 26 February 1999
- Submission 39 – Ms Elizabeth Woods, dated 25 February 1999
- Submission 40 – Avcare, dated 4 March 1999
- Submission 41 – NSW State Forests, dated 15 March 1999
- Submission 42 – Mr Phillip & Mrs Colleen Drew, dated 25 May 1999
- Submission 43 – Walgett Shire Council, dated 24 May 1999
- Submission 44 – NSW Agriculture, dated 11 June 1999
- Submission 45 – Ms Teena Sambrook, dated 31 March 1999
- Submission 46 – Mr Wally Jones, dated 25 March 1999
- Submission 47 – Mrs V Moses, dated 31 March 1999
- Submission 48 – Australian Cotton Industry Council, dated 17 June 1999

ATTACHMENT 2

List of persons sent correspondence relating to their scheduled appearance to give evidence at the pesticides public hearing on 21 June 1999

Mr Jeff Angel, Director, Total Environment Centre
Ms Jo Immig, Toxic Chemicals Campaigner, Total Environment Centre
Dr Kevin Sheridan, Director-General, NSW Agriculture
Dr Richard Sheldrake, Deputy Director-General, NSW Agriculture
Mr Richard Toffolon, Program Leader – Agricultural & Veterinary Chemicals, NSW Agriculture
Dr Richard Spurway, Program Manager, Fibre, Oils & Specialty Products and Program Manager, Education & Training, NSW Agriculture
Mr John Williams, Regional Director, North Coast, NSW Agriculture
Mr Michael Nichols, Chairman – Agricultural Chemicals Committee, NSW Farmers' Association
Mr Michael Keogh, Policy Director, NSW Farmers' Association
Mr Brad Williams, Director, Intensive Industries, NSW Farmers' Association
Ms Annie Tucker, Assistant Director, Intensive Industries, NSW Farmers' Association
The Hon Gary Punch, Chief Executive, Cotton Australia
Mr Mike Logan, Director, Cotton Australia
Mr Bruce Pike, Extension Manager, Cotton Australia
Mr Dave Anthony, Director, Cotton Research & Development Corporation
Mr Lindsay Keenan, NSW Director, Aerial Agricultural Association of Australia
Mr Peter Weatherstone, Executive Officer, Aerial Agricultural Association of Australia
Dr Neil Shepherd, Director-General, Environment Protection Authority



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 2

Monday, 21 June 1999
At Parliament House at 9.30 am

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Mr Macdonald
Dr Pezzutti

2. Confirmation of Minutes

Resolved, on motion of Mr Cohen, that the minutes of meeting number 1 be confirmed.

3. Business Arising

The Committee deliberated.

Resolved, on motion of Mr Cohen, that Dr Pezzutti be granted a leave of absence from the Committee from 26 July 1999 to 5 September 1999.

4. Hearing

The Committee deliberated.

Resolved, on motion of Dr Pezzutti, that in accordance with the Resolution of the Legislative Council of 11 October 1994 the Committee

authorises the sound broadcasting and television broadcasting of its public proceedings held today.

The public and media were admitted.

4.1 Pesticides Inquiry

Mr Jeff Angel, Director, and Ms Jo Immig, Toxic Chemicals Campaigner, both of the Total Environment Centre, were sworn and examined. Mr Angel tendered two documents supporting his evidence.

Resolved, on motion of Dr Pezzutti, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Dr Richard Shel Drake, Deputy Director-General, Dr Richard Spurway, Program Manager, Fibre, Oils and Specialty Products and Program Manager, Education and Training, Mr Roger Toffolon, Program Leader, Agricultural and Veterinary Chemicals, and Mr John Williams, Regional Director, North Coast, all of NSW Agriculture, were sworn and examined. Dr Shel Drake tendered two documents supporting his evidence.

Resolved, on motion of Dr Pezzutti, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Mr Michael Nichols, Chairman, Agricultural Chemicals Committee, Mr Brad Williams, Director, Intensive Industries, and Ms Amy Tucker, Assistant Director, Intensive Industries, all of NSW Farmers' Association, were sworn and examined.

Resolved on motion of Dr Pezzutti, that pursuant to the provisions of section 4 of the *Parliamentary Papers (Supplementary Provisions) Act 1975* and under the authority of Standing Order 252, the Committee authorises the Clerk to the Committee to publish submission no 26 (Total Environment Centre).

Evidence concluded and the witnesses withdrew.

The Hon Gary Punch, Chief Executive Officer, Cotton Australia, and Executive Director, Australian Cotton Industry Council, Mr Gary Fitt, Principal Research Scientist, CSIRO, and Chief Executive Officer, Australian Cotton Research Institute, and Mr Mike Logan, Farmer and Director, Cotton Australia, were sworn and examined.

Evidence concluded and the witnesses withdrew.

Mr Peter Weatherstone, Executive Officer, and Mr Lindsay Keenan, NSW Director, Aerial Agriculture Association of Australia, were sworn and examined. Mr Weatherstone tendered a document supporting his evidence.

Resolved, on motion of Dr Pezzutti, that the Committee accept the document.

Evidence concluded and the witnesses withdrew.

Dr Neil Shepherd, Director-General, Ms Sue Dawson, Acting Assistant Director-General, and Mr Mark Gorta, Manager, Chemicals Policy, all of the NSW Environment Protection Authority, were sworn and examined.

Evidence concluded and the witnesses withdrew.

Public hearing concluded, the media and public withdrew.

Resolved, on motion of Dr Pezzutti, that pursuant to the provisions of section 4 of the *Parliamentary Papers (Supplementary Provisions) Act 1975* and under the authority of Standing Order 252, the Committee authorises the Clerk to the Committee to publish the corrected transcripts of evidence given at today's hearing, and to publish the documents accepted by the Committee during today's hearing [Mr Angel - two; Dr Sheldrake - two, Mr Weatherstone - one].

5. Pesticides Inquiry

The Committee deliberated.

Resolved, on motion of Mr Cohen, that the Director write to all those persons who have expressed an interest in the inquiry, advising them of the inquiry timetable and agreed hearing dates and that additional submissions will be received up until 16 July 1999.

6. Adjournment

The meeting adjourned at 4.00 pm until Monday, 26 July 1999 at 9:30 am.

Anna McNicol
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 3

Monday 26 July 1999

At Oxley Room, Dubbo Civic Centre, Dubbo at 9.30 am

1. Members present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson

2. Apologies

Dr Pezzutti (leave of absence granted from the Committee until 5 September 1999).

3. Confirmation of minutes

Resolved, on motion of Mr Johnson, that the minutes of meeting number 2 be confirmed.

4. Business arising

Nil.

5. Tabled documents

5.1 Submissions

The Chair tabled two submissions sent to the Committee in relation to its pesticide inquiry:

Submission 51 – Gunnedah Environment Group, dated 28 June 1999
Submission 55 – Central West Environment Council, dated 19 July 1999

6. Hearing

The Committee deliberated.

Resolved, on motion of Mr Cohen, that in accordance with the Resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held today.

The public and media were admitted.

6.1 Pesticides inquiry

Mr Sam Amey, Mr Richard Noss and Mr David Yeo, all of Citizens Against Pollution, were sworn and examined. Mr Amey tendered three documents supporting his evidence. Mr Yeo tendered one document supporting his evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Mr Peter Cone, Senior Area Manager, Cotton Australia and Mr John Furney, Proprietor, Ben Furney Flour Mills, were sworn and examined.

Mr Furney requested that certain evidence be heard in private by the Committee.

Under Standing Order 250, the public and media were excluded for a portion of Mr Furney's evidence.

In private evidence concluded.

The public and media were readmitted.

Evidence concluded and the witnesses withdrew.

Mr Doug Herd, Director, Environmental Services, Mr John Davis, Manager, Environment and Health, Mr Paul Anderson, Manager, Building and Development and Mr Greg Geoghagen, Manager, Strategic Planning, all of Dubbo City Council, were sworn and examined. Mr Davis tendered four documents supporting his evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Ms Shirley Jeffrey and Mr Andrew Montgomery, both private citizens, were sworn and examined. Mr Montgomery tendered 19 documents supporting his evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Ms Barbara Eldershaw, private citizen, was sworn and examined. Ms Eldershaw tendered 19 documents supporting her evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the documents.

Evidence concluded and the witness withdrew.

Mr Andrew Montgomery, private citizen, was recalled and examined under former oath.

Mr Montgomery requested that certain evidence be heard in private by the Committee.

Under Standing Order 250, the public and media were excluded for a portion of Mr Montgomery's evidence.

In private evidence concluded.

The public and media were readmitted.

Evidence concluded and the witness withdrew.

Mr Bob Meadley, Director, Environmental Services, and Mr Johannes Honnef, Planning Officer, both of Narromine Shire Council, were sworn and examined. Mr Meadley tendered 8 documents supporting his evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Ms Amanda Pahl, Secretary, Mudgee District Environment Foundation, and

Ms Bev Smiles, Secretary, Central West Environment Council, were sworn and examined. Ms Pahl tendered 2 documents supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Mr Peter Howat, Research and Development Manager, Australia, Nufarm, was sworn and examined. Mr Howat tendered two documents supporting his evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the documents.

Evidence concluded and the witness withdrew.

Public hearing concluded, the media and public withdrew.

7. General business

The Committee was advised by the Chair that Mr Robert Stefanic, has been seconded to the position of Senior Project Officer to the Committee until 17 September 1999 to assist the secretariat with the Pesticides inquiry.

8. Adjournment

The meeting adjourned at 5:00 pm until Tuesday, 27 July 1999 at 10:00 am.

Steven Carr
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 4
Tuesday 27 July 1999
At Smithhurst Theatre, Gunnedah at 10:00 am

1. Members present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Mr Macdonald

2. Apologies

Dr Pezzutti (leave of absence granted from the Committee until 5 September 1999).

3. Hearing

The Committee deliberated.

Resolved, on motion of Mr Cohen, that in accordance with the Resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held today.

The public and media were admitted.

3.1 Pesticides inquiry

Ms Vicki Doubleday and Mr Len Sanders, both private citizens, were sworn and examined. Ms Doubleday tendered one document supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the document.

Evidence concluded and the witnesses withdrew.

Ms Sandra Strong, Mr Sam Leys and Mr Ian Grant, all of the Gunnedah Chemical Liaison Committee were sworn and examined. Ms Strong tabled one document supporting her evidence.

Resolved, on motion of Mr Macdonald, that the Committee accept the document.

Evidence concluded and the witnesses withdrew.

Ms Christine Robertson, Director, New England Public Health Unit, and Dr Lyn Fragar, Director, Australian Agricultural Health Unit, were sworn and examined. Dr Fragar tabled one document supporting her evidence. Ms Robertson tendered six documents supporting her evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

The Committee undertook a site visit of a property owned by Len Sanders and Jan Douglas at Gunnedah.

Mr Peter Middlebrook, Proprietor, Middlebrook Air Services, was sworn and examined.

Mr Middlebrook requested that certain evidence be heard in private by the Committee.

Under Standing Order 250, the public and media were excluded for a portion of Mr Middlebrook's evidence.

Mr Middlebrook tendered one document supporting his evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the document.

In private evidence concluded.

The public and media were readmitted.

Evidence concluded and the witness withdrew.

Cr Geoff Marshall, Mr Max Kershaw, General Manager and Mr Michael Silver, Manager, Environment, all of the Gunnedah Shire Council, were sworn and examined.

Evidence concluded and the witnesses withdrew.

Mr Mike Slack-Smith, Chairman, and Ms Eslyn Johns, Administration Officer, both of the Rural Lands Protection Board (Narrabri), were sworn and examined.

Evidence concluded and the witnesses withdrew.

Public hearing concluded, the media and public withdrew.

4. Pesticides inquiry

The Committee deliberated.

Resolved, on the motion of Mr Cohen, that the Committee write to the NSW EPA to ascertain the results of pesticide residue analysis taken by Narromine Council and the NSW EPA of a Narromine bus on 5 February 1999.

5. Adjournment

The meeting adjourned at 3:40 pm until Wednesday, 4 August 1999 at 9:30 am.

Steven Carr
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 5

Wednesday 4 August 1999

At Lismore Workers' Club at 9:30 am

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson

2. Apologies

Dr Pezzutti (leave of absence granted from the Committee until 5 September 1999).

3. Business Arising

The Committee deliberated.

Resolved, on the motion of Mr Johnson, that the leave of absence granted by the Committee to Dr Pezzutti be recorded in the minutes.

Resolved, on the motion of Mr Johnson, that Mr Macdonald's name be struck from the Apologies section of Minutes 3 and Minutes 5.

4. Tabled Documents

7.1 Submissions

The Chair tabled 19 submissions sent to the Committee in relation to its pesticides inquiry:

- Submission 45 – Ms Teena SamBrook, dated 16 June 1999
Submission 46 – Mr Wally Jones, dated 16 June 1999
Submission 47 – Mrs Val Moses, dated 16 June 1999
Submission 48 – The Hon. Gary Punch, Cotton Australia, dated 17 June 1999
Submission 49 – Ms Brenda Myers, dated 18 June 1999
Submission 50 – Ms Heather Teakle, Mullumbimby Progress Association, dated 23 June 1999
Submission 51 – Ms Vicki Doubleday, Gunnedah Environment Group, dated 28 June 1999
Submission 52 – Ms Susan Marshall, dated 29 June 1999
Submission 53 – Mr Jim Hourigan, dated 12 July 1999
Submission 56 – Ms Margaret Dalitz, dated 16 July 1999
Submission 57 – Dr Lilliana Corredor, dated 16 July 1999
Submission 58 – Associate Professor Richard Roush, Cooperative research Centre for Weed Management, dated 23 July 1999
Submission 59 – Mr Peter Middlebrook, Middlebrook Air Services, dated 26 July 1999
Submission 60 – Mrs Val Scanlon
Submission 61 – Mr John Clark, Clark and Associates, dated 28 July 1999
Submission 62 – Cr Geoff Marshall, Gunnedah Shire Council, dated 27 July 1999
Submission 63 – Ms Jenny Czensy, Lachlan River Families for a Safe Environment, dated 29 July 1999
Submission 64 – Mr Mike Slack-Smith, Narrabri Rural Lands Protection Board
Submission 65 – Mr W Lander, dated 30 July 1999

7.2 Correspondence Received

The Chair tabled two items of correspondence received:

Letter from Dr Neil Shepherd, Director General, Environment Protection Authority, to Senior Project Officer, dated 23 July 1999, providing answers to questions on notice from the Department's appearance at the Committee hearing on 21 June 1999.

Letter from Dr Kevin Sheridan, Director General, NSW Agriculture, to Senior Project Officer, dated 23 July 1999, providing answers to questions on notice from the Department's appearance at the Committee hearing on 21 June 1999.

8. Pesticide inquiry

The Committee deliberated.

Resolved, on motion of Mr Johnson, that pursuant to the provisions of section 4 of the Parliamentary Papers

(Supplementary Provisions) Act 1975 and under the authority of Standing Order 252, the Committee authorises the Clerk to the Committee to publish the corrected transcripts of evidence given at the Committee hearing of 26 July 1999 and 27 July 1999. The Committee authorises the Clerk to publish the documents accepted by the Committee during the hearings of the:

26 July 1999 [Mr Amey – three, Mr Yeo – one, Mr Davis – four, Mr Montgomery – 19, Ms Eldershaw – 19, Mr Meadley – eight, Ms Pahl – two, and Mr Howat – two]; and

27 July 1999 [Ms Doubleday – one, Ms Strong – one, Dr Fragar – one, Ms Robertson – six, and Mr Middlebrook – one].

9. Hearing

The Committee deliberated.

Resolved, on motion of Mr Johnson, that in accordance with the Resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held today.

The public and media were admitted.

9.1 Pesticides inquiry

Cr Richard Staples, Byron Shire Council, was sworn and examined.

Evidence concluded and the witness withdrew.

Ms Kath Vail, representative, Poison Watch, was sworn and examined. Ms Vail tabled one document supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the document.

Evidence concluded and the witness withdrew.

Mr Stan Scanlon, representative, Conservation of North Ocean Shores, was sworn and examined.

Evidence concluded and the witness withdrew.

Mr Rod Fayle, President, and Mr Andrew Heap, Executive Officer, both of the Australian Macadamia Society Limited, were sworn and examined.

Evidence concluded and the witnesses withdrew.

Mr Don Want and Mrs Ann Want, both private citizens, were sworn and examined. Mrs Want tabled one document supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the document.

Evidence concluded and the witnesses withdrew.

Mr Ian Campbell, consultant to the Banana Industry Committee, and Mr Neil Treverrow, Technical Specialist, Tropical Fruit, NSW Agriculture, were sworn and examined. Mr Campbell tabled three documents supporting his evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witnesses withdrew.

Dr John Beard, Director, Northern Rivers Institute of Health and Research, Northern Rivers Area Health Service, was sworn and examined.

Evidence concluded and the witness withdrew.

Public hearing concluded, the media and public withdrew.

Resolved, on motion of Mr Cohen, that the confidential status of Mr Scanlon's submission to the Committee (submission No.24) be confirmed.

7. Adjournment

The meeting adjourned at 3:30 pm, until Thursday 5 August at 9:30 am.

Steven Carr
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 6

Thursday 5 August 1999

At Parliament House at 9:30 am

1. Members Present

Mr Kelly (in the Chair)

Mr Cohen

Mr Johnson

Mr Macdonald (for the period 10:40 am – 11:00 am)

2. Apologies

Dr Pezzutti (leave of absence granted from the Committee until 5 September 1999).

3. Business Arising

Nil.

4. Hearing

The Committee deliberated.

Resolved, on motion of Mr Cohen, that in accordance with the Resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held today.

The public and media were admitted.

4.1 Pesticides inquiry

Ms Kate Hughes, private citizen, was sworn and examined. Ms Hughes tabled one document supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the document.

Evidence concluded and the witness withdrew.

Mr Claude Gauchat, Executive Director, Mr Colin Sharpe, Director, Scientific and Regulatory Affairs (Crop Protection), and Mr Vernon Keighley, General Manager, Agsafe, all of Avcare, were sworn and examined. Mr Sharpe tabled four documents supporting his evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the documents.

Evidence concluded and the witness withdrew.

Mr Peter Mullins, Executive Officer and Ms Alison Nowland, Environmental Co-ordinator, Rural Lands Protection Board State Council, were sworn and examined. Mr Mullins tabled one document supporting his evidence.

Resolved, on motion of Mr Johnson, that the Committee accept the document.

Evidence concluded and the witness withdrew.

Dr John Keniry, Chairman, Dr Alison Turner Chief Executive Officer, and Mr Greg Hooper, Deputy Chief Executive Officer, all of the National Registration Authority, were sworn and examined.

Evidence concluded and the witness withdrew.

Mr Brian Inall, NSW Branch Chairman, Mr Malcolm Trotter, Member of the NSW State Council, all of the Australian Environmental Pest Managers Association, were sworn and examined.

Evidence concluded and the witness withdrew.

Ms Jillian Cranny, representative, Toxin Action Network (North Coast), National Toxics Network, North Coast Environment Council, was sworn and examined. Ms Cranny tabled seven documents supporting her evidence.

Resolved, on motion of Mr Cohen, that the Committee accept the documents.

Evidence concluded and the witness withdrew.

Public hearing concluded, the media and public withdrew.

Resolved, on motion of Mr Cohen, that pursuant to the provisions of section 4 of the Parliamentary Papers (Supplementary Provisions) Act 1975 and under the authority of Standing Order 252, the Committee authorises the Clerk to the Committee to publish the corrected transcripts of evidence given at the Committee hearings of 4 August 1999 and 5 August 1999. The Committee authorises the Clerk to publish the documents accepted by the Committee during the hearings of:

4 August 1999 [Ms Vail – one, Mrs Want – one, Mr Campbell – three]; and

5 August 1999 [Ms Hughes – one, Mr Sharpe – four, Mr Mullins – one, Ms Cranny – seven].

5. General Business

The Committee deliberated.

Resolved, on motion of Mr Cohen, that the Minutes reflect the attendance of Mr Macdonald at the hearing of 5 August 1999 to be from 10:40 am to 11:00 am.

6. Adjournment

The meeting adjourned at 3:30 pm, until Monday 13 September 1999 at 2:30 pm.

Steven Carr
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 7
Monday 13 September 1999
At Parliament House at 4:00 pm

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Mr Macdonald
Dr Pezzutti

2. Apologies

3. Confirmation Of Minutes

Resolved, on motion of Mr Johnson, that the minutes of meeting numbers 3, 4, 5 and 6 be confirmed.

4. Business Arising

Nil.

5. Tabled Documents

6. Submissions

The Chair tabled nine submissions sent to the Committee in relation to its pesticides inquiry:

Submission 66 – Dr Frances Parker, University of Western Sydney, dated 2 August 1999.

Submission 67 – Ms Patricia Bartholomew, dated 2 August 1999.

Submission 68 – Mr John Rogers, North Coast Low-Chill Stonefruit Growers' Association Inc, dated 5 August 1999.

Submission 69 – Mrs Clare Gaudron, North Coast Oilseeds Growers Association Inc, dated 6 August 1999.

Submission 70 – Dr Archie Kalokerinos, dated 3 August 1999.

Submission 71 – Ms Jillian Lyons, dated 8 August 1999.

Submission 72 – Cr Ewan Tolhurst, Bogan Shire Council, dated 10 August 1999.

Submission 73 – Mr Sam Haddad, Department of Urban Affairs and Planning, dated 18 August 1999.

Submission 74 – Mr Tony Vlatko, dated 19 August 1999.

7. Correspondence Received

The Chair tabled nineteen documents of correspondence received involving responses to questions taken on notice.

8. Response to questions on notice

Letter from Ms Amanda Pahl, Mudgee District Environment Foundation, and Ms Beverley Smiles, Central West Environment Council, to Director, dated 23 August 1999, responding to questions taken on notice before the Committee on 26 July 1999.

Letter from Ms Jillian Cranny, National Toxics Network, North Coast Environment Council, Toxin Action Network, dated 23 August 1999, responding to questions taken on notice before the Committee on 5 August 1999.

Letter from Mrs Shirley Jeffery, private citizen, to Director, dated 23 August 1999, responding to questions taken on notice before the Committee on 26 July 1999.

Letter from Mr Sam Amey, Citizens Against Pollution, to Director, dated 23 August 1999, responding to questions taken on notice before the Committee on 26 July 1999.

Letter from Mr Ian Campbell, consultant to the Banana Industry Committee, to Director, dated 26 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Shaun Slattery, Narrabri Rural Lands Protection Board, to Director, dated 26 August 1999, responding to questions taken on notice by Mr Mike Slack-Smith before the Committee on 27 July 1999.

Letter from Ms Vicki Doubleday, Gunnedah Environment Group, to Director, dated 26 August 1999, responding to questions taken on notice before the Committee on 27 July 1999.

Letter from Ms Christine Robertson, New England Public Health Unit, to Director, dated 26 August 1999, responding to questions taken on notice before the Committee on 27 July 1999.

Letter from Mr Don Want, private citizen, to Director, dated 26 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Don Want, private citizen, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Claude Gauchet, Avcare, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 5 August 1999.

Letter from Mr Vernon Keighley, Agsafe, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 5 August 1999.

Letter from Mrs Kath Vail, Poison Watch, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Stan Scanlon, Conservation of North Ocean Shores, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Peter Cone, Cotton Australia, to Director, dated 27 August 1999, responding to questions taken on notice before the Committee on 26 July 1999.

Letter from Dr Alison Turner, National Registration Authority, to Director, dated 30 August 1999, responding to questions taken on notice before the Committee on 5 August 1999.

Letter from Dr John Beard, Northern Rivers Institute of Health and Research, Northern Rivers Area Health Service, to Director, dated 30 August 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Cr Richard Staples, Byron Shire Council, to Director, dated 5 September 1999, responding to questions taken on notice before the Committee on 4 August 1999.

Letter from Mr Peter Howat, Nufarm, to Director, dated 7 September 1999, responding to questions taken on notice before the Committee on 26 July 1999.

9. Pesticides Inquiry

Deliberation of draft report version 1.

The Committee deliberated.

10. General Business

Nil.

11. Adjournment

The meeting adjourned at 5:45 pm until Friday, 17 September 1999 at 9:30 am.

Steven Carr
Director



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 8
Friday 17 September 1999
At Parliament House at 9:30 pm

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Dr Pezzutti

2. Apologies

Mr Macdonald

3. Confirmation Of Minutes

Resolved, on motion of Mr Johnson, that the minutes of meeting number 7 be confirmed.

4. Business Arising

Nil.

5. Pesticides Inquiry

5.1 Draft Report Version 1

The Chair submitted his draft report entitled "The Use and Management of Pesticides in New South Wales" which, having been circulated to each Member of the Committee, was accepted as being read.

The Committee proceeded to consider the draft report.

Resolved, on motion of Mr Johnson, that the Prelude be adopted, as amended.

Resolved, on motion of Mr Johnson, that Chapter one be adopted, as amended.

Resolved, on motion of Mr Johnson, that Chapter two be adopted, as amended.

Resolved, on motion of Mr Johnson, that Chapter three be adopted, as amended.

Resolved, on motion of Dr Pezzutti, that Chapter four be adopted, as amended.

Resolved, on motion of Dr Pezzutti, that Chapter five be adopted, as amended.

Mr Cohen indicated his intention to submit a statement of dissent in relation to the report.

6. General Business

The Chair tabled a letter from Mr Carl Scully, Minister for Transport and Minister for Roads, requesting that the Standing Committee on State Development inquire into and report on issues relating to road maintenance and competitive tendering (letter attached).

The Committee deliberated.

Resolved, on motion of Dr Pezzutti, that the Chairman write to the Minister for Transport and Minister for Roads, requesting details of the number of recommendations that the NSW Government has implemented from the following Standing Committee on State Development reports:

Discussion Paper 1 May 1989

Public Sector Tendering & Contracting in New South Wales: A Survey

Report 1 August 1989

Public Sector Tendering & Contracting in New South Wales: Supply of Goods and Services

Report 2 October 1989

Public Sector Tendering & Contracting in New South Wales: Local Government Tendering & Contracting

Discussion Paper 3 June 1990

Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting: Management Options

Report 3 April 1991

Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting. Volume A

Report 5 December 1991

Public Sector Tendering & Contracting in New South Wales: Capital Works Tendering & Contracting. Volume B

Report 7 June 1992

Public Sector Tendering & Contracting in New South Wales: Supply of Goods and Services: Follow Up Report

Report 8 October 1992

Coastal Planning & Management in New South Wales: The Process for the Future. Volume II

Report 9 April 1993

Public Sector Tendering & Contracting in New South Wales: Local Government Tendering & Contracting: Follow Up Report

Resolved, on motion of Dr Pezzutti that, where available, the Director forward copies of these reports and discussion papers along with NSW Government responses.

7. Adjournment

The meeting adjourned at 3.00 pm until Monday, 20 September 1999 at 2:00 pm.

(Unsigned)



STANDING COMMITTEE ON STATE DEVELOPMENT
Parliament of New South Wales, Legislative Council

Minutes No. 9
Monday 20 September 1999
At Parliament House at 2:00 pm

1. Members Present

Mr Kelly (in the Chair)
Mr Cohen
Mr Johnson
Mr Macdonald
Dr Pezzutti

2. Apologies

3. Business Arising

Nil.

4. Pesticides Inquiry

4.1 Draft Report Versions 1 And 2

The Chair submitted his draft report, as amended (version 2), entitled "The Use and Management of Pesticides in New South Wales" which, having been circulated to each Member of the Committee, was accepted as being read.

The Committee proceeded to consider the amended draft report.

The Committee deliberated.

Resolved, on motion of Dr Pezzutti, the meeting adjourned at 2:30 pm until 2:50 pm.

The Committee deliberated.

5. Correspondence Received

The Chair tabled two items of correspondence received:

Letter from Mr Mick Keogh, Policy Director, NSW Farmers' Association, to Chairman, dated 19 September 1999, relating to injunction powers under the *Pesticides Act 1978*.

Correspondence from Mr Judson Agius, NSW Environment Protection Authority, to Director, dated 20 September 1999, relating to injunction powers under the *Pesticides Act 1978*.

The Committee deliberated.

Resolved, on motion of Dr Pezzutti, that the Director amend the draft report to incorporate extracts from the NSW Farmers' Association's correspondence of 19 September 1999.

Resolved, on motion of Dr Pezzutti, that recommendation 26 of draft report version 1 be deleted. Mr Cohen requested that his dissenting vote be noted.

Resolved, on motion of Dr Pezzutti, that recommendation 31 of draft report version 2 be deleted. Mr Cohen requested that his dissenting vote be noted.

Resolved, on motion of Dr Pezzutti, that recommendation 36 of draft report version 2 be deleted.

Mr Cohen indicated his intention to submit a statement of dissent in relation to the report. It was agreed that the statement would be provided to the Clerk to the Committee to append to the report no later than 9:30 am on Wednesday 22 September 1999.

The Committee deliberated.

Resolved, on motion of Mr Macdonald, that Volume two be adopted.

Resolved, on motion of Mr Macdonald, that the report, as amended, be adopted.

Resolved, on motion of Mr Macdonald, that the report be signed by the Chairman and presented to the House.

5. General Business

Nil.

6. Adjournment

The meeting adjourned at 4:45 pm *sine die*.

(Unsigned)

CONTACT DETAILS

Correspondence and telephone inquiries concerning the Standing Committee on State Development and current work should be directed to:

The Secretariat
Standing Committee on State Development
Legislative Council
Parliament of New South Wales
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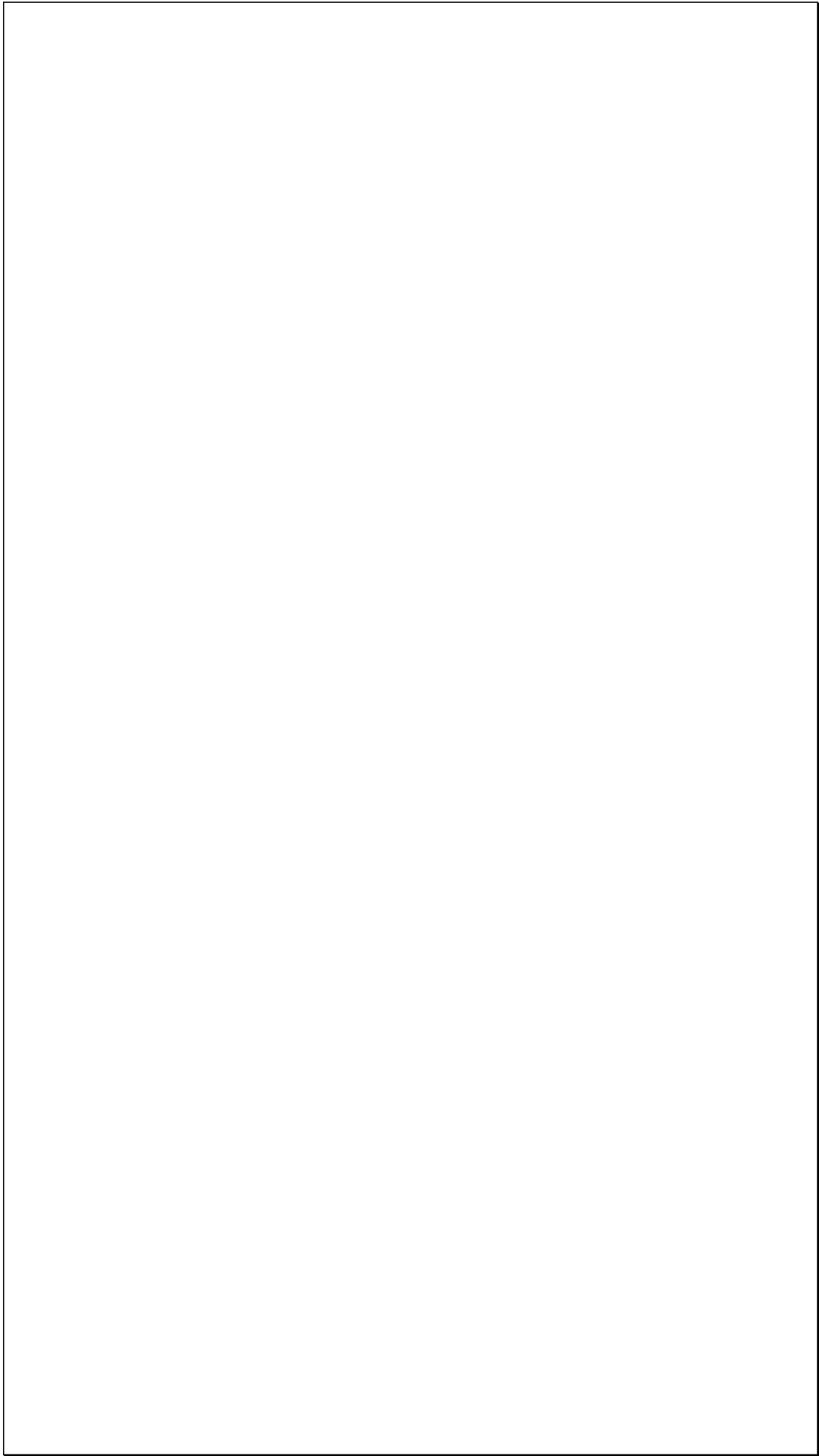
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PARLIAMENT OF NEW SOUTH WALES
LEGISLATIVE COUNCIL

STANDING COMMITTEE ON STATE DEVELOPMENT

Report

on

THE USE AND MANAGEMENT OF PESTICIDES IN
NEW SOUTH WALES

Ordered to be printed

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INQUIRY'S TERMS OF REFERENCE

The Use and Management of Pesticides in New South Wales

(Reference received 12 November 1999)

That in light of:

- its inquiry into the Role of Government in Facilitating the International Competitiveness of Agriculture in New South Wales, and
- the widespread community consultation that was conducted in 1997 by the NSW Environment Protection Authority in conjunction with the Government's *Discussion Paper on Improving Pesticide Management in NSW*;

the Standing Committee on State Development inquire into and report on issues associated with all pesticide use in NSW and options for future policy and/or programs related to the management of pesticides, including all agricultural chemicals, having particular regard to:

- the sustainability of agricultural activities which currently rely on intensive pesticide use;
- the social, health, environmental and trade interests of the agricultural and wider community, including the need for avoiding and reducing the risks associated with pesticide use;
- the role of pesticide users, local government, State agencies and other stakeholders (including environment and other community groups) in the resolution of local conflicts in relation to pesticide use; and
- any opportunities for industry to address the issues through research and development (on aspects such as less pesticide-dependent plant varieties, improved pesticide products and application techniques) and the development and implementation of best management practices for pesticide use.

For the purposes of the inquiry, the Minister for the Environment has advised that the term pesticides includes herbicides, bactericides, pest baits, fungicides, insecticides, pest lures, rodenticides and pest repellents.



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MEMBERSHIP OF THE STANDING COMMITTEE

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Australian Labor Party

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Mr Robert Stefanic
(For the period 2 August 1999 – 17 September 1999) Senior Project Officer

Ms Annie Marshall Committee Officer

ESTABLISHMENT AND FUNCTIONS OF THE STANDING COMMITTEE

In June 1988, the Legislative Council of the New South Wales Parliament resolved to establish two Standing Committees—the Standing Committee on Social Issues and the Standing Committee on State Development. After the 1995 election a third Committee, the Standing Committee on Law and Justice, was established. At that time the Standing Committee on Privilege and Ethics was reconstituted by resolution.

The functions of the State Development Committee, as set out in the Resolutions of the Legislative Council, are to inquire into, consider and report to the Council on: ¹

- options for future policy directions and emerging issues to ensure that opportunities for sound growth and wise development for the benefit of the people in all areas of New South Wales are pursued;
- any proposal, matter or thing concerned with economics and finances, resources and energy, transportation, tourism, public administration, local government, the Olympics, primary industry, industrial and technological developments and environmental issues in New South Wales; and
- any proposal, matter or thing concerned with the problems or disadvantages uniquely or predominantly experienced in country areas, including the viability of cities and towns in those areas.

¹ Legislative Council, 1st Session, 52nd Parliament, Committees, Resolutions, Office Holders and Ministerial Representation, (Draft), p.6.

OPERATION OF THE STANDING COMMITTEE

Matters for inquiry may be referred to the Standing Committee by a Minister of the Crown or by resolution of the Legislative Council. Additionally the Standing Committee may inquire into and report to the House on any annual report or petition that has been tabled in the Legislative Council that is relevant to the functions of the Standing Committee. The Standing Committee may publish papers and evidence taken in public, as it considers appropriate. In that connection the Standing Committee may prepare and distribute discussion papers as aids to its inquiries.

The Legislative Council resolution enables the Standing Committee to:

- summons witnesses;
- make inspections;
- call upon the services of government organisations and their staff with the consent of the appropriate Minister;
- accept written submissions concerning inquiries from any person or organisation;
- conduct public hearings; and/or
- meet and make joint reports with other federal and state parliamentary committees.

Reports must be tabled in the Legislative Council within ten days of adoption by the Standing Committee. Each report is debated in the House. The Leader of the Government in the Legislative Council is required to respond within six months to any recommendations for Government action that have been set out in Standing Committee reports.

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REPORT OF PROCEEDINGS BEFORE

**STANDING COMMITTEE ON STATE
DEVELOPMENT**

**INQUIRY INTO THE USE AND MANAGEMENT OF PESTICIDES
IN NEW SOUTH WALES**

At Sydney on Monday 21 June 1999

The Committee met at 9.30 a.m.

PRESENT

The Hon. A. B. Kelly (Chairman)

The Hon. I. Cohen, The Hon. J. R. Johnson, The Hon. I. M. Macdonald,
The Hon. Dr B.P.V. Pezzutti

CHAIR: Evidence given before the Committee and any documents presented to the Committee that have not been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any member of such Committee, or by any other person. Copies of the guidelines covering broadcasting of the proceedings are available from the Committee staff.

Motion by the Hon. Dr B. P. V. Pezzutti agreed to:

That in accordance with the resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held today.

JEFFREY SAMUEL ANGEL, Director, Total Environment Centre, 2/362 Kent Street, Sydney, and

JOANNA LIZA IMMIG, Chemicals Campaigner, Total Environment Centre, 2/362 Kent Street, Sydney, affirmed and examined:

CHAIR: Did you each receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr ANGEL: Yes.

Ms IMMIG: Yes.

CHAIR: Are you each conversant with the terms of reference of this inquiry?

Ms IMMIG: Yes.

Mr ANGEL: Yes.

CHAIR: If you consider at any stage during your evidence that in the public interest certain evidence or documents that you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into a confidential Committee. However, if that becomes the case the Parliament has the right to override that decision and make any evidence public at a later stage. Jeff, would you like to make a statement?

Mr ANGEL: Jo and I will make a view brief statements. The Total Environment Centre [TEC] has been involved in the pesticides issue for many years. We have a long history of research, public consultation and public education activities and have been involved in assisting a wide range of rural groups which have been beset by pesticide load and chemical pesticide issues. As well, we run a public information service which is used daily when people suddenly discover a potentially hazardous chemical is being sprayed next door or in the house. We regard the Government response so far as ineffective and that the problems are getting worse. For example, attempts to mediate in areas such as Gunnedah and Middle Pocket have clearly failed.

The Hon. J. R. JOHNSON: Which Middle Pocket—on the North Coast?

Mr ANGEL: Yes.

The Hon. Dr B. P. V. PEZZUTTI: Near Billinudgel?

Mr ANGEL: Yes. There is increasing demand on TEC from the public in both rural and urban areas for information and assistance. In fact it is getting quite serious, particularly following the last couple of spraying seasons in the country so far as people's emotions in relation to this issue. In response to that community concern and the cost of dismissal by industry and some Government members and agencies, that pesticide problems were anecdotal and isolated, the TEC commissioned an Opinion Poll in 1998. Of those polled in city and country areas, 86 per cent were considered about the effects of pesticides on the environment; 92 per cent were in favour of increased regulation, increased controls, of pesticides. It was of note that the rural perceptions and attitudes were higher than the country attitudes in terms of being very concerned about the effects of pesticides.

CHAIR: The concerns of the rural community were higher than those of the city?

Mr ANGEL: Yes. The people outside Sydney were more concerned about the effects of this on the environment and were strongly in favour of improving controls on the use of pesticides. Not by a lot, but it was interesting that the convention was that country people were more tolerant of pesticides.

The Hon. Dr B. P. V. PEZZUTTI: Who compiled that report?

Mr ANGEL: Newspan, in May 1998. I table that document.

Document tabled.

The concerns about pesticides have led to the national strategy investigations. The National Strategy for the Management of Agriculture and Veterinary Chemicals acknowledges these problems and defines objectives to address them. The strategy identified reducing reliance on chemicals, risk reduction and use of chemicals as key objectives. It is essential that State legislation also embodies those objectives. The last spray season was a disaster; cattle from New South Wales were contaminated with endosulfen, which threatened exports and led to the national registration authority introducing tough new controls on all cotton industries. The town of Gunnedah was enveloped in a cloud of curacon, a cotton chemical. Community claims of illness were dismissed as psychosomatic.

Children in northern New South Wales were sprayed with pesticides while waiting for school buses. A plane crashed and spilled its load in Gunnedah. Contaminated pesticide containers are regularly dumped in local waste disposal facilities. Waterways, vegetation and wildlife were once again exposed to a cocktail of pesticides. These are the incidents we know about.

CHAIR: Do have information on those specific incidents?

Mr ANGEL: I can provide that. The question we ask is: Why was the last spray season another disaster after a history of industry, particularly the cotton industry, trying to sort itself out? We obtained a report by the Australian Cotton Foundation Ltd dated 8 November 1995 which stated in its covering letter that deteriorating public and government perceptions of the industry necessitated the commissioning of attitude research immediately. It stated "it is sobering reading when contemplating the task that is ahead of us if we are to recapture lost ground". The 1995 report further stated that the aim was to position cotton as a value commodity with broad-ranging community support and the cotton industry generally as a good environmental citizen within two years. That was 1997, two years after the report, and it failed. A lot of questions should be asked about why it failed.

One of the reasons that we believe that the cotton industry and other intensive users have failed is that they are incapable of controlling the cowboys in the industry. Unlike the views of New South Wales farmers and the cotton industry, we do not believe that there are a few cowboys; we believe there are a lot of cowboys, and that is symptomatic of the lack of best practice which the industry cannot adopt voluntarily. For that reason we have rejected the self-regulation policies of the New South Wales Farmers' Association and the cotton industry. We have examined the best management practices manual of the cotton industry which became public a few months ago. That manual espouses voluntary compliance with minimum standards for environment protection and management without real consultation with stakeholders about the standards. There is no vision for the industry to minimise reliance on pesticides in the future or even acknowledge that the pesticide load must be reduced.

Essentially the best practice manual, which the cotton industry claims is the most advanced available in agriculture, contains a self-assessment process, it has a system of questions from which people try to find out where they rank in pesticide use and potential impacts. It basically does nothing except to wait for the farmer to do something, without any particular prompting. There are a number of ranks, one, two, three and four; ranks three and four are absolutely appalling and should be banned or regulated out of existence rather than waiting for a patchy and slow evolution in the industry.

When the Carr Government came to power in 1995 it transferred the Pesticides Act to the Environment Protection Authority, and this was the first major move in improving regulation, because it separated regulation of pesticide use from the agricultural encourager or operator which was the Department of Agriculture and which previously held the Pesticides Act. However, there is a major task which has to now be done and that is to fix the Act so it can be brought up to modern standards to prevent chemical trespass and protect the environment and people's health in the urban and rural environments.

Ms IMMIG: It is fair to say that New South Wales pesticide legislation is out of step with international, national and other State trends to reduce risk of exposure to pesticides. The Environment Protection Authority[EPA] discussion paper "Improving Pesticide Management in New South Wales" identifies Queensland, South Australia, Victoria and Tasmania as having more stringent requirements in some areas of pesticide regulation than New South Wales. New South Wales is a significant user of pesticides, if not the greatest user of pesticides, although it is difficult to determine that accurately

because we do not collect any use data in this State. Therefore, I believe New South Wales should be leading the way with pesticide regulation and management. Instead, we have an Act that is more than 20 years old and it fails to protect the community and the environment from pesticide exposure.

Certain agricultural groups such as cotton and farmer associations have dominated the scene and community groups have been persecuted for raising their genuine concerns. The key issues for amending the Pesticides Act were contained in our submission so I will not reiterate them here. However, I would like to add some further comments to some recommendations that we believe may be controversial and difficult. The first of those is notification and community right to know. One of the fundamental complaints the Total Environment Centre receives from the community in both the rural and urban areas is about the lack of obligation of pesticide users to notify people of their intention to use pesticides. The notification period that is often discussed that would be helpful is 48 hours in advance. This would help people on both sides to take the necessary precautionary actions to protect themselves from exposure and to ensure the applicator is not applying pesticides on sensitive areas. The precautionary principle must be applied here because we keep finding out about serious unanticipated health and environmental impacts of pesticides.

Access to data about the volume and types of pesticides used in regions must also be made available to the community. It is dangerous not to know enough, and we have to guard against that. The Total Environment Centre frequently receives calls from members of the community in both the rural and urban areas. In the urban environment they go along the lines of, "I am at home with my baby. I have washing on the line and a vegetable patch out the back. The neighbours are spraying their house with chlorpyrifos. Is this dangerous? I have a bit of a headache, the chemical smell is filling my house. What should I do?" We also had a call from a child care centre in a state of panic. A bowling green directly next door was being treated heavily with pesticides while children were in the child care centre.

Another significant issue is the location of intensive pesticide-using agricultural industries. The nature of agriculture in New South Wales has changed dramatically from what it was 20 years ago. We now have many different types of crops next door to each other, and intensive crops such as cotton and rice, using large volumes of highly toxic chemicals, can be right up against something very sensitive such as an organic farm or livestock. The endosulfin beef residue crisis last year indicates this is a significant issue for trade as well as the environment and community health. There is documented scientific evidence that pesticides associated with cotton crops move off the crops and contaminate waterways. The Department of Land and Water Conservation's pesticides monitoring programs for 1995-96 and 1996-97 both indicate clearly that inland rivers in New South Wales are regularly inundated with pesticides every intensive pesticide-spraying season at levels that exceed the Australia and New Zealand Environment and Conservation Council guidelines.

A Commonwealth Scientific and Industrial Research Organisation investigation of endosulfin transport mechanisms in the riverine environment found that volitalisation of endosulfin from the cotton crop is a continuous process which eventually removes 70 per cent of the total endosulfin deposited during a spray. Basically, it goes up in the air and causes air pollution. I table that report as well.

Document tabled.

Intensive pesticide-using agricultural enterprises that pose significant risk to the environment and public health should be regulated through planning instruments. Why should an intensive pesticide-using crop be treated any differently to a polluting factory in the urban environment, where it is subject to a whole raft of development and planning controls? Why should a cotton crop, for example, be able to establish anywhere it likes and make life hell for neighbours and the natural environment as well? A current example of suitable planning processes is currently occurring in Dubbo, where the regional environment plan treats cotton farming as a separate type of intensive agricultural industry requiring a development application.

CHAIR: A local environment plan.

Ms IMMIG: Is it? The Dubbo community has expressed its significant concern over the potential siting of a cotton farm on the banks of the river and next to a sensitive aquifer recharge area. Lastly, I think the development of the pesticide reduction council is very important, because reducing pesticides is an ongoing and complex task. New information is constantly coming to light and the New South Wales Government must remain informed about these developments and set targets for risk reduction based on data about pesticide use in New South Wales. Currently, we do not know what is being used where and in what quantities, so how can we possibly be carrying out risk assessments without that fundamental layer of data?

Because this issue crosses so many jurisdictions—health, agriculture and local government—it is critical that the issue is tackled from all sides and involves all relevant ministries and representation from community and environment groups. The council should not be just an advisory council with a minimal impact. It should report to Parliament and assist the New South Wales Government to achieve the goal of reducing pesticide pollution in New South Wales so that we can lead the way with regulation and management of pesticides and not drag the chain as we currently are.

The Hon. I. COHEN: I am wondering about the experience in Europe, and I am particularly interested in aerial spraying. Could you enlighten the Committee as to whether you have any information on measures taken, targets set, in Europe, in relation to agvet chemical reduction and, in particular, the overseas experience, especially Great Britain's experience with aerial spraying?

Ms IMMIG: There are a number of international programs for pesticide risk reduction. Some are set in legislation, others take a different approach. The Netherlands, Switzerland, Denmark and Germany have excellent programs that either set targets or have pesticide risk reduction measures from all different aspects built into them. Yes indeed, some places such as the United Kingdom have certainly restricted aerial agricultural spraying in many places. I do not know whether they have banned it.

The Hon. I. COHEN: Has your organisation assessed the ability to do away with aerial spraying and whether we could have an effective regime that would function in the Australian environment, particularly in the cotton industry, with perhaps a

better form of delivery of what sprays had to be applied?

Ms IMMIG: It is a highly technical issue and certainly there are opportunities for other types of applications of pesticides through ground rig operations, and so on, and also a move away from applying pesticides to those crops ultimately. I think the 1990 Senate Select Committee into Agriculture identified that if all the social and environmental implications of aerial agriculture could not be accounted for then Australia should certainly look towards banning it. A lot of people in those areas, living with aerial spraying in their everyday lives, hope it is something we move away from, because it causes a great deal of pesticide drift.

The Hon. I. COHEN: Is that the position of the Total Environment Centre, to ban aerial spraying?

Mr ANGEL: Yes.

The Hon. I. COHEN: Jo, you mentioned consideration of planning measures. Could you give the Committee some indication of planning measures that may be effective to alleviate the conflict about pesticide use and application?

Ms IMMIG: I might ask Jeff to answer that.

Mr ANGEL: Essentially, the Environmental Planning and Assessment Act sets up different types of rigour of assessment for industries that are regarded as having different scales of environmental and social impact. There is no doubt that in the rural sector the intensive chemical-using developments have escaped sensible levels of environmental and planning assessment. It was a little bit of a surprise to find that Dubbo had brought in such planning.

CHAIR: It is a very progressive area.

The Hon. I. COHEN: It could be the influence of the Committee Chair; you never know.

Mr ANGEL: Possibly Dubbo wanted to escape the fate of Moree and Gunnedah. The treatment of the development application [DA] for the cotton farm near the river, near the aquifer and near the town, although not receiving the complete level of assessment that should be required, makes it quite obvious that the council is examining intensively the environmental, economic and health impacts. That is the sort of thing that should happen for such intensively chemical-using activities that chemically trespass.

Any major industrial development in an urban area from which pollution will escape outside its borders requires extra assessment. The health of people and the environment outside the border of that proposed farm are subsidising those activities through the environmental and social costs. We would prefer that intensive chemical-using industries in particular locations are made designated developments under the Environmental Planning and Assessment Act, which would bring them in concert with a whole range of other proven polluting activities in urban areas, mines, major roads or industrial and chemical processes.

On that scale people would be able to have a say. One of the reasons that people in the country are so angry about pesticides is that they do not get a say. No-one ever asks them whether their neighbour who is going to chemically trespass on them— whether through aerial spraying or tailing waters released into the stream that they use for stock and domestic purposes, or during flood times when sediment from the sprayed farm flows out over a whole range of other farms—should do it. The anger, the emotion and the polarisation of the debate in country areas is particularly progressed by this lack of consultation.

The Hon. I. COHEN: In your report to this Committee you mentioned that two people, one of whom is a Dr David Cook a local general practitioner in Gunnedah, stated that 500 people reported symptoms such as fatigue, headaches and gastro-intestinal upsets thought to be related to pesticides. The other person you mentioned was Mr Peter Clancy who reported that following aerial spraying on nearby cotton fields a large number of children suffered sores on exposed skin and were extremely fatigued and lacked concentration, and often had to be sent home. Has there been any further investigation into those specific matters? In the light of this type of information, which I understand has been repeated in many areas, do you have any opinion on how we should look at financial liability, and how we prove these types of issues?

Ms IMMIG: I am not aware of any further investigation into those specific incidences, although there may well be.

Mr ANGEL: In terms of social, financial and environmental liability, it is quite obvious that the current legislation fails to give people their due rights. The most notorious cases are when a person's cattle are contaminated and rejected by the abattoir. In the past 12 months or so the cotton industry has instituted some sort of compensation process, but there is no compensation process for people's rainwater tanks being contaminated; there is no compensation process for people's kids who are sprayed at a school bus stop.

The legislation and/or the ability of Government to protect those people has been sadly lacking. We are certainly concerned that pesticide legislation allows people to protect themselves by court action, if necessary, but one would hope that is a last resort because we want to reduce the number of those incidents. The threat of court action certainly helps to reduce those incidents and makes industry behave better. Bodies such as the Environment Protection Authority [EPA] should be given much more modern-day powers to prosecute.

At the moment the ability under the Pesticides Act to prosecute cowboys is 20 years behind the times. It is not even equivalent to the powers of the EPA under its existing pollution legislation. It is a fairly embarrassing situation for the EPA that it can be seen to be prosecuting polluters in the city, but out in the country it cannot touch them because the legislation is so prehistoric.

The Hon. Dr B. P. V. PEZZUTTI: There was a flurry of activity at Coffs Harbour associated with the spraying of bananas and cleft palate. It was aggressively followed up by the Department of Health as a major study. Could you tell me the result of that study?

Ms IMMIG: The study concluded that there was a cluster, but that it could not necessarily be associated with the chemical used on the banana crop. It found high levels of chlorpyrphos, which is a chemical frequently used in domestic pest control. But I do not think the study conclusively concluded that the cleft palates were not associated with agricultural chemicals.

The Hon. Dr B. P. V. PEZZUTTI: The buffer zones used to protect ecologically sensitive areas—children, public places and residents—go to the very heart of farming and farming practices. Do you think there should be a much stronger role for the Department of Urban Affairs and Planning to set aside areas for farming, rather than mixing farming with residences?

Mr ANGEL: In these days of intensive agriculture that is clearly a question that is asked more often than previously when we had generally benign or kinder impacts from just a bit of grazing, but in the country we have the onset of feedlots intensive chemical-using industries, which not only includes cotton but rice. Mudgee had a controversy about spraying for vineyards, which were close to town. There is no doubt that planning law and the skills resident in the planning agencies at a local and State level have not kept pace with the changes in agriculture.

One of the things that generally concerned us and many people is that because of the sterilising effects of the pollution from these intensive activities we are seeing a loss of environmental and economic diversity in rural areas. You end up having to rely more and more on cotton, for example, because grazing is being driven out. It is incredibly unhealthy for a country town to rely on a single or dominant income source because if the market goes into a deep downward spiral the town goes into a downward spiral as well. The ecological health of a place is fundamental to its economic diversity, and that is fundamental to its sustainability.

The Hon. Dr B. P. V. PEZZUTTI: Representatives from the Department of Agriculture will appear before the Committee today. New South Wales Farmers put out a document about the shrinking of agricultural resources. Would you support an increase in the funding for New South Wales Agriculture to provide both advice and a research base for the limitation and reduction of the impact of pesticide use?

Mr ANGEL: No. We do not believe that the Department of Agriculture is the appropriate body. It has a vested interest in promoting intensive agriculture. At the moment it is actively engaged in promoting cotton in the Lachlan area, which has not had cotton before. In terms of the credibility and perception of the public, Agriculture should be kept right out of it and a more robust government agency should promote that sort of activity. That is why the Pesticides Act was moved to the EPA, that is why the Pesticides Risk Reduction Council that we are proposing should lie with the EPA and should report to Parliament.

The Hon. Dr B. P. V. PEZZUTTI: Do you propose that all people who handle pesticides should do an accredited course? Would this go further than occupational health and safety training? What extensive course would it be?

Ms IMMIG: Currently voluntary courses operate for safe use in farm chemicals. To some extent they involve occupational health and safety and also

environmental concerns. But examination of the material in those courses suggests to me that perhaps they do not go far enough and that certain levels or categories of chemicals require more stringent training. For example, schedule 7 chemicals should be restricted to certain people who have attained a certain level of training with those materials. That training should be mandatory, not voluntary as it is at the moment.

The Hon. Dr B. P. V. PEZZUTTI: Your other proposal is that the Act should provide for third party rights to uphold public duties and initiate prosecutions under the Act. If a child is under a spray drift, a pesticide invasion, or trespass, and that child develops symptoms, for example to organochlorides, and the child becomes very weak, common law rights to litigation are currently available for such people, are there not?

Mr ANGEL: You could argue that case with any other pollution law that we have passed in the last 20 years and the common law rights have been found to be wanting. One of the reasons is the necessity to have a precautionary approach because of the links between chemicals and health, and chemicals and environmental impact are such that they require an enormous level of resources to establish. If we are going to reduce that chemical load on the environment and on people, and you might say a person's rainwater tank is contaminated, why cannot that person sue the guy who has the nearest cotton farm?

The prevailing weather conditions would make that link. Unfortunately, the levels of evidence, like the tobacco industry, are continually thrown up to stop such cases. As with pollution law and the EPA the rules of evidence and the rules of the rights to prosecute have been expanded. As we know, there is a problem but the common law is such that it reduces the ability to make those links known and to prosecute those links.

The Hon. Dr B. P. V. PEZZUTTI: Agvet chemicals are commonly used by ordinary gardeners. Should they have to go through some sort of program or training, when one considers that there are many more gardeners than there are farmers?

Ms IMMIG: That is quite a complex issue that relates back to the scheduling of different chemicals and what should be available on the domestic market. Label directions and material safety data sheets may be enough material for the home gardener if only certain levels of chemical are available to them.

The Hon. Dr B. P. V. PEZZUTTI: You refer to statutory advisory committees. Do you expect similar committees to those thrown up by the Minister in relation to fishing?

Mr ANGEL: I would hope that the relationship between the Minister and committees, and those who are setting them up in Parliament would be much more friendly and efficient. Pesticides are such a significant issue that they need airing in Parliament and the community. For that reason we are supporting a Pesticides Reduction Council which can initiate its own investigations and report to Parliament. But it is also made up of a range of stakeholders who will be able to work together to improve the situation. I believe anyone you will be talking to today would reflect upon the polarisation of the issue and why we need to get cowboys under control. There are a lot of cowboys out there and they need a range of legal and planning hints to do the right thing. We still have a fairly major job to do in getting people to work alongside each other.

The Hon. Dr B. P. V. PEZZUTTI: This legislation was promised prior to the 1995 election and has not come forward yet. Are you hopeful that it will come forward in this particular session of the Carr Government?

Mr ANGEL: During the election this year we obtained a written commitment that—

The Hon. Dr B. P. V. PEZZUTTI: You got that last time.

Mr ANGEL: Yes. Well, they failed in 1995 to 1999, absolutely. In the 1995 policy they said they would reform pesticide legislation as a package of reforms of all the environmental legislation under the Environment Protection Authority [EPA]. Under the 1999 election we obtained a written commitment that the new legislation to reform pesticide regulation would be introduced by July 1999. There was a clear reason for that: so that we could avoid another spraying season like the one we have just experienced. I fear for the people of rural New South Wales and for the EPA. The little old Total Environment Centre [TEC] is getting more calls in the summer spraying season from very worried people about incidents like whole towns and school buses being sprayed. We really have to stop it to get the debate back to some sensible level where we can get constructive issues of pesticide risk reduction on the ground. There is only so much that people can tolerate by being polluted completely and involuntarily from the skies.

The Hon. J. R. JOHNSON: Are there any bans, restrictions or protocols in countries of manufacture or development of certain pesticides but the product has continued to be sold to underdeveloped, developing and advanced countries?

Ms IMMIG: That situation certainly occurs. The United States of America has many chemicals that are not permitted for use there but are manufactured and exported to other countries for use.

The Hon. J. R. JOHNSON: What attitudes do Australian governments—State, Federal and territorial—have to that sort of product?

Ms IMMIG: Historically Australia has been slow to react to chemicals that have been internationally recognised as of concern and withdrawn in other countries. Organochlorines are the classic example. We were much further behind Europe and the United States of America in our withdrawal of organochlorines from the market here.

The Hon. J. R. JOHNSON: If you do not wish to answer any of my questions forthwith, I would be happy if you would let the Committee know your answer at a later stage. Is a protocol in place in one State, Territory or in the Commonwealth accepted in all other States and Territories?

Mr ANGEL: In Australia there is a distinction between the rules concerning which chemicals can be used and their application. This is done at a national level with the National Registration Authority [NRA], and Jo might say a bit more about that in a moment. Each State has different rules controlling the way they are applied and the standards to which they are applied, and the legal rights which affect that application process, as well as the planning issues. Each State has its own planning approach and buffer zones et cetera.

The Hon. J. R. JOHNSON: Is the short answer that a protocol in one State is not necessarily accepted in the others?

Mr ANGEL: No, not unless it is under a National Registration Authority label.

The Hon. J. R. JOHNSON: I can recall being in the United States of America when Gerry Brown was Governor of California and, of course, was thrown out of office because of his anti-pesticides attitudes. However, most propositions he put forward are now entrenched in the law. Perhaps he was a man before his time. Can you indicate if there is a model you think we should be aiming for?

Ms IMMIG: It is possible that we need to look at all existing programs and at what is good in them and what might be appropriate for Australia.

The Hon. J. R. JOHNSON: Has that been done?

Ms IMMIG: I do not believe so, to any great extent.

The Hon. J. R. JOHNSON: Is it mandatory to advise, say, the health department, local government authorities, doctors and neighbours, et cetera, of any contaminants that may be used in a process or are going to be used?

Mr ANGEL: The NRA in its new labelling for endosulfen after the last year's cattle contamination episode now requires certain notifications. I do not think we are aware of any other general rule that applies for any other chemical. There may be some local practices and there have been some attempts in Gunnedah for example to develop voluntary agreements between neighbours, but they essentially fell apart because the industry is unable to police those agreements.

The Hon. J. R. JOHNSON: Is labelling to the standard you would expect? I am more concerned with not only the content of a certain composition or compound but the treatment necessary for the effects from it.

Ms IMMIG: Labelling happens at the national level.

The Hon. J. R. JOHNSON: My question was were you happy with it?

Ms IMMIG: It is a vexed issue and, essentially, no, we are not. There are many reasons why. There are problems with labels to do with readability of the material for people from a non-English-speaking background.

The Hon. I. M. MACDONALD: And for those from an English background as well.

The Hon. J. R. JOHNSON: You need a magnifying glass to see it.

Ms IMMIG: You need a magnifying glass. It is a complex issue legally: who owns what is on the label and so on. There is a lot of room for improvement, which

has been discussed for many years. One of the other issues is a full list of ingredients. Currently we only get listed the active constituent. Many people want all the ingredients in a pesticide product on the label.

The Hon. J. R. JOHNSON: Has the TEC developed any protocols?

Mr ANGEL: Not especially. Some years ago we certainly attempted to improve.

The Hon. J. R. JOHNSON: If I rang the TEC today and asked can you send me something, can you?

Mr ANGEL: Yes. We have a web site and we also advise people to get proper materials.

Ms IMMIG: We generally advise people who ring us and ask us, "How do we find out more about this product", to ring the manufacturer and ask for a material safety data sheet.. On how web site we also have a toxin database with some of the most frequently used pesticides and chemicals with extensive data sheets on those chemicals.

The Hon. Dr B. P. V. PEZZUTTI: Have those data sheets been checked and approved by the Commonwealth department before they are released?

Ms IMMIG: The ones the manufacturers produce?

The Hon. Dr B. P. V. PEZZUTTI: Yes.

Ms IMMIG: They are not all checked. There is a code [the National Code of Practice for the Preparation of Material Safety Data Sheets] to which they are meant to adhere through NOSH [National Occupational Health and Safety Commission], but there are many examples of very ineffective materials safety data sheets that do not contain the relevant information.

The Hon. J. R. JOHNSON: Difficulties are faced under section 92 of the Constitution with containers that are used when a spraying contractor may be spraying in New South Wales but is based in Victoria, South Australia or Queensland. Anything New South Wales comes up with would have to have application by invitation or otherwise of the other States if the contractor is based outside the State. For example, in Albury, Goondiwindi and places just over the Queensland border where aerial spraying companies go into New South Wales and but the contractor does not put a foot down in New South Wales.

Mr ANGEL: You could say the same thing about pollution laws. If you are going to operate in the State and it has different pollution laws to another State, you should be required to follow those pollution laws. It is through that at the moment we do not have national pollution laws. We have a vague state. The National Environment Protection Council tried to produce some national approaches, but I believe we are many years from getting consistency between States with application practices. Certainly New South Wales cannot wait until some Federal approach comes to fruition. It is not going to happen under the current system.

The Hon. J. R. JOHNSON: Is there anything in place about decontamination, destruction, reuse or total ban of containers that had certain products that were toxic or otherwise?

Ms IMMIG: That is perhaps one of the areas where progress is currently being made. Agreement has been made between industry and government on a new container collection program that has elements of recycling where drums are returned and reused or recycled into other materials. That program is called Drum Muster. Another national program called ChemClear addresses the collection of unwanted chemicals and chemical containers that are currently out there.

The Hon. I. M. MACDONALD: Have you done any modelling on cost factors that would be involved if you adopted the measures you outlined in your submission upon, say, the cotton industry? You used the average benchmark figure of around \$145,000 per annum that is currently being spent on chemicals by cotton farmers. If your regime is put into effect, what impact would that have on the level of sustainability economically?

Mr ANGEL: We have not done any modelling. I understand that if new proposals for legislation came forward, the EPA would undertake some sort of impact statement in that regard and they may have some advice.

The Hon. I. M. MACDONALD: Should they not be doing that now?

Mr ANGEL: I guess you better ask them, but I hope they have. It is certainly my impression that, given the costs which the cotton industry, for example, has incurred trying to fight off the various controversies, including that now they are paying compensation to cattle farmers and what have you, inevitably it will be cheaper if they avoid the problem in the first place. They are obviously very worried about their reputation. It has not improved since their strategy paper of 1995 and they have tried self-regulation, mediation, public relations and a whole lot of local political stuff to try to improve their image and it is failing. Obviously, it would be a lot cheaper at this stage just to accept some robust regulation.

Ms IMMIG: I wish to add something to that. The cotton industry spent \$6 million determining that endosulfan goes into rivers from cotton farms. I was quite horrified when I found out that figure. That sort of money could actually go towards assisting cotton farmers and doing the sorts of changes that they need to do to adhere to the new regulatory approaches.

Mr ANGEL: One could say though—and this is perhaps partly implied by your question—that I do think there are some areas where cotton farming is not sustainable and should not be allowed. There are certain areas close to towns and close to environmentally sensitive areas or areas that incompatibly adjoin agricultural activities. In the case of Gunnedah, there is a particularly narrow valley that suffers from temperature inversions. I think there is a limit to where regulation can take you. The physical conditions in which a cotton farmer may wish to locate would negate against cotton farming continuing. They are issues that could have been worked out through the planning system.

It is not as though you get an oil refinery in every part of Sydney. Unlike the

city, what we are facing in country areas is that if a guy comes along and says, "I want to start an oil refinery", he can put it anywhere. He can buy a block of houses and say, "This is going to be an oil refinery." That is what the country is suffering at the moment. There are some areas where you would not ask the question: Can cotton farming be made sustainable by regulation? It is just not something that regulation can help. It is that the pollution cannot be prevented by the regulation because of the physical environment in which it would be located.

The Hon. I. M. MACDONALD: In the case study you have given in the Gunnedah document, it appears that two factors run through it: one is that the evidence seems to be inconclusive generally and the other is that you appear to be highly critical of the Environment Protection Authority [EPA]. What would you do in relation to improving the EPA's role in these areas? We can impose more regulation upon them but it is irrelevant if they are not doing their job now. Do they have enough field officers? What is going on? Why is it that you say all the way through that they appear to have inadequate monitoring, assessment and sampling protocols and what have you? I would have thought that in relation to the cotton industry in particular we would be up there and would be first class in relation to the EPA.

The Hon. Dr B. P. V. PEZZUTTI: This is point source pollution, and it is easy.

Mr ANGEL: Tell them that.

Ms IMMIG: Exactly. I think there have been many examples where we have felt the EPA has let the community down and has let the environment down in terms of investigating and monitoring pesticide issues. To some extent they have been hampered by their own legislation in that area. It is difficult to obtain prosecution even when there have been instances where there may well be evidence suggesting misapplication but they may have not proceeded with the prosecution because it is not likely that they are going to win the case. It is very difficult at the moment because under the current legislation they have to prove wilful intention and that is very difficult legally.

Mr ANGEL: In general, the EPA, I suppose, tries to be nice first. The evidence—particularly in country areas where they are not particularly well resourced and where they are trying to shift a lot of pollution control activity onto local government which obviously does not have the resources or skills available to cope with that—has led to a fairly bad reputation for the EPA in country areas. I think the urban places are much better served by the EPA than is the rural sector. Arguably there are some incredibly severe pollution problems in rural areas. From my understanding or my perception, the EPA has had a cultural, funding and legal problem in regard to upgrading its activities on pesticides.

When the Pesticides Act was given to them in 1995, one of the first questions we asked members of the EPA was: What resources are you going to devote to it? There was not any improvement. They were inheriting a bit of stuff from Agriculture and that was about it. They have been struggling ever since to come to grips with the problem. There has been a morale issue in that they do not believe they can prosecute the really outlandish cowboys who are out there, and that has affected their ability to protect the environment and health. It is our belief that if they were given very strong powers—and they do have an excellent legal group—the message to the cowboys out there would be given

very fast and their industry associations will help to sort it out after that if there are bad prosecutions affecting the industry as a whole.

CHAIR: We are nearly out of time.

The Hon. I. M. MACDONALD: I am a bit concerned about this third party rights issue because you point out quite clearly through this that there are communities in conflict. I am very concerned that if you add a further level of litigation in relation to it—one with possibly quite severe penalties—you would only aggravate the tensions in the area. What is the rationale for it? What are the limits to third party rights

Mr ANGEL: There are two types of third party rights. The first, which is more in general practice in this State's law, is that you can ensure that the processes of the Act are followed. That is generally directed at the regulators: Have they done it incompetently or have they negligently avoided important parts of the legislation? In that category, there have been very few cases each year. There might be one, two, or three a year if you are lucky on those sorts of issues because of the legal aid requirements that community groups are encumbered with. In the case of direct prosecutions, I agree that there is a lot of conflict out there. I think that, as we saw in the endosulfan contamination in the last spraying season with cattle, they were very close to being in court anyway; but the threat of that court action made the cotton industry come up with an expedient resolution for that year, which was some compensation.

The fundamental point of what you are asking is equality. The situation will not be equal until the victims have the same legal rights as the perpetrators. Chemical trespass is chemical trespass, and if they do not have a right to defend themselves, particularly if the government regulators are failing to act—and as I say, I hope that the new legislation will give the EPA the ability to strategically act to protect those people so that they will not feel the necessity of taking their neighbours to court—and if we cannot give people equal legal rights to protect themselves, we are basically institutionalising a system where we are saying that it is okay to pollute your neighbour to a severe level. I do not think that is acceptable in this day and age. I think that everyone has to have legal rights and then they can maturely work through it. But if you put people in a position of inequality, as we have in country towns, then I am afraid that those who are politically or economically dominant, as we have seen in Gunnedah, will not give those victims a chance. We tried everything in Gunnedah, including mediation and self-regulation.

The Hon. I. M. MACDONALD: Would this apply across the board to all chemicals, or are you only specifying this for certain industries?

Mr ANGEL: It would apply across the board for certain types of impact. It has to be a case of significant environmental harm or human harm. As we have said, the ability to prove those links in court is not actually easy. I do not think that you would have a flood of cases. You might have a few threats flying around, but I think that that would be the beginning of a more robust relationship between equals.

CHAIR: We are well and truly out of time.

The Hon. I. M. MACDONALD: Are there any proposed legislative amendments outlined in the EPA discussion paper unacceptable to the Total Environment

Centre [TEC]? I would ask you to take that on notice.

CHAIR: Are there any other questions to be taken on notice?

The Hon. Dr B. P. V. PEZZUTTI: I refer to page 5 of the report by Ms Immig. Could you please give us your scientific background?

Ms IMMIG: I hold a Bachelor of Applied Science. I majored in environmental geography.

The Hon. Dr B. P. V. PEZZUTTI: On page 5, there is a reference to the scientific link between CSF and pesticides. Could you provide us with scientific evidence of that? On page 6, there appears a statement that there is a convincing number of anecdotal reports. I have read the comments in the appendix at the back. Is there any more information about the selected health impacts of pesticides?

CHAIR: We will give you a copy of these questions. Do not worry about answering them now.

The Hon. Dr B. P. V. PEZZUTTI: Could you confirm or clarify the impact on cattle? Was that from eating cotton stubble, or was that a direct impact?

Ms IMMIG: The helix issue was to do with eating contaminated cotton.

The Hon. Dr B. P. V. PEZZUTTI: Stubble?

Ms IMMIG: Trash.

CHAIR: If there are any other questions, we will write to you and ask you. We will give you a copy of the transcript and you can give us your responses from that.

The Hon. I. COHEN: In terms of transgenic cotton, the level of pesticide use at the present time, and potential dangers in how much pesticide will be used in the future, how much damage can you foresee, or will there be any danger of damage that you can foresee?

CHAIR: We are out of time and unfortunately we will not have the chance to take that answer now.

Ms IMMIG: That would be a long answer.

CHAIR: Thank you for your time today.

(The witnesses withdrew)

RICHARD FREDERICK SHELDRAKE, Deputy Director-General, New South Wales Agriculture, 161 Kite Street, Orange, and

RICHARD ALAN SPURWAY, Program Manager, New South Wales Agriculture, 161 Kite Street, Orange, and

ROGER BRUNO TOFFOLON, Program Leader—Agricultural and Veterinary Chemicals, New South Wales Agriculture, 55 Green Lane West, Orange, and

JOHN DAVID WILLIAMS, Regional Director of Agriculture—North Coast, New South Wales Agriculture, 351 Gap Road, Alstonville, sworn and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the Parliamentary Evidence Act 1901?

Dr SHELDRAKE: Yes.

Dr SPURWAY: Yes.

Mr TOFFOLON: Yes.

Mr J. WILLIAMS: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Dr SHELDRAKE: Yes.

Dr SPURWAY: Yes.

Mr TOFFOLON: Yes.

Mr J. WILLIAMS: Yes.

Dr SHELDRAKE: I would like to make a brief statement that will set the scene for New South Wales Agriculture. Before beginning this presentation I take this opportunity to thank the Committee for allowing us to appear before it at this early stage. Today my presentation will highlight some of New South Wales Agriculture's research, extension, diagnostic and regulatory activities associated with improving the efficiency of pesticides and reducing the risks associated with their use. A more comprehensive picture of the department's activities is included in the written submission which has already been provided to the Committee.

New South Wales Agriculture is a major provider of knowledge and services to the food and fibre industries. In partnership with the private sector and other government agencies, New South Wales Agriculture is working to enhance the domestic and international competitiveness of our food and fibre industries, and thereby contribute to the economy and prosperity of New South Wales. New South Wales Agriculture is also the major vehicle for

delivery of the Government's commitment to more sustainable agricultural systems, which conserve the natural resource base and protect the environment. An important component of this is reducing the risks associated with pesticide use.

What is the rationale for pesticide use? Pesticides and other farm chemicals make a vital contribution to achieving an internationally competitive and sustainable agricultural sector. The use of agricultural pesticides has enabled the reliable supply of quality food and fibre products which, in turn, contribute to the health and well being of the entire community. There is no doubt that pesticides contribute to higher yields and greater economic productivity in agriculture. In the absence of pesticides more land would need to be converted to agriculture in order to achieve the same output. This would place increasing pressure on the remaining areas of native vegetation, and the wildlife which depends upon them.

Pesticides are also important in producing quality products which meet market requirements for colour, appearance, size and taste. In addition to substantially increasing agricultural productivity and quality, pesticides can provide significant environmental benefits through the effective control of weeds, feral pests, disease vectors such as mosquitoes, and by reducing soil erosion through minimum tillage systems which are based on herbicide usage. Pesticides are also important in relieving the pain and stress that insects and other parasites inflict on livestock, and are therefore a valuable tool in managing the care and welfare of animals.

The Committee should not conclude from what I have said so far that there is no substitute for pesticides in high-yield farming, only that alternative practices need to be measured against current standards for yield and quality. What is New South Wales Agriculture's role? New South Wales Agriculture continues to play a major role in the development and introduction of pest, weed and disease management strategies which utilise biological control, cultural practices and other non-chemical control techniques.

Our current estimate is that the department commits the full-time equivalent of approximately 86 professional officers and 125 regulatory officers to programs which can be broadly categorised as pesticide risk reduction and which include reducing pesticide use and more efficient pesticide use. New South Wales Agriculture's expenditure on these programs is approximately \$25 million per year, or 11.4 per cent of the department's total expenditure. A few examples at this time may illustrate the point that I am trying to make.

The introduction of improved pest management practices for vertebrate pests such as foxes and wild dogs has reduced the use of the poison 1080 by more than 80 per cent since the 1980s. The unit is currently exploring the possibility of using contraceptive vaccines as a novel way of controlling foxes and replacing the use of poisons. With regard to horticulture, New South Wales Agriculture has worked closely with the New South Wales pome fruit industry over many years developing low-chemical input pest control strategies using predatory insects and mites along with other pest management techniques.

In recent years, that has resulted in a reduction of approximately 25 per cent in pesticide usage. Significant reductions in pesticide use have also been achieved in the citrus and wine grape industry where New South Wales Agriculture has developed pest management techniques which rely on less chemical inputs and a transition to softer low-toxic chemicals. New South Wales Agriculture's tropical fruit research station at Alstonville continues to improve pest management practices in bananas to the extent that the use of insecticides to

control the primary pest, banana weevil borer, has been reduced by 90 per cent.

New South Wales Agriculture research has led to a better understanding of the biology of weed species and how they are affected by changing environmental conditions. This in turn has allowed the rates of herbicides to be reduced under some conditions with a greater emphasis on alternative weed management techniques such as strategic grazing, use of competitive plant species and the introduction of biological control agents. New South Wales Agriculture's biological control program for weeds is currently targeting 48 agricultural, aquatic and environmental weeds with 32 established biological control agents. The reduction in herbicide use already achieved through this program and the prospect for future reductions is significant.

New South Wales Agriculture develops and provides information and advice on organic and biodynamic farming systems by drawing on an extensive network of expertise within the department which is co-ordinated through a dedicated alternative farming systems officer. The department has also established an alternative farming systems demonstration farm at Yanco in the Riverina as a means of instructing farmers on practical methods of non-chemical pest, disease and weed management. This educational initiative is complemented by a home study training package on organic farming also developed by the department and delivered through the department's Tocal College in the Hunter Valley.

New South Wales Agriculture is working closely with farmers to identify new markets for organic and biodynamic products and to improve access to existing markets. In recent years, New South Wales Agriculture has organised and funded two conferences on the marketing of organic and biodynamic products. I am pleased to provide the Committee with a copy of both the organic farming home study program and the proceedings of the Market Organic and Bio-dynamic Products Conference.

Documents tabled.

With regard to environment and contamination, New South Wales Agriculture's Centre of Excellence for the Environment at Wollongbar is involved in groundbreaking research into the degradation of waste chemicals and the remediation of contaminated land. Technologies developed by New South Wales Agriculture have already been applied to the remediation of cattle dip sites containing the insecticide amitraz. The centre is also researching other technologies which will degrade DDT and other organochlorines in contaminated soils.

Altered requirements for the chemical treatment of livestock, along with the implementation of eradication strategies and better training of staff, has significantly decreased the risks associated with the control of cattle ticks in northern New South Wales. This has also resulted in a reduction in the use of chemical treatments of more than 50 per cent over the past 10 years, and further significant reductions in pesticide usage are anticipated over the next two to three years.

New South Wales Agriculture has had a long involvement in developing more efficient pest management techniques in cotton, utilising strategies such as pest threshold levels, the enhancement of beneficial species, the introduction of resistant varieties, the introduction of biological control agents and the adoption of resistance management techniques. For example, the use of insecticides for early season pest control can be reduced

by up to 47 per cent through the adoption of recommended pest threshold levels.

The introduction of transgenic or Ingard cotton has provided additional savings in the use of insecticides. Over the past two years, the total number of insecticide applications to Ingard cotton crops were on average 46 per cent less than on conventional cotton crops. Early use of endosulfan has been reduced by 83 per cent on Ingard cotton crops. The examples I have outlined are only a subset of many initiatives in which New South Wales Agriculture is involved in reducing the risks associated with pesticide use.

With regard to managing pesticide use in New South Wales, the community has a quite reasonable expectation that agricultural pesticides can be used safely, and that persons who misuse these chemicals and place others at risk can be dealt with. All agricultural and veterinary chemicals entering the Australian market are subject to a rigorous, scientific assessment by the National Registration Authority to ensure that they meet high standards of safety and effectiveness. The scheme is comparable in scope and rigour to the best assessment and registration processes in the world.

Once these pesticide products have been assessed and approved by the National Registration Authority, they are available to producers who must use them strictly according to the approved instruction. The Pesticides Act 1978, administered by the Environment Protection Authority is the primary legislation controlling the use of pesticides in New South Wales. The reforms to the Pesticides Act proposed by the Environment Protection Authority in their discussion paper, "Improving Pesticide Management in New South Wales" are clearly aimed at improving the effectiveness of this legislation in dealing with the misuse of pesticides.

New South Wales Agriculture supports the broad thrust of the proposed reforms and particularly those that will enhance the EPA's ability to prosecute those who, because of their own negligence, cause injury or harm to persons, property or to the environment. However, in providing more effective controls on the use of pesticides, the regulators must ensure that they do not impose unnecessary and costly restrictions which will adversely impact on the domestic and international competitiveness of the agricultural industries of this State. To this end, New South Wales Agriculture looks forward to continuing involvement in the development of proposals to reform the Pesticides Act.

In conclusion, New South Wales Agriculture considers that the competitiveness of the State's agricultural industries will remain dependent upon appropriately used pesticides for the foreseeable future. New South Wales Agriculture, in collaboration with the food and fibre industries, will continue its research, extension and educational activities aimed at reducing reliance on the use of pesticides and in reducing the risks associated with pesticide use. Thank you for your attention and the opportunity to present this summary to you.

It may assist the Committee if I introduce the other panel members representing New South Wales Agriculture. Mr Roger Toffolon is the department's program leader, agricultural and veterinary chemicals and his primary role is to provide technical and policy support on farm chemical issues to the rest of the department. Mr Toffolon also provides the first contact point on farm chemical issues for the regulatory agencies such as the National Registration Authority and the Environment Protection Authority. Dr Richard Spurway is program manager, fibres, oils and specialty crops and has responsibility for the delivery of research and advisory services to broadacre cropping industries such as cotton, canola and soy

beans. Dr Spurway is also responsible for the department's education and training program. Finally, Mr John Williams, a veterinarian, is the Regional Director of Agriculture for the department's North Coast region based in Wollongbar. Mr Williams also leads the department's group involved in improving the management of tick control chemicals, including the control of contaminated cattle tick dip sites.

The Hon. Dr B. P. V. PEZZUTTI: It was heartening to hear the Total Environment Centre speak glowingly of low impact grazing as being less injurious to the environment. As I understand it, we are trying to move away from cattle into agriculture for feeding the world. Which agricultural pursuit has the most impact on the environment and which the least? Have you prepared a list of the impact of the environmental degradation of various agricultural pursuits?

Dr SHELDRAKE: The short answer to that question is that there is no list that we have prepared but I think you would need to be very careful—it is quite a complex issue—in that different industries will have different impacts on the environment. The way in which one industry will impact on the environment will depend on, for example, whether pesticides are used and whether they are not, how the land is managed and so on. You are asking quite a broad question.

The Hon. Dr B. P. V. PEZZUTTI: But low-impact grazing is seen to be a no-risk venture?

Dr SHELDRAKE: No, it would not be a no-risk venture. There are always risks associated with whatever form of farming you are in. The risks will be either to the environment or to the individual.

The Hon. Dr B. P. V. PEZZUTTI: Has New South Wales Agriculture seen a copy of "Shrinking Agricultural Resources" by New South Wales Farmers? Have you provided a critique of that document for the Minister?

Dr SHELDRAKE: No, I do not recall—

The Hon. Dr B. P. V. PEZZUTTI: Is it possible as a question on notice for you to provide us with a critique of that document?

Dr SHELDRAKE: Certainly.

The Hon. J. R. JOHNSON: That came only last week, did it not?

The Hon. Dr B. P. V. PEZZUTTI: Yes. Given that in previous inquiries the head of the department, Dr Sheridan, was quite critical of the reduction in resources the department has had, would you say that you are happy with the level of resourcing that you have now to provide for the needs of the department?

Dr SHELDRAKE: We are. New South Wales Agriculture has the resources it requires to provide the services which it is currently providing.

The Hon. Dr B. P. V. PEZZUTTI: Do you believe that it is one of your core resources to provide research and development in the area of agriculture, and do you think that

should be handed over to another department?

Dr SHELDRAKE: In terms of pesticide usage or in agriculture broadly?

The Hon. Dr B. P. V. PEZZUTTI: Pesticides, disease control, regulation, research and development.

Dr SHELDRAKE: New South Wales Agriculture clearly has a responsibility to undertake research and development extension and education in a broad range of areas including those that you have just covered.

The Hon. Dr B. P. V. PEZZUTTI: TEC talks about pesticide reduction, you talk about pesticide risk reduction. Is there a great deal of difference between the two?

Mr TOFFOLON: Yes and no. Pesticide use reduction is a subset of pesticide risk reduction. Use reduction is one way in which you can reduce risks. Certainly some countries have chosen to highlight use reduction but within the OECD at the moment the push is towards developing broad performance indicators for reducing risk. One of the performance indicators is use reduction, but it is not the only one. A transfer from a highly toxic chemical to a low-toxicity chemical is significant reduction in risk but might not involve a reduction in use.

The Hon. Dr B. P. V. PEZZUTTI: Or the method of use or the timing of use and things like that?

Mr TOFFOLON: All those sorts of things as well.

The Hon. Dr B. P. V. PEZZUTTI: You indicated that you have 86 full-time people doing the work. How many people did you have doing the work in 1988?

Dr SHELDRAKE: I do not have the answer to that. That is a question I would be happy to put on notice.

The Hon. Dr B. P. V. PEZZUTTI: It seems that every month in the *Government Gazette* I get something from the Department of Agriculture about use of pesticides or various approved mechanisms for the use of pesticides, which are really quite detailed. How possible is it for a farmer to keep up with all the regulations and all the ministerial statements and all the changes to the law that impact upon farming? I read those documents. Three or four times a year there are about 48 pages of very detailed information about the use of a pesticide or a weedicide.

Dr SHELDRAKE: Keep in mind that not all farmers would be required to have a knowledge of all products; they would need to have an understanding and knowledge of those products that relate to their business.

The Hon. Dr B. P. V. PEZZUTTI: I am particularly drawn to the issue of whether there should be changes to the Act to permit the use of pesticides at a lower rate than appears on the label. In other words what is regulated by the Minister comes from the label, or the label comes from what is regulated by the Minister, and now you are proposing that

people should be able to use lower rates than is recommended and regulated by the Minister.

Mr TOFFOLON: I am not sure what document you are reading from so I do not know who wrote this. It would perhaps be easier to answer the question if I knew what the document was.

The Hon. Dr B. P. V. PEZZUTTI: This is a summary by our Committee officer—the provision which would permit the use of pesticides at lower rates than would appear on the label.

Mr TOFFOLON: Yes, we have supported that type of proposal.

The Hon. Dr B. P. V. PEZZUTTI: And yet your regulations have very specific rates of application on them. When I read them I am amazed that anybody without a degree could understand them.

Mr TOFFOLON: They are not our regulations. Certainly, at the moment you are required to follow the label or the directions on the label but with the development of new weed management techniques there are opportunities to reduce the volume of herbicides that you are using on more susceptible weeds or at times when the weeds might be more easily controlled, for example. So the opportunity for a grower to make a decision to reduce his use of pesticides for that purpose is very much consistent with the broader goal of pesticide risk reduction—in this case pesticide use reduction.

The Hon. J. R. JOHNSON: Gentlemen, what is your major area of concern with pesticides?

Mr TOFFOLON: It would be easier to promote the sorts of practices that we are looking to promote and which I think the agricultural industries are responsive to in terms of more effective pesticide use and more risk reduction in pesticide use if we could deal with those people effectively who negligently misuse chemicals. Unfortunately, one bad example of a pesticide misuse often taints a whole industry or can turn consumers or the community against a particular industry or against a particular individual in some cases. If the legislation was effective and enabled the regulators to carry out the intent of the legislation, that would certainly assist us in our objectives.

The Hon. J. R. JOHNSON: Is the legislation not effective?

Mr TOFFOLON: It appears that in the enforcement of certain provisions of the legislation there are legal issues which have made it difficult to achieve prosecutions. That was the case when the Department of Agriculture had the legislation and it is the reason why prior to the election in 1995 we had a bill before the House seeking certain amendments to the legislation. That is still the case now: Those difficulties in prosecutions still exist.

The Hon. J. R. JOHNSON: Was the bill dealt with?

Mr TOFFOLON: No, it was not. The House—

The Hon. J. R. JOHNSON: Subsequently?

Mr TOFFOLON: No.

The Hon. J. R. JOHNSON: Has it been advanced by the department again?

Mr TOFFOLON: It is not the department's responsibility, sir; it is the Environment Protection Authority's responsibility now.

The Hon. J. R. JOHNSON: If the department comes across something that is of concern and was of concern perhaps there could be some prompting to your sister department. That may be of some help without stirring the possum in the other department.

Mr TOFFOLON: We have certainly made submissions to the Environment Protection Authority on these sorts of reforms, which we have been discussing for some time.

The Hon. J. R. JOHNSON: You mentioned contaminated tick sites. How advanced is that problem in being totally dealt with?

Mr WILLIAMS: We are about half of the way, if you want a quick response. We have worked out how to destroy the chemicals that are used currently as a tickicide. What we have not resolved yet is the process for removal of the persistent chemicals that are in the soil from past practices, particularly the arsenic and the DDT.

The Hon. J. R. JOHNSON: Have you heard of a company in Queensland called Wanless Metals, or one of its subsidiaries—Mr Wanless used to be a motor car racer—which imported a machine along the lines of a bitumen spreader, where the flame is going, the bitumen is being melted, the aggregate et cetera are being mixed together and spread on the road and rolled in one operation. Apparently, this machine was purchased in the United States for some astronomical amount of money but on its way to Australia dropped off in Hawaii to treat contaminated soils there. It picks up the soils at the front, treats them and the soil then comes out "purified"—I do not know whether I do it justice or injustice by using that term. Have you heard of that?

Mr WILLIAMS: No, I have not. From what you describe I have some concerns about it in relation to the contaminants that we have. With any heat process, especially getting to high temperatures, when you have arsenic amongst your waste stream there is a potential to convert the arsenic metal to an arsenic gas, which is quite a poisonous material. You would need very special provisions to be able to handle—

The Hon. J. R. JOHNSON: I am not sure that it is by heat.

Mr WILLIAMS: I am not familiar with the Wanless Metals technology.

The Hon. J. R. JOHNSON: Could I suggest that it may be worth an inquiry?

Mr WILLIAMS: Yes, we can follow that up.

The Hon. J. R. JOHNSON: From looking at newspaper articles and listening to talkback radio from time to time, and from letters of complaint—the labelling of pesticides appears to leave much to be desired. There are very few chemicals in small bottles or other containers that are highly toxic for which a magnifying glass is not necessary to read the

directions. That surely needs very detailed legislation or regulation.

Mr TOFFOLON: The labelling of pesticides is controlled by the national registration authority, which you have already been advised of. We have made representations to it on a number of occasions and been involved in certain processes to help it come up with better labelling layouts. It has not really put those suggestions into force or into practice. The difficulty is the balance between those who want more information on the label, whether it is environmental or occupational health and safety information, and those who want it simplified. Simplification does not always mean less, but the more you have there the less likely it is that somebody will read the important information that you put there. So you are trying to achieve a balance. There are regulations in the State health Act, the Poisons Act and in the Commonwealth registration legislation that prescribe the size of lettering and the placement of information on the label. I can only agree that some labels utilise only the very minimum lettering size. They are very difficult to read.

For that reason the department often tries to assist that process by including information in publications targeted to a particular industry. For example, we produce a pest management guide for orchard industries and within that we repeat some of the information that people find on the label in what we think is a more readable form. Perhaps it is more easily understood by the broader range of people involved in agriculture.

The Hon. J. R. JOHNSON: I have received complaints about the colouring of labels from people who are colour blind. If text is emblazoned in red that means nothing to a colour-blind person, who would see it as brown. Where would you consider the greatest advantages in the control of pesticides has taken place, in Australia or overseas?

Dr SHELDRAKE: I have outlined some of the advances that have taken place, and to pinpoint it to one would be unfair. We are looking at changes in management practice, for example with the introduction of integrated pest management. Dr Spurway may comment on the impact that has had on the cotton industry. Another area is the genetically modified organisms, the Ingard cotton for example. To say that there is one answer to pesticide control is probably not appropriate; it will be the implementation of a range of strategies, all working together. One of those will be changing attitudes towards the use of chemicals.

The Hon. J. R. JOHNSON: No doubt Australia is up-to-date on the overseas models?

Dr SPURWAY: Yes, although some problems experienced overseas are slightly different from Australia. As a general conclusion I would have to agree with what Dr Sheldrake has said; the advance and implementation of general pesticide practice in Australia is probably on a par with the best in the world.

The Hon. I. M. MACDONALD: What role is the department playing in expansion of the cotton industry into the Lachlan Valley? What advice has it given and what is its attitude?

Dr SPURWAY: Most of the decisions made to expand cotton growing in the Lachlan Valley are made purely on a commercial basis by those wishing to invest. The advice from the department is basically that it is a high-risk situation, because the Lachlan Valley experiences shorter summers than growing areas further north. When cotton was first grown

in the modern era in the Murrumbidgee Irrigation Area we quickly found that the summers were far too short and the varieties required much longer seasons than we had. Therefore, cotton could not be grown. We are still basically in that same situation. The further south that cotton is grown the higher the risk for the crop.

The Hon. I. M. MACDONALD: What you are saying is high risk from commercial factors, not necessarily other factors?

Dr SPURWAY: Yes.

The Hon. I. M. MACDONALD: In your submission you say that New South Wales Agriculture works closely with local government, other government agencies and the community to avoid future land-use conflicts and where possible resolve existing conflicts. In the case of the cotton industry proposition for the Lachlan Valley where is the department working to avoid possible future land-use conflicts that mark the operation of the cotton industry around Warren and other places?

Mr TOFFOLON: We have been asked our advice on what sort of buffers might be applied to the edge of a cotton crop in order to reduce the potential impact of spray drift onto adjoining crops or land use. We have been asked for technical information on the sort of pesticides that might be appropriate in a low-risk or high-risk environment. That is the sort of input that we make and that is the level at which we work with other agencies who may have decision-making responsibilities for planning control or some other regulatory responsibility. We will provide whatever technical input we can to help the decision-makers.

The Hon. I. M. MACDONALD: Has the department publically stated the difficulties with the expansion of the cotton industry into the Lachlan Valley? Has it advised agencies dealing with the Lachlan Valley? Has it spoken with local government about the viability of the expansion of cotton industry into the Lachlan Valley?

Dr SHELDRAKE: Our role is primarily one of assisting and solving problems. We work on the problems through research and development and extension and make that information available to all of the cotton industries. The data that we provide to the northern cotton industry we make available also to those who wish to invest in the Lachlan Valley. That data is relevant to their decisions both from a business position and from its impact on the environment.

The Hon. I. M. MACDONALD: If people still want to go ahead you will not do anything about it?

Dr SHELDRAKE: It is not our position to make a decision to say that they should or should not farm there. Those are business decisions effectively within the constraints of local government and other agencies that have responsibility for planning issues. I am happy to take that question on notice.

CHAIR: The Committee will ask the planning department to become involved later.

The Hon. I. M. MACDONALD: In your submission, at page 12, you state

that you are playing a major role in the development and introduction of pest, weed and disease management strategies which utilise biological control cultural practices and other control techniques, et cetera. How are you doing that and what information are you able to give to the practitioner on the ground?

Dr SHELDRAKE: We have a significant weed research group in Orange. We are part of the national co-operative research centre for weed management systems which headquarterd in Adelaide, but its biggest unit is in the Department of Agriculture's research facility at Orange. We are doing that through research and development and then extending that through weeds officers and extension staff. Effectively our agronomists, who might be advising farmers on one hand on wheat varieties, will be able to give farmers the most appropriate and latest up-to-date information on the control of weeds.

The Hon. I. M. MACDONALD: My question applies also to the policies that you described on sustainable agriculture. I am intrigued as to how the very fine words that are listed there are translated on the ground. I have been concerned for some time about the increasing development of hired guns in the field of agricultural for various chemical companies, or with other companies in this field whose natural inclination, despite whatever scientific degree they have, is to promote the use of their products. I have worried about that for the past five or six years. How do you get independent advice through to farmers that is not tainted by commercial considerations?

Dr SHELDRAKE: That is a clear role for New South Wales Agriculture. Farmers see our extension officers as independent; they are well educated and up-to-date with the latest technology and they are not pushing a barrow for any corporation.

The Hon. I. M. MACDONALD: How many extension officers do you have in New South Wales?

Dr SHELDRAKE: I do not know the exact number, but I take that on notice.

The Hon. I. M. MACDONALD: Could you provide a comparison of the number of people in the field and what is happening with them over the past decade?

Dr SHELDRAKE: I would like to break it down into various categories, such as agronomists and livestock officers.

The Hon. I. M. MACDONALD: I would like to have the department give the Committee its thoughts on how the cotton industry is going, given the widespread conflicting nature of the issues involved.

The Hon. I. COHEN: Dr Sheldrake, you mentioned earlier the banana weevil borer incident had been reduced by 90 per cent. You also mentioned alternative weed techniques including grazing and biological control agencies. I have a real concern in the north of New South Wales with small banana plots that are still using aerial spraying. There is a huge concern in the local community about the continuation of aerial spraying. A report was given to the Committee by the Total Environment Centre about spray drift in the Gunnedah area being sighted up to five kilometres from the spray site. What is your department's position on aerial spraying? If you accept that chemical use is part of the international competitiveness, why are you not finding more effective and less lethal ways of dealing with that issue than aerial

spraying?

Dr SHELDRAKE: I will answer the last part of your question first. I said that if pesticides are used—and they will be in the foreseeable future—they should be used appropriately. Our research and development continues to focus on ways of reducing the use of pesticides and their impact and increasing the appropriateness of pesticide usage. Regarding cotton and spray drift, Mr Toffolon will answer that.

Mr TOFFOLON: I will first address the issue of what we are doing about general pesticide application versus aerial application. The Committee has asked whether we are encouraging people to move away from aerial application and my answer is that no, we are not. Where there is a problem, we are looking at more effective ways of delivering chemical application. With weeds, we have developed new types of sprayers that put out less chemicals and are more selective in that they spray only the weeds. In horticulture, direct air-assisted spraying techniques, low-volume techniques, are being promoted as economically sound. We do not have the power to prevent aerial agriculture being used in a particular area, that is a commercial decision of the contractor or person requiring the aerial spraying to operate within whatever regulations are set by the EPA. Where there are conflicts we try to provide scientifically research alternatives that people can adopt if the economics and regulations require them to adopt certain techniques.

The Hon. I. COHEN: You say it is between the contractor and the landowner. From your department's point of view, who should be responsible for the misuse of spray incurring health and ecological problems?

Mr TOFFOLON: That is a problem for the Environment Protection Authority [EPA], and I know it has put proposals in its discussion paper. At this stage those proposals are to be developed fully and we would reserve our judgment as to specifically who can legally be captured in the net of the Pesticides Act.

The Hon. I. COHEN: So you do not see your department as being responsible for the misuse of sprays, given that your department is critically involved with the use of these sprays in the agriculture sector? I cannot quite understand. I understand it is an EPA role. I do not quite understand how you can step out of responsibility for something like that.

Dr SHELDRAKE: I do not think we are stepping out. The fact that we are spending 11 per cent of our department's budget is a good indication that we take the issue very seriously. We are continuing to try to enhance and increase the export of agricultural products, as you heard from us at the previous inquiry. One of the key issues, of course, is trying to promote our agricultural products as clean and green. So, we are very aware of the sensitivity and importance of the use of pesticides.

The Hon. I. COHEN: But you did say, Dr Sheldrake, that your department looks at the safety issues and you believe that the transgressors are few and can be controlled. You said that today, if I understood you rightly. So, is that not a role of your department, and what are you doing effectively to control those transgressors? Would your department wear a ban on aerial spraying?

Dr SHELDRAKE: We are not the department that is responsible for policing

those transgressors. So, where we see those transgressions occur we are extremely disappointed, because it does impact negatively on our ability to market products. So, our responsibility is, effectively, research, development and extension, and that is where our effort is put in, trying to reduce those transgressions occurring.

Mr J. WILLIAMS: If I can just add one thing on the bananas example. With the banana weevil borer we were able to find an alternative to the use of chemicals by using a count and cut method which basically meant that we reduced the use of chemicals quite substantially.

The Hon. I. COHEN: That is on-the-ground application, is it?

Mr J. WILLIAMS: On the ground. The problem with the aerial application on bananas, as I understand it, is that it relates to leaf-borne diseases which require treatment with a miscible oil, and probably the most efficient and effective means of getting that treatment in place in the banana industry, especially in New South Wales on such steep slopes, is by aerial application. At this stage we have not been able to find a better method of treating those diseases. So, to be competitive, a grower needs to be able to control those leaf diseases. That is not to say we are endorsing poor practice in the application of those chemicals, by aerial or ground spraying, in any circumstances. But that is the difference. Where we can we will apply new technology to try to reduce the use of chemicals or, as Roger was describing earlier, reduce the risks that might be associated with the use of chemicals. If there is a problem for an industry such as the banana industry, we liaise with the industry because the industry wishes to keep access to technology such as aerial application because the threat to the industry if it were to lose that particular technology is quite substantial.

The Hon. I. COHEN: You are saying to the Committee that in those very small banana plots—I have seen them, I come from northern New South Wales—there is no economically viable alternative to the application of those leaf sprays, miscible oils? Are we dealing with anything in those products that is of the same reputation as the other issues?

Mr J. WILLIAMS: No, they are not. When they are applied they are generally a miscible oil, like a petroleum oil, and the only chemical I know that has ever been added is a chemical called Tilt, which is a propiconazole. Tilt is the registered trade name. Most of the applications are just with the miscible oil, like a white oil, and that is what is sprayed. It is not the same as people think with the cotton industry, where other insecticides are being used. This is to control leaf diseases.

The Hon. Dr B. P. V. PEZZUTTI: What is the risk to humans associated with the use of those things?

Mr J. WILLIAMS: It is a lower order of magnitude; there is always a risk.

The Hon. I. COHEN: So, none of the chemicals under debate is in those aerial sprays?

Mr J. WILLIAMS: That is correct.

The Hon. I. COHEN: You can guarantee it?

Mr J. WILLIAMS: Yes. It is either miscible oil or Tilt. They are the only chemicals used in aerial agriculture with bananas.

The Hon. I. COHEN: Just getting back to the spray drift involved in the Breeza Valley, Gunnedah area, has your department undertaken any specific investigation or analysis of the extent of that spray drift and problems involved with the distance the vapours travel and their impact on surrounding vegetation and other communities?

Dr SPURWAY: We have done no study at all.

Mr TOFFOLON: While we have not been involved in any monitoring or investigation of instances of spray drift, which is very much an EPA responsibility, we have participated in research funded by the Land and Water Research and Development Corporation, part of which was looking at issues such as how do chemicals get away from the farm. Obviously spray drift is one way. Movement in water and movement in soil are others. We have been involved in that type of research as part of a team that has involved universities, the Commonwealth Scientific and Industrial Research Organisation and the Department of Agriculture. So a considerable amount of research has gone into the mechanisms of drift, including how far chemicals drift off farms.

CHAIR: I would like to ask you a number of questions to take on notice and then other members of the Committee have a couple. First, the submission suggests the strategic land use planning will overcome some of the conflicts arising from pesticide use. Has New South Wales Agriculture considered how such a process might be implemented? Second, while strategic planning may assist in overcoming future conflicts, what can be done to deal with existing conflicts? Third, would New South Wales Agriculture comment on the possible introduction of right-to-farm legislation? How would this impact on current land owners in both the rural and urban environments? Next, are any of the proposed legislative amendments outlined in the EPA discussion paper unacceptable to New South Wales Agriculture? The submission highlights the economic benefits of pesticide use to the Australian agricultural industry. Has the department done any work to determine the long-term economic costs associated with pesticide use? Finally, if licensing were extended to agricultural pest and weed control contractors, which agency should take on this role?

The Hon. J. R. JOHNSON: Gentlemen, we had an answer that an agronomist may go into the field advising on wheat but then give advice on something else outside his field. Is he or the Department indemnified against giving wrong advice?

Dr SHELDRAKE: What I was trying to portray was that the agronomist who gave advice on wheat would have expertise and technical ability to give advice on the control of weeds and the appropriate use of herbicides. Our agronomists are familiar with the weeds that would be a problem, for example, in the wheat growing area. He would not be giving advice on the control of, perhaps, a weed on the North Coast that he would not be familiar with.

The Hon. J. R. JOHNSON: One more question, and the corollary, was the health of the bunchy-top inspectors that were for years readily available on the far and central North Coast monitored since they have left the Department?

CHAIR: Could we take that question on notice, and there are two or three

more.

The Hon. Dr B. P. V. PEZZUTTI: What concerns me about this debate, particularly the Total Environment Centre's [TEC] submission, which you should read, is the lack of science involved in the claims and counterclaims. What steps is the department taking to put the scientific evidence it has on the table, and those areas where there is a need for research clearly announced so those bits can be in contention and the other bits not in contention? I am particularly concerned that the TEC was very disparaging of the \$6 million spent by Cotton Australia to establish that there was endosulfin in rivers. That actually establishes a relationship between spraying and waterways, but they were disparaging of that as though they already knew it. What steps are you taking to make sure there is real science in the public domain so it can be used rather than the feel of the day?

The Hon. I. COHEN: My question concerns dip sites. I understand former Minister for Agriculture and Fisheries Jack Hallam is representing a group looking at a refraction process in terms of dip site remediation. Perhaps you could give the Committee your department's position on that—how effective, how safe, and is this the direction to go.

CHAIR: If anything else should occur to you, please send that information as well as the answers to the questions on notice.

(The witnesses withdrew)

MICHAEL NICHOLLS, Chairman, Agricultural Chemicals Committee, New South Wales Farmers' Association, 1 Bligh Street, Sydney, and

BRADLEY JOHN WILLIAMS, Director, Intensive Industries, New South Wales Farmers' Association, 1 Bligh Street, Sydney, sworn and examined:

AMY CAROLINE TUCKER, Assistant Director, Intensive Industries, New South Wales Farmers' Association, 1 Bligh Street, Sydney, affirmed and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the Parliamentary Evidence Act 1901?

Mr NICHOLLS: Yes.

Mr B. WILLIAMS: Yes.

Ms TUCKER: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr NICHOLLS: Yes.

Mr B. WILLIAMS: Yes.

Ms TUCKER: Yes.

CHAIR: If any of you consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be heard or seen only by members of the Committee, the Committee will be willing to accede to your request, however I have to warn you that Parliament has the right to overturn that.

Mr NICHOLLS: First, let me apologise for Mr Mike Keogh, whose wife is giving birth this morning. The New South Wales Farmers' Association welcomes the opportunity to participate in this inquiry. We look forward to a frank and open discussion today. As we indicated in our submission and in our original response to the Environment Protection Authority [EPA] discussion paper in 1997, the New South Wales Farmers' Association wholeheartedly supports the concept of safe and responsible use of agricultural chemicals. At this point it may be appropriate for me to reiterate the Association's policy.

The Association will promote the right of farmers to use agricultural chemicals, provided they are used with due care and they are used in accordance with labelled directions and industry best practice; they are used in a manner that recognises responsibility towards their neighbours, the environment, consumers, employees and themselves; and supports the right to aerial spraying in accordance with industry best practice. It needs to be stated that agricultural industries are taking great strides in making progress in their efforts to reduce the pesticide load, particularly through the adoption of integrated pest management programs [IPM]. The adoption of IPM is well and advanced in many fruit and vegetable industries, and is being increasingly adopted in other broad-acre industries.

The apple industry is a good example. In 1998/99 the apple industry, through the Horticultural Research and Development Corporation, spent some \$817,000 on research and development of integrated pest management programs. This, out of a total industry levy of \$1.5 million, is obviously a significant investment. The grains industry is another case in point. Since 1994 the Grains Research and Development Corporation has invested more than \$7 million of industry levy funds in research and development on stored grain pest management, invertebrate pest management and weeds management. Government, environmental groups, farmers and the public have very similar goals when it comes to reducing the unwanted impact of agricultural chemicals. In fact, I think it is safe to say that we have more in common than we have different.

It is perhaps in the mechanics of achieving this outcome where the greatest difference lies. A regulatory approach is never going to eliminate the cowboy operators who cut corners and take unnecessary risks to save a few dollars; nor, might I say, is the approach we are advocating of industry self-regulation. However, a regulatory approach can undermine the process of industry striving to continually improve application methods and levels of protection for the community and environment. There is no doubt that there are risks and costs associated with chemical use, but by the same token there are also a great many benefits, and it is critical that we strike an equitable balance in dealing with the use and management of agricultural chemicals. In conclusion I would like to quote an extract from a publication of the Consumers Union of the United States of America entitled "Pest Management at the Crossroads":

Nearly 25 years of Federal pesticide regulation have not notably reduced the aggregate public health and ecological risks of pesticide use and regulatory grid lock in the effort to control pesticides has spawned frustration and distrust of government on all sides.

I hope that we can avoid similar mistakes in New South Wales.

The Hon. J. R. JOHNSON: Comment was made of industry best practice, but nothing of total adherence to the regulations. Do I take it that industry best practice is based on the regulations plus other knowledge?

Mr NICHOLLS: Industry best practice strives to ensure that as an absolute minimum the regulations are adhered to, and, as knowledge becomes available, it seeks to lift the level of performance and application and use of agricultural chemicals.

The Hon. J. R. JOHNSON: What is your area of major concern?

Mr NICHOLLS: The prospect that additional regulation will be seen as a solution to the wider community concern about the use of chemicals in the food production chain, because the community may develop a false sense of assurance. I do not believe that regulation will deliver that outcome.

The Hon. I. M. MACDONALD: A lot of comment has been made to us about the cotton industry specifically. The cotton industry seems to have considerably bad public relations in regard to these issues. Will you tell us the discussions within the New South Wales Farmers' Association about the continuing expansion of cotton in, say, the Lachlan valley, and the widespread use in the cotton industry of a range of highly toxic chemicals applied at rates up to 8 and eleven times per annum?

Mr NICHOLLS: I am not here to defend the cotton industry. I would take exception to your "highly toxic" chemicals. I do not believe that is a fair assessment. Going back to the original import of your question, the Association is torn by producers across the full range of agriculture, and I take comfort in the way in which the Association tries to resolve the conflicts and the Association's policy on the use of agricultural chemicals go to the heart of it. I and the Association believe very clearly that the application of chemicals should be done in such a way as to minimise their impact on others. That is not always easily done. Our understanding of how things work is improving all the time and the ultimate obligation on users of chemicals is to use them in accordance with the label and in accordance, or I would argue from a farmers perspective, in a way that minimises their impact on other members of the community either at the time of application or as a consequence on the product that is produced.

The Hon. I. M. MACDONALD: Do you think members of the New South Wales Farmers' Association in the cattle industry have been adequately compensated for the chemical scare last year?

Mr NICHOLLS: I am not close enough to that issue to give you a clear answer, although I understand the Association's cattle committee was and has been very much involved in the process of resolving that issue. I think there may be individuals who may believe they have not been adequately compensated. The Association's perspective is that the package developed between the cattle industry and the cotton industry to address that was reasonably equitable.

The Hon. I. M. MACDONALD: What was the level of compensation?

Mr NICHOLLS: I understand that varied upon the circumstances that each producer found himself in.

The Hon. I. M. MACDONALD: And you have a number of members who still feel aggrieved?

Mr B. WILLIAMS: I think it is safe to say that there are people who were not comfortable with the outcomes, but I think it is also safe to say that that is always going to be the case in any circumstances: 100 per cent of the people will not be satisfied with the outcomes. From my standing in the organisation, there was a great deal of dialogue about that compensation package and its outcomes. There was also more to it, which you can perhaps discuss with Cotton Australia later on in terms of claims of discrimination in buying, et cetera, through the so-called E list that was developed, which also caused some particular angst, and was removed from actual impact of chemicals as well.

Mr NICHOLLS: To complement it from a generic perspective, it causes the Association enormous concern when chemicals have been used that impact on other producers.

The Hon. I. M. MACDONALD: Do you have a cotton division within New South Wales Farmers?

Mr NICHOLLS: No.

The Hon. I. M. MACDONALD: So that issues relating to cotton are handled

through the intensive industries group or committee?

Mr B. WILLIAMS: Just to clarify the structure of the organisation: Cotton Australia is the representative organisation for cotton producers. We have a number of members who are producers of cotton, but who are also producers of other products as well. They tend to be dealt with within the broader association.

The Hon. I. M. MACDONALD: So that New South Wales Farmers would have very few Cotton Australia members?

Mr B. WILLIAMS: No, not necessarily.

The Hon. Dr B. P. V. Pezzutti: There are 1,200.

The Hon. I. M. MACDONALD: Do you have 1,200 members who are in the cotton industry?

Mr B. WILLIAMS: I cannot confirm that. New South Wales Farmers has more than 15,000 members. I cannot confirm those numbers, but I will say that members who produce cotton tend to go to Cotton Australia to deal with cotton-specific issues.

The Hon. I. M. MACDONALD: Are you satisfied that the regime put in place last year following these incidents, and remember the cotton industry has a long history of these sorts of incidents, is satisfactory and will protect in every instance cattle farmers in adjacent areas?

Mr NICHOLLS: It will protect anybody, and no amount of regulation, whether it is industry best practice, self-regulation, or statutory regulation, will prevent incidents from occurring when people do not follow and carry out their responsibilities in the way in which they ought to. Yes, I believe the processes put in place ought to improve the situation. Am I convinced that they will prevent a recurrence? No, I am not.

The Hon. I. M. MACDONALD: What do you think we should do to enhance our ability to control malpractice within the cotton industry in terms of its application to chemicals? For instance, the concept of third party rights has been put to us, and the concept of increasing penalties for malpractice, whether you could sue, for instance, the various parties involved in the application of chemicals, whether they be the pilots, the companies, the farmers themselves or whoever?

CHAIR: If you want to take any of these questions on notice or give a supplementary answer, please let us know.

Mr NICHOLLS: The harder question is how do we as a community manage an issue that my quote indicated government regulation per se will not deliver the outcome. I think it is a blend of education, industry self-regulation and government statutory legislation. It is how we do that. I take enormous heart from the fact that 26,000 farmers in this State have undertaken the farm chemical user training program. I believe there is enormous goodwill on the part of the vast majority of producers to use agricultural chemicals responsibly. I can assure you that no producer uses agricultural chemicals other than as a result of necessity. They are too expensive today to use lightly. I suspect there is support by the Association to strengthen

some areas and focus energy a little more clearly in some areas of the present Pesticides Act, which has been under government review for a number of years and which has still not produced any change. We would continue to support that approach. We believe that ensuring a balance at the end of the day is going to deliver the best outcome for the broader community.

The Hon. I. COHEN: Could you give the Committee an example where self-regulation has clearly worked in a specific primary industry?

Mr NICHOLLS: I believe it has worked because we use less chemicals today.

The Hon. I. COHEN: What industry? Perhaps that is a general statement to make, but give me an example of an industry where you are seeing self-regulation effectively working.

Mr B. WILLIAMS: It is important to acknowledge that most agricultural industries have now introduced their own quality assurance programs. Cattle care is an example. Flock care is another example of industry-developed programs that address chemical residue issues. The grains industry is now looking at quality assurance programs. Fruit and vegetable industries have also addressed this issue through the development of quality assurance programs such as Freshcare and SQF2000. Some industries have gone down the path of ISO [International Standards Organisation] accreditation. I think it is safe to say this is an example of industry self-regulation which is driven by commercial reality. They are examples where it is working. Those programs are still being developed and refined. It is a relatively new process for agriculture to go down this path, but it is in response to commercial reality. To complement those fruit and vegetable programs, Sydney Markets has chemical residue testing and monitoring to ensure that the product going into the marketplace to the consumer is free of chemical residues that breach MRLs. So, they are probably examples of industries taking those approaches.

Mr NICHOLLS: I had a mental block earlier, but the wool industry, for example, is moving to control, monitor and reduce the residues in wool, driven by commercial reality. Certainly Europeans do not want chemicals coming out in the scours.

The Hon. I. COHEN: Is commercial reality the driving force between your association assisting members to overcome differences? Obviously, you have members that are at odds; one industry is impacted upon by another industry that you represent. How are you dealing with that?

Mr NICHOLLS: I think commercial reality is a part of that. The association's general counsel strives to understand the issues when it is developing policy. It reverts back to sort of overarching policy such as those I outlined at the beginning, and it strives to find balances. It is looking to maximise the return to agriculture in this State. To do that we have to recognise that consumer needs are changing and that we enable our members and producers to produce products that are required by the marketplace, and that we operate in an environment that imposes some limitations on the progress and speed of moving forward.

The Hon. I. COHEN: Apart from the way you see your organisation perceives dealing with this problem, do you accept that there is a persistent and systemic problem and danger of agricultural chemicals as presently used, particularly towards people

living in proximity?

Mr NICHOLLS: I do not know that I would accept that it is a systemic problem. As people desire to move away from some of the problems of urban living and seek to move to, shall we say, a different rural environment, they carry with them expectations that are sometimes inconsistent with the expectations of those who have lived in rural areas. I do not believe that that means that some of those who have lived there for a long time do not have similar concerns, but they have learnt to accept and balance some of those issues in making some of their lifestyle decisions. Towns impacted on by agricultural activities in close proximity to them, just as we all make choices and decisions, so too they have to make some as well.

The Hon. I. COHEN: Who do you think should be responsible for things like significant spray drift and problems with aerial spraying? Should it be the operator or the land owner, and why?

Mr NICHOLLS: I think both are. Everybody in the chain is responsible. The producer who certainly determines to run a particular enterprise has responsibilities to ensure that he can manage that enterprise appropriately during the whole of its life, whether it is a crop short term or a grazing operation over the long term. The people he employs to deliver that outcome are responsible to do as they are directed. There is a responsibility with the manufacturers of chemicals to be continually looking for more tightly focused and targeted and less toxic chemicals. There are responsibilities on the part of government to ensure that there is appropriate extension services and resources. Finally, there are responsibilities with people like us, as the association, to try to inform our members of their general responsibilities. The regulatory environment has responsibilities, for example, with labels. I heard discussion earlier about labels. Users want a single source of information that is targeted to their needs in the use of chemicals. Those who government put in charge of ensuring that regulations are adhered to need to have adequate resources to follow through. I do not think you can single out any one particular sector.

The Hon. I. COHEN: You said earlier that your organisation was not happy with an increased regulatory environment.

Mr NICHOLLS: I would ask you to turn to pages five and six of our submission. There are 24 different pieces of legislation. You cannot say agricultural chemicals are not regulated in this country. I would totally refute any suggestion along those lines. There is an absolute raft of Acts and regulations that go to the heart and use of agricultural chemicals.

The Hon. I. COHEN: Is that succeeding in guaranteeing public safety at this stage?

Mr NICHOLLS: No. I said to you that no amount of statutory regulation will guarantee anything, other than that people will break the law because eventually they will be found to be at fault. What you need is a combination of statute industry self-regulation and consumer awareness to get a balance that is appropriate and right and delivers the outcomes that society is looking for. We would not need courts and a police force if we did not have them.

The Hon. Dr B. P. V. PEZZUTTI: I ask that the submission by the Total

Environment Centre be sent to New South Wales Farmers for its comment. We heard Dr Sheldrake or Dr Williams say that there are no pesticides used on bananas. Yet, a statement in this document says, "Children actually being exposed to pesticide spray drift while they wait for school buses." That sort of inaccurate statement, according to the department—

The Hon. I. COHEN: No, they said tilt.

The Hon. Dr B. P. V. PEZZUTTI: Tilt is a fungicide. The other issue is the statement that the growing number of local conflicts occurring throughout New South Wales signals a fundamental failure of New South Wales pesticide laws to adequately protect the public.

Mr NICHOLLS: Do they provide statistics to underpin that assertion?

The Hon. Dr B. P. V. PEZZUTTI: No. I am just wondering whether your association's scientists would give the Committee a critique of that document.

CHAIR: In order to do that you will have to move that the document be made public.

The Hon. Dr B. P. V. PEZZUTTI: I move that the submission of the Total Environment Centre be made public and be transmitted to New South Wales Farmers for its assessment.

The Hon. I. M. MACDONALD: I second that.

The Hon. Dr B. P. V. PEZZUTTI: I received your document "Primary Report" about agriculture resources. Were you present when Dr Sheldrake indicated that he is happy with the amount of resources New South Wales Agriculture is receiving from the New South Wales Government?

Mr NICHOLLS: I did hear that, yes.

The Hon. Dr B. P. V. PEZZUTTI: It is interesting that you comment:

The current real taxpayer contributions to New South Wales Agriculture are lower than they have ever been for the last 25 years.

Is that a true and accurate statement from your document?

Mr NICHOLLS: I do not have the document in front of me. If you are reading it correctly, I can only assume that it is an accurate statement.

The Hon. Dr B. P. V. PEZZUTTI: I move that this document be forwarded to each member of the Committee. Would you be happy for that document to become part of your evidence?

Mr NICHOLLS: Yes. The author of that document is Mr Keogh, who would have been more than happy to take questions on it. I am not as familiar with it as I probably ought to be.

The Hon. Dr B. P. V. PEZZUTTI: I make the comment only that that is the amount of resourcing the department receives. He makes the clear comment also:

In terms of the precautionary principle, the decisions about future funding of the public sector to Agriculture should apply.

In other words, they should not take away money until they are certain that they do not need money.

Mr NICHOLLS: I would certainly support that contention.

The Hon. Dr B. P. V. PEZZUTTI: He comments also that agriculture research and development funding in New South Wales, which goes to this issue of pesticide use, proper use, research and the like, is already below the international OECD benchmark of 2.4 per cent agriculture gross domestic product [GDP]. Is the association concerned about that?

Mr NICHOLLS: The association has been concerned for some time about the resources available to New South Wales Agriculture. I am not sure whether the OECD benchmark also includes the investigation and—

The Hon. Dr B. P. V. PEZZUTTI: Private sector sourcing?

Mr NICHOLLS: No. I am thinking of actually implementing regulation. The role the EPA has in New South Wales in relation to the pesticides Act, I do not know whether that was looked at in that context.

The Hon. Dr B. P. V. PEZZUTTI: The other issue raised in this document is that a survey was conducted in mid-1988 about farmer satisfaction with services provided by New South Wales Farmers. Not only are there smaller numbers of advisers, but the satisfaction level with those advisers seems to have dropped. Is that your appreciation of the situation?

Mr NICHOLLS: On a personal level, that is not the case. I value the extension and advisory officers I have access to in relation to my property and the management of it.

The Hon. Dr B. P. V. PEZZUTTI: I stand corrected, the statements says, "the perception of the availability of resources" has dropped.

Mr NICHOLLS: Generally speaking, I believe producers value enormously the extension services of the department. It was of enormous concern to them a few years ago when the heart was wrenched out of the advisory services and some were subsequently reinstated.

The Hon. Dr B. P. V. PEZZUTTI: At that stage Dr Sheridan commented to the Committee that he did not recommend that 23 per cent cut in the budget and was most unhappy about his resource levels. Has the association a proposed model for right to farm legislation, given your comments about people moving into areas of otherwise traditional farm

land for occupation?

Mr B. WILLIAMS: The association certainly has been concerned about this issue and is currently in the process of developing that said model. We have looked at a number of pieces of legislation in Australia and overseas at what might be the most appropriate way to develop a model for New South Wales legislation. It is an issue of concern and has become increasingly of concern in issues raised today. We are certainly progressing down the path. As an interim measure, we have sought from the local government level that councils include, as they have in Kempsey with their section 149 certificate, a notice indicating existing land use and requiring an awareness in purchasing land. That is the process we have adopted as an interim step to developing a model.

The Hon. Dr B. P. V. PEZZUTTI: I am not suggesting that there should be a free go for people to do anything they like, but with SEPP46 and its brothers, sisters and cousins, plus the 27 pieces of legislation, the huge numbers of departments involved and the regulations relating to pesticides alone, one would almost need a PhD to get one's head around some of that stuff.

Mr NICHOLLS: Can I make two quick comments? The association did not support the administration of the regulations moving from New South Wales Agriculture to the Environment Protection Authority. It added another level of potential confusion for people. I also reiterate the point I made to The Hon. I. Cohen that the label is the most critical piece of communication to a producer. He wants to be able to pick up a tin or a container and read what he needs to know to be able to use that product appropriately, safely and effectively. The more information we put on the label the more we compromise that outcome because the practical reality is that they will try to find the few bits they want and they will not read every single word on the label. We need to focus our energies on ensuring that the key messages are delivered and not the peripheral ones.

CHAIR: We have five questions that I will not read out. I will ask for them to be incorporated in *Hansard*. You can take them on notice and give us your answers to them.

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1. Has the Association given any consideration to planning measures that could be introduced to alleviate conflict about pesticide use and application?
 2. How has the Association helped its members to overcome differences in relation to use of pesticides for intensive agriculture? Can common ground be found between different sectors of the agricultural industry?
 3. Would the Association like to comment on the possible introduction of right-to-farm legislation? How would this impact on current landowners in both the rural and urban environments?
 4. In its 1997 submission to the EPA, the Association indicated it does not support licensing of ground rig operators, but that it does support training and industry accreditation. How does the Association see this working?
 5. What steps has the Association taken to promote the reduction of pesticide use by agricultural producers? Does the Association support the introduction of genetically modified crops to combat the pesticide problem?

CHAIR: Earlier references made to container dumps and to the new Drum

Muster or ChemClear processes.

The Hon. Dr B. P. V. PEZZUTTI: That is paid for by the end user.

CHAIR: Do you have any thoughts as to how local government should get involved in providing for the safe return or dumping of chemical drums?

Mr NICHOLLS: Drum Muster as the collection of clean containers is very much a local government responsibility. They are paid as part of the Drum Muster Program to be involved and to facilitate the collection of empty or clean containers.

Mr B. WILLIAMS: And are signatories to the agreement, I might add, with the National Farmers Federation.

CHAIR: When will that start?

Mr B. WILLIAMS: It has started.

Mr NICHOLLS: As producers, we are already paying.

Mr B. WILLIAMS: The first collection started in Gunnedah two weeks ago.

Mr NICHOLLS: I think there is a lot of ignorance still among local governments as to their role, and that is of concern to the association.

CHAIR: I asked the question because I used to be a general manager of a council and I have also had three irrigation properties. Every time it floods, I get a raft of chemical drums down the river and across my property.

Mr NICHOLLS: I had not thought of disposing of them in that way but I know the problem. There is a second issue in relation to the collection of unwanted chemicals and that issue is still being addressed by Federal and State Governments and industry to try to move towards a reconciliation and process of moving forward.

CHAIR: On notice, you might make some comments pertaining to the questions incorporated in the transcript in relation to possible changes to LEPs, particularly bearing in mind the situation in Dubbo with cotton farms. You probably cop it from both sides, or perhaps from one side more than the other.

Mr NICHOLLS: Yes.

CHAIR: You answered a question asked by the Hon. I. Cohen about who should accept responsibility. You answered the question by saying that everybody should accept responsibility. However, I am not quite sure whether his question went to the extent of a situation such as in Narromine where a pilot sprayed a school bus. Should the farmer be responsible in that situation? I agree with the comment that you made to start with, but I wondered about a specific instance.

Mr NICHOLLS: It depends on the facts and I am not familiar with the facts. If the instructions were clear from the farmer to the pilot and the pilot failed to fulfil those

instructions, then I do not believe that the farmer can be held accountable. If the instructions are ambiguous and equivocal, such as, "Just spray the crop which is over there", then I think there is a responsibility. You need to go to the facts of the issue but I do not believe and I would not accept the premise that the person whose crop is being sprayed is necessarily liable for the outcome. It depends on the method of application.

CHAIR: Finally, how do you get over the problem in determining how big the responsibility is that the sprayer has in relation to the drift? There have been a lot of comments about the spray drift from planes over cotton fields. Obviously, that spray can drift a fair way, and then we come down to the use of Roundup along fence lines or near electric fences where it might spread for a distance of two feet into the next-door neighbour's property. How does one draw the line?

Mr NICHOLLS: I encourage my neighbour to spot-spray my weeds as he goes along the fence line, but that is a different issue.

CHAIR: But you might have a different farmer and the opposite situation.

Mr NICHOLLS: Fundamentally, I believe that, without the consent of neighbours, you have a responsibility to manage your operation, not his. The responsibility is on those who are applying the chemical to ensure that, to the best of their ability, it does not impact on other producers or on the community.

CHAIR: Thank you very much for that. We had better move on. We would like to ask those incorporated questions and we will give you a copy of *Hansard*. If you have any other thoughts, you could let us have those too.

Mr NICHOLLS: And the Hon. Dr B. P. V. Pezzutti asked questions, which will be in the transcript as well?

CHAIR: Yes.

(The witnesses withdrew)

GARY FRANCIS PUNCH, Chief Executive Officer, Cotton Australia, and Executive Director, Australian Cotton Industry Council, Level 2, 490 Crown Street, Surry Hills, Sydney, and

MICHAEL JOHN LOGAN, Farmer and Director, Cotton Australia, Oakville, Narrabri, sworn and examined:

GARY PETER FITT, Principal Research Scientist, CSIRO, and Chief Executive Officer, Australian Cotton CRC, Australian Cotton Research Institute, Post Office Box 59, Narrabri, affirmed and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

The Hon. G. PUNCH: Yes.

Mr FITT: Yes.

Mr LOGAN: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

The Hon. G. PUNCH: Yes.

Mr FITT: Yes.

Mr LOGAN: Yes.

CHAIR: If any of you should consider at any stage during your evidence that in the public interest certain evidence or documents that you present should be heard or seen only by the Committee, then the Committee would be willing to accede to your request and resolve itself into a confidential session. However, I warn you that Parliament may override that decision. I invite you to make a statement and then we will have a round of questions. It may happen that we will direct some questions to you on notice and you can provide answers later.

The Hon. G. PUNCH: Chair and members of the Committee, this is a great opportunity for the Australian cotton industry to appear before you to address particularly the terms of reference of your inquiry. Briefly, your terms of reference encapsulate all the issues. The reality is that if Australia is to remain a first world economy providing food and fibre to great portions of the world and pressing home its natural advantages, it must do two things: (1) it must continue to use chemicals in the foreseeable future; (2) it needs to be wiser, if you like, in how it applies those chemicals.

The Australian cotton industry recognises both of those issues. It is, and has been for quite some time, working very hard to diminish its use of chemicals. Second, it is working now at what can only be described as breakneck speed, particularly across this closed season, to make sure that the application of chemicals in the cotton industry is far more exact and far more compliant with community expectations.

Essentially, we have five broad thrusts that we are undertaking as an industry. The first is that we have put to the National Registration Authority, which controls the use of chemicals, a more restricted formula for the use of endosulfan next summer. While the very finest details are being worked out between elements of the Australian Cotton Industry Council and the National Registration Authority, suffice to say there will be much greater restriction on the use and application and on the aspects of application—in other words, the environmental situation such as temperature, and climate and, to be more precise, the calendar and other aspects pertaining the exact conditions at the time when that chemical will be applied.

As part of that restricted label—I note the comments of the NSW Farmers Association on the importance of the label and we agree with that—we have formulated a spray and drift management plan which we are seeking to have included in the label provisions. My colleagues will take you through the spray and drift management plan in much greater detail later on, but in summary it is a three-way signing off document amounting, I think, to a contract between the farmer, the spray applicator and the cotton consultant who advises when various chemical applications should be made and what sort of chemical applications should be made—the agronomist, in other words. It is a three-way document which makes transparent the accountabilities and responsibilities for the spray application. We think that is a very important breakthrough and we are in the midst of rolling out that document in an education process right across our industry.

The second aspect is education. We need to continually educate people both in technologies and chemicals that they are using in the application process. The cotton industry has been doing that for quite some time. We are, if anything, stepping it up. At the same time that leads to the third aspect, that is, policing and sanctions. The cotton industry recognises that education itself is not enough. It has recognised that unanimously in its councils, its discussions and growers are recognising that at mass meetings. While there is some nervousness, we are yet to agree on a formal finite means of policing and sanctions.

Broadly speaking we are seeking to glean from State authorities in both New South Wales and Queensland delegated regulatory authority to allow us to better police ourselves as a supplementation to the Environment Protection Authority and other authorities—not in place of them—and delegated authority by an authorisation from the Australian Competition and Consumer Commission to impose real sanctions on transgressors. The reality is that in the bush one farmer will not dob in another farmer, even when they are doing the wrong thing. In the cattle endosulfan crisis that the cotton industry went through last summer there was not one tangible enough complaint from a beef producer against a transgressor from our industry that amounts, in effect, to something that can be legally taken up.

Recently the EPA informed us that there has not been one successful prosecution of a cotton farmer under the Pesticides Act. We must acknowledge that the black-letter law alone will not work, just as education alone will not work. To those of us who are born and bred in the city—Maroubra and Oatley—the bush culture is hard to understand. We are continuing to develop policing and sanctions. We have a workshop tentatively scheduled for Wednesday week when we will talk to various State and Federal authorities under one roof to try to hammer down how we will go about it.

I hasten to add that this should not be characterised as self-regulation because

it is no longer self-regulation; it is what I euphemistically recently referred to as co-regulation. We are seeking delegated powers to help police ourselves on the ground, not to the exclusion of existing provisions, but as a supplement to them. We recognise that one of the problems with the existing law is that there is just simply not enough bodies—not enough eyes and ears—to carry it through.

The fourth aspect is that we are attempting to work with the beef industry to refine the E-list. More than half of the controversy in the bush this summer was because the E-list was for the first time published prior to sale.

That meant that in the saleyards a lot of cattle producers were discriminated against not because there was anything wrong with their beef cattle or the cotton industry did anything to that cattle but because of their address. Those producers had an address near a cotton farm, or were a cotton farm, and therefore it is possible they could have been contaminated. They consequently suffered rife discrimination. Indeed, of the amounts that we have paid out (which we will not disclose publicly) a very small minority of the dollar payout of actual funds going out is to beef producers that have actually been damaged by the cotton industry.

The Hon. J. R. JOHNSON: Are there many claims outstanding?

The Hon. G. PUNCH: To the best of my knowledge the beef producers have all now been paid. I think the cheques went out last week or the week before. Claims from beef processors are subject to another meeting of the claims panel which, like the E-list, is voluntary that the cotton industry signed itself up for and pays for. We pay half the E-list costs although this summer we will be paying far more than half. In respect of the compensation, the claims tribunal chaired by Mr Dick Conti, QC, will be meeting again at the end of this week to finalise the beef processors' claims. Those claims were originally outside the guidelines for which we agreed to pay, as well as the national residue survey additional claims of monitoring about which there has been some discussion between ourselves and the beef industry.

We are looking to refine the E-list so that the public rancour that it indirectly caused is put to bed. The fifth aspect is that we are attempting to formulate a vision for the industry that says that we need to carve out a niche for Australian cotton on the world market as being the most environmentally sustainable in its growing practices, worldwide. We think there are very real market benefits both in the proportion of market and ultimately, hopefully, price that can be gleaned from that, particularly in first-world economies of Europe, et cetera. Our industry does not use child labour like many of our third-world competitors.

If you like, Australian cotton is politically far more correct than arguably any of our competitors around the world, with the possible exception of parts of the San Juan Valley in California. In order to do that we have to come to some greater level of understanding, indeed détente, with the stakeholders of the cotton industry, peak green organisations, the beer industry and others. We intend to go to the stakeholders when we have our policing and sanctions formula tied down, together with our best management practice documentation and effort rolling out, to give them far more input and say. The cotton industry has not been good at that in the past but it is something that we want to correct in the future.

The carrot to our membership is that, with that sort of criticism being turned

around through greater access, a greater understanding of the science behind our industry and what the science inputs are to our industry, then our product on a world market will be quite rightfully seen as being ecologically far more sustainable than a lot of our competitors, if not all, worldwide.

The Hon. I. COHEN: I hear from what you are saying that you accept that there has been some serious problems in the industry. Interestingly, you talk about child labour. The Committee has had evidence earlier today of schoolchildren being seriously affected by spray drip from cotton crops, et cetera. I hear that you are working to remedy the situation. What responsibility is your industry taking for quite serious health complaints, particularly about young children, in those cotton growing areas? Do you accept your mistakes, walk away and say that you will do better now or will you go back and adequately look at those issues?

The Hon. G. PUNCH: Firstly, I do not accept that those claims are founded on objective evidence. Not having seen the ones to which you specifically refer, I can only comment on those that have been alleged at us in the media in the past. Dr Fitt is far more qualified than I to answer this question. We, as a nation, which depends heavily on primary industries need to seriously look at the long-term effects of chemical exposure to the population. We have already signalled to the former Federal Minister for Agriculture, John Anderson, that we would be happy to be part of that process.

At the end of the day, I remind the Committee that the people most closely associated, geographically, physically and otherwise with chemical exposure are the farmers and their families. I know that in the mythology that is peddled by some quarters about the cotton industries it is popular to believe that the cotton industry has two heads, are generally devils and possibly could never have children. But most cotton farmers have kids. Those farmers are just as concerned about their children as anybody else. To paraphrase Sting, cotton farmers love their children too. We would be more than happy to be involved in that.

I have witnessed a number of wild and woolly allegations in the extreme in the 2½ years that I have been in this industry. In this country, and for that matter internationally, we are not overflowing with enough information about the health effects of long-term exposure to low levels of agricultural chemicals. We would be more than happy to support that and look into it. One of the problems of the cotton industry, and our polling suggests this very strongly, is that there are a lot of people in the bush from traditional, if you like, non-intensive agriculture who do not like the cotton industry—new guys on the block, big debts, big profits.

The criticism that one can make about the cotton industry is most easily the simplistic because when dealing with a fairly complicated production process, it is fairly easy to make a simple statement that may or may not stand up over 10 years of research scientifically and in some quarters it is fairly easy to get a run for it. The cotton industry has been a victim of that and there is no doubt that it has not been helped by the excesses of a minority of its members. That again comes back to the concept of policing and sanctions and why we want to do something about that with the authorities. We realise that these people give the whole industry a bad rap and make those sorts of claims all the more believable.

The Hon. I. COHEN: For example, do you accept from a total environment centre report entitled "A Multidisciplinary Analysis of Pesticide-Related Problems in New South Wales" a claim that in 1981 in Gunnedah and Breeza Valley over 500 people reported symptoms such as fatigue, headaches and gastro-intestinal upset thought to be related to

pesticides? That was stated by Dr David Cook, a local general practitioner from Gunnedah. Also in the 1984-85 spraying season the Breeza public school principal at the time, Mr Peter Clancy, reported that following aerial spraying of nearby cotton fields a large number of children suffered sores on exposed skin, were excessively fatigued, lacked concentration and often had to be sent home. Do you accept those reports from a principal and a doctor in the local community. Are they reasonable reports?

The Hon. G. PUNCH: I accept it, certainly, as being reasonable, but 1981 is a long time ago. Practices have changed dramatically since then, as has the science that underwrites those practices. That is the first point to take very great and careful note of. There would have been practices in farming generally in the 1970s that most people would shy away from now right across the board, not just in the cotton industry. Can I underline a couple of things you said there? I think the quote was "thought to be associated with". The other opinion was from a local GP. If we are going to take this issue seriously we have to rest on far more evidence than circumstantial and opinionated judgments such as that. I do not know of any cotton farmer who would like to be known in his community as causing that sort of distress, whether it be actual chemical distress, if that were proven to be the case, or some sort of underlying psychological distress arising from a perception from something that a child has read or heard.

I think it is a very good opportunity—this is why we are keen on the whole stakeholder consultation process that we want to go through when we get our act together on a number of other fronts—to sit down with the Greens and go through this. Hopefully, we may be able to come up with a combined approach to governments to get some sort of long-term assessment of these sorts of issues under way, because it is clearly needed. If the industry is affecting the public's health, albeit very small numbers of people at the margin, that means we have to change the way we do things. But let us have some objective foundation for it rather than opinions.

The Hon. I. COHEN: Do you or do you not or would your industry accept anything of a precautionary principle with issues that are so potentially adversely affecting the population?

The Hon. G. PUNCH: We do every day. A great deal of the rollout of what we are doing this winter in preparation for next summer is taking that to another level.

The Hon. I. COHEN: On that precautionary principle, is there any other option for your industry other than aerial spraying?

The Hon. G. PUNCH: Two options broadly come to mind but they are not solutions in themselves. First of all, a number of our farmers are working hard on developing ground rig application methodologies and techniques. Anecdotally, may I say that this summer we seem to have a far greater rollout of ground rigs. In some cases that was good; in other cases it was bad, because some farmers thought that by using ground rigs, trying to do the right thing, they were minimising the drift to the maximum extent possible. But the climatic circumstances were such that it exacerbated the problem because they did not understand the finer sciences of what they were doing. We believe as an industry that ground rigs ought to be regulated because at the moment any Tom, Dick or Harry can make one up or buy one and open a business and start applying chemicals. That flies in the face of the accreditation processes that the four As [Aerial Agricultural Association of Australia] are trying to get up

and running for aerial application. So we should not assume that helicopters or ground rigs are necessarily always better. That is certainly not the case.

The other area again is a case of horses for courses. It is hugely expensive in capital outlays and would be prohibitive to most industries other than some parts of our own, and I stress some parts. That is the use of underground drip feed type technology to apply chemical. A number of our farmers are doing that more on a trial basis than anything else but the capital outlay of that is huge. There is no encouragement by government from a taxation point of view for farmers to get into that, as near as I can see. It would be more correct to say that there is not enough encouragement. These are all things which the industry, because of its economic abilities, is starting to look at. But that does not for a moment deny the truth that aerial application of chemicals is with Australian agriculture to stay for a long time, not just cotton. It is a matter of actually making that aerial application far more effective and stopping chemical trespass. The message that we have had this summer from government, State and Federal, from the regulators, is that we must have zero chemical trespass. That is what we are going out to try to do next summer. You know as well as I do that that is going to be very hard, but that is the objective.

The Hon. I. COHEN: I have to say—you might like to comment on this; it is not necessarily a comment on your role—that your submission is a very political document. I refer to page 13. It is extremely short on fact and the way things are communicated here it sounds very nice but it leaves me wondering what you are going to do. Talking about chemical trespass, how are you going to guarantee it? Again, under the precautionary principle, one would expect a guarantee is needed both environmentally and socially. You say that this planning framework aims to provide a flexible process that will address the need to manage the natural resource base and also meet the producer's need. What do you actually mean by that.

The Hon. G. PUNCH: I will refer that question to Michael.

Mr LOGAN: That is talking about the education process under the best management practice program. What we had to come up with under that was something that the farmers got a benefit from. It is very difficult to put something to them that is all cost and no benefit. The idea is to come up with good environmental results. It is mainly educational: What is the best way to do this? We could also increase the farmer's ability to run his farm better by giving him a formal planning process. So in the BMP there is a planning process and there is an education aspect to it. That is what the paper is trying to say. There is a win-win here in that we are trying to get better environmental outcomes and better operational outcomes on the farms through the formal planning process.

The Hon. Dr B. P. V. PEZZUTTI: I take you back to page 5 of the Total Environment Centre Report, from Immig. The quote referred to by Ian Cohen concerned a survey done by a GP in 1981. It read on, "However, after some investigation the Department of Health at the time concluded the condition was one arising from neurosis, not pesticide exposure." I give that to give you the whole quote and also to tell you that ME/CFS is still a much misunderstood illness. Later in the same paper it says that there is some association, rather than scientific link, with organochlorine blood levels. They were widely used but are not used any more in the cotton industry.

CHAIR: What is the question?

The Hon. Dr B. P. V. PEZZUTTI: The question is: How likely is it that we will see not just a reduction in pesticide use but a reduction in the risk associated with pesticides used in the cotton industry?

Mr FITT: I can address that. Speaking from the point of view of the cotton CRC, our whole focus is on reducing the need to use pesticides. If we look at the current developments in the range of pesticides available and alternatives to pesticides we can see that we are achieving reductions in use. The major recent development that has achieved that is the introduction of genetically engineered cotton that has built-in proteins for control of the major pest in cotton, heliothis. Those cottons have achieved in their three years of commercial use 50 per cent to 60 per cent reductions in total pesticide applications on the crops. We should keep in mind that this is just the first generation of transgenic cottons. We have approaching commercialisation cottons that can achieve even more substantial reductions in pesticide use—somewhere in the vicinity of an 80 per cent reduction. With the first generation of plants the industry, working closely with the NRA, has restricted the use of the technology as growers become more familiar with managing it, and there is a cap on its use currently of 30 per cent of the area. But in the next five to 10 years we can expect that new generation transgenic plants will be released that will be grown over much wider areas and that can achieve significant reductions in pesticide use.

The other aspect of current pesticides in the industry is that many new pesticides are being introduced that are much more environmentally acceptable. They are much more selective compounds that control only specific pests and have minimal impact on other organisms. We have a much greater commitment to and understanding of the components of IPM, so we have a much better understanding of the capacity of the plant to accept damage from pests and so minimise the need to spray. Growers are developing a tremendous commitment as part of BMP but through their own initiatives in forming area-wide management groups a much greater commitment to IPM in the broad, which over the long term will also see reductions in the need for pesticides.

The Hon. Dr B. P. V. PEZZUTTI: You have commented that there is no organically grown cotton in Australia. Is that correct?

Mr LOGAN: That is correct. I actually tried organic. There is some difficulty with the practical production of organic. I had a market-driven exercise in which I tried to achieve the requirements of the market. We could not come up with a product that we could produce at a reasonable price a consumer would pay for it. We had to back away from it because the cost per kilogram of fibre was about three times what the consumer is currently paying. That is at the fibre level; it is obviously less as you get nearer the product, nearer the T-shirt, for example. But the reality is that all the organic producers in the country are now out of business. Unfortunately, it does not pay.

The Hon. Dr B. P. V. PEZZUTTI: On page 8 of your submission you refer to self-driven initiatives. There is a footnote explaining the difference between self-regulation, coregulation and regulation alone. Can you explain to me simply what you mean by self-directed initiatives rather than coregulation or self-regulation?

Mr LOGAN: Again, this document is referring specifically to the best management practice program. It is trying to encourage the farmer to come up with his own

solution given some information guidelines. One of the ways we could have done it was to say, "Here is what you must do." The farmers would have said, "You are not going to tell me how to run my bloody farm, mate." We say, "Here is what you can do. How are you going to do it on your farm?" Then they are trying to come up with something that they can work it out for themselves and draw their own conclusions given a base of information.

The Hon. Dr B. P. V. PEZZUTTI: I understand that but how does that get to the issue that Ian Cohen identified of protection of the consumer and neighbours from drift? I can understand how you might have an initiative to have a better farm practice but how does that go to the issue of everybody being a winner by reducing the risk of pesticide use?

The Hon. G. PUNCH: I think you are talking about two different concepts. As Mr Logan was just saying, this is about the education format, the roll out of best management practice. What we are talking about in terms of policing and sanctions we think is truly termed coregulatory because we are seeking to take delegated regulatory authority in the case of New South Wales from the Minister for the Environment, probably under section 7 of the pesticides Act, to enable the appointment of officials from our industry who will have the right of inspection. We have to discuss what other rights the State Government may or may not allow. In the context of Mr Cohen's comments, this should give the public greater surety that the industry is out there policing itself and banging a few heads together. That is in addition to existing governmental controls. It is important to understand that we are not trying to replace the EPA officials, but we acknowledge that there are not enough of them and the ethos of the bush is that they will not do in other farmers no matter what the complaint.

The Hon. Dr B. P. V. PEZZUTTI: In the best management guidelines have you tried to achieve an Australian standard so that a grower can say that he is producing cotton to an Australian standard like an ISO?

Mr LOGAN: That is the idea. My farm is the only one in the world to be accredited as ISO 14,000. That is an international standard for an environmental management system, signed off by 100 governments around the world, including the Australian government. It is the only standard or process that I am aware of that is applicable in this instance, and that is why I selected it. The BMP is loosely based on that standard and there is a proposal that it may over time become that standard. We are trying to set a benchmark and set it relatively high.

The Hon. Dr B. P. V. PEZZUTTI: Is the BMP to work to an Australian standard which is not only for growing quality but also for management of the environment generally?

Mr LOGAN: It is specifically for management of the environment, nothing to do with a quality of the cotton. It is not an ISO 9,000, which is a quality management system; it is focused wholly on environmental management.

The Hon. G. PUNCH: The best management practice roll out is being done in a series of modules and the first module is entitled "Pesticides in the Riverine Environment". It is the first cab off the rank in the practice that we are trying to change at a grassroots level, farm by farm.

The Hon. J. R. JOHNSON: Can you give any figures on the diminution in

the use of chemicals?

Mr FITT: We can send those figures.

The Hon. I. M. MACDONALD: The submission from the Department of Agriculture states that comprehensive testing of ground and surface waters in New South Wales, particularly the central and north-western rivers, and the southern irrigation areas, has identified significant levels of some pesticides. However, the ecological significance of this contamination has not been fully determined. In itself that is a problem, but in the light of that statement, which is of concern to me, why are we expanding the cotton industry into new areas such as the Lachlan Valley? If there is concern at the level of pesticides and assuming that has some relationship to the cotton industry studies, why is the industry continuing to assist expansion into other areas? Maybe you can take that on notice.

The Hon. G. PUNCH: I can give you a quick answer. Firstly, the industry does not make a decision as such to expand. With development of new areas for cotton you see one of two things: firstly, existing cotton farmers without reference to the industry decide to open a second, third or fourth farm in a new area, which is generally judged suitable by climatic conditions and water availability. Secondly, as has been seen this year in great preponderance, there is the conversion of some farms from beef, wheat, or whatever, to a property which is doing much better financially. We often do not find out about them becoming new cotton farm until the end of the season.

The Hon. I. M. MACDONALD: If these problems exist should we have some mechanism whereby farmers in new emerging areas are advised to wait because of the uncertainty about the cumulative impact of this expansion. They should be told to wait for some advice before they transfer into this new property.

The Hon. G. PUNCH: You are quite right, that takes us to the planning issue. We have no trouble with councils rezoning for the industries they do or do not want in their area as long as the bar is set evenly. In other words, cotton should be judged alongside a range of other intensive agricultural pursuits which often use the same chemicals but which often do not have the same degree of sophisticated industry education. By next summer, if we succeed in our other plans, we will have nowhere near the amount of monitoring in other industries that we have with ours. We should not be punished for putting in a bigger effort on an environmental front. Nor should we be punished because we have in the past put in a bigger effort. For example, about 43 crops use endosulfan, and we are the only ones with arrangements with the beef industry for a monitoring process such as the E-list. We should not be punished.

The Committee is seeing far more openly and transparently what is going on in the cotton industry and than what is going on in a great deal of other industries. With water reticulation we have an industry guide of practice which states that irrigation farms should be fully reticulated; in other words the water should not escape into the river. As with the application pesticides, the reality is that not everyone is doing that, but we think there is a high compliance rate, especially in comparison with other industries. We need power to inspect and make sure it is happening in 100 per cent of cases and that is what we are seeking from the Government. We want to round that off and make sure that it happens in conjunction with the EPA.

We get into trouble with other intensive agricultural industries when a flood or heavy rain occurs in excess of the EPA guidelines and water escapes into the environment. There is not a lot we can do about that. Cotton farmers are often better placed than other farmers, because of the large banks around cotton farms. If you are asking whether we can make a greater contribution to cleaner rivers, we say yes, give us the ability to do that and we will do it.

The Hon. J. R. JOHNSON: In your document you indicate that the Queensland Government has provided \$2.4 million additional funding over the next 40 years to help identify alternatives to conventional pesticides. Does the Commonwealth or other States provide funding?

Mr FITT: The Commonwealth has provided additional funding in the form of the CRC, at \$2 million a year for the next seven years and a large proportion of the CRC's role is to develop sustainable, environmentally acceptable management systems. That is an example of the Commonwealth input. I not where of other State governments making commitments of the magnitude of Queensland.

The Hon. J. R. JOHNSON: That is \$2.4 million additional funding, so I take it that they are already contributing some funding?

Mr FITT: Of course. The New South Wales Government is already funding significant research in cotton pest management.

The Hon. G. PUNCH: There is also the Cotton Research and Development Corporation, which acts as a clearing house for funding scientific projects which have a very strong environmental ethos for the most part. Most grants are matched dollar for dollar by the Commonwealth, and that has been in existence for 12 years.

The Hon. J. R. JOHNSON: Have there being any legal actions from local councils, State government departments, individuals or groups against the industry or selected people in the industry alleging some chemical trespass?

The Hon. G. PUNCH: Not to my knowledge.

Mr LOGAN: There was one case, *EPA v Axer*, which is an aerial operator out of Moree. My understanding is that the EPA did not win.

The Hon. G. PUNCH: We will take that on notice. Often there is a threat of legal action and there were substantial class actions against chemical companies some years ago in respect of Helix. There have been some EPA actions against various aerial operators. Recently I was informed that they have been no successful prosecutions under the Pesticides Act by the EPA of a cotton farmer. No-one in the industry could tell me any differently. One of the problems at the heart of Mr Johnson's question is evidence.

The Hon. J. R. JOHNSON: I am not interested in hearsay.

The Hon. G. PUNCH: One of the problems for authorities and members of the public who want to take action against any chemical applicator, whether in the cotton industry, the peanut industry or anywhere else, is evidence. This comes back to the notion of

policing and sanctions. We have to tighten up on that front. It is very much in the cotton industry's interests to do that because there is a number of people in the cotton industry, frankly the vast majority, trying to do the right thing, who would get hung, because the transgressors give the whole industry a bad name.

The Hon. J. R. JOHNSON: Is the health of cotton workers, managers and their families monitored?

Mr LOGAN: Yes, the Moree agricultural health unit has monitored that for years. I do not have any results with me, but they are available. It is a well-respected New South Wales Department of Health facility. I monitor the staff of 20 on my farm. We do it as part of the induction process. When they come on staff we monitor them, get a baseline level and review that every year. We also test blood, hearing, sight, backs, and a whole range of things. As an anecdote, one came to us from a horticultural industry with an anti-cholinesterase level so high that I thought he should be in hospital. We brought him down to below the community average in 18 months.

(The witnesses withdrew)

(Luncheon adjournment)

PETER WEATHERSTONE, Executive Officer, Aerial Agricultural Association of Australia Ltd, 15 Riversdale Avenue, Burradoo, New South Wales, and

LINDSAY PATRICK KEENAN, General Manager, Chief Pilot, representing the New South Wales Director of the Aerial Agricultural Association of Australia Ltd, "Lingrove" Kooroogamma Road, Moree, sworn and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the Parliamentary Evidence Act 1901?

Mr WEATHERSTONE: I did.

Mr KEENAN: Yes, I did.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr WEATHERSTONE: Yes.

Mr KEENAN: Yes.

CHAIR: If you should consider at any stage during the giving of your evidence it is in the public interest that certain evidence or documents that you may want to present to the Committee should be heard or seen only by the Committee, the Committee will accede to your request, however I have to remind you that Parliament may override any decision we make and can make them public.

Mr WEATHERSTONE: The association has made a written submission to the Environment Protection Authority concerning amendments to the Pesticides Act and to the Standing Committee on State Development. Today we wish to refer briefly to those two issues, firstly, the Pesticides Act and, secondly, to just one portion of our submission to the standing committee.

As the audible and visible aspect of pesticide application and having borne the brunt of much uninformed criticism over 20 years, this association considers itself well qualified to comment on the wider issues involved. At present we are the only licensed and insured applicators of farm chemicals. Furthermore, the present Pesticides Act and regulations are almost totally focused on our activities. The agricultural pilot and his employer therefore tend to wear the mistakes of others involved. I refer to others as being the farmer, his consultant or adviser, and the pesticide reseller. Should a farmer insist on applications in unsuitable weather or give misleading advice concerning adjoining crops or dwellings, or if a reseller or advisor recommends off-label use, it is the pilot and his employer who is responsible for contravening the regulations. We believe the answer is to share the responsibility, including any compulsory liability insurance that may be deemed necessary, amongst all parties involved. A signed order form giving directions for application and advice on adjoining crops, neighbours and hazards should be mandatory. It is already in use by the more progressive operators in our industry.

The enormity of the penalties under the present environmental and pesticides legislation is of concern. Along with the proposal to introduce penalty notices issued by the EPA inspector or even an officer of another authority, our industry could be said to be

regulated in the extreme. In all that has been stated or written about the need to strengthen the laws relating to pesticide use we have observed little about the need for the education of the parties involved, including members of the non-farming rural community. Penalties will never replace education as a means of pesticide management reform and alone will not result in safer application. The association believes that if the enforcement of stricter regulations and stiffer penalties become the order of the day, responsible aircraft operators and pilots will leave the industry and those who are left will be the risk-takers, quite the reverse of our aims and what we believe the aims of the regulating bodies should be.

This association has a self-administration program known as Operation Spraysafe which in part involves examining pilots on our manual, and this is the only up-to-date text on aerial application of pesticides available in this country. This exam is accepted by the New South Wales EPA for licensing purposes. Operation Spraysafe also requires the aircraft operator to meet a standard for his aircraft, the application equipment and the storage, mixing and loading facilities. The aircraft operator's facility is audited under this program, which we believe achieves a higher standard than anywhere else in the world. I would like to leave with you copies of information relevant to our Operation Spraysafe program.

Document tabled.

I refer to another section of our submission to the standing committee concerning right-to-farm legislation. We believe that pivotal to the sustainability of pesticides, and the social and environmental concerns of the community, is the enactment of sensitive right-to-farm legislation. In reality, urban development cannot co-exist with most commercial-style agricultural and horticultural pursuits. Hobby farm and even leisure resort development in the midst of intensive cropping such as vegetables, fruit, cotton and vines invites disputation to the detriment of both the farming and non-rural community interests. A recent proposal that wording be placed in the contract of sale or lease to the effect that would-be purchasers or lessees accept that neighbouring farming activities may invoke noise, odour and so on should be proceeded with immediately by State and local government. In conclusion, I would like to say that right-to-farm legislation is long overdue in this State.

The Hon. I. COHEN: Mr Weatherstone, what is your organisation doing regarding safer application and, given the rather poor reputation of many in the industry because of overspray and spray trespass, has your organisation changed its methods in recent times?

Mr WEATHERSTONE: The Operation Spraysafe program that we have introduced is aimed at achieving just this. Like any industry, we are possibly judged by our poorest performers.

The Hon. I. COHEN: What do you do to your poorest performers?

Mr WEATHERSTONE: We have in place an accreditation program but I must be honest with you that it lacks teeth in that we do not have any legislative back-up to enforce the terms of the accreditation program, nor are we legally able to impose sanctions ourselves.

The Hon. I. COHEN: On the small-area banana farms in the far North Coast of New South Wales near the Queensland border, where are those flyers coming from? Do they

come from Queensland, and does that have an impact with the different regulatory provisions between Queensland and New South Wales?

Mr WEATHERSTONE: To the best of my knowledge, the banana farms on the far North Coast are sprayed by aircraft operators who are resident in New South Wales, not in Queensland.

The Hon. I. COHEN: What is your organisation's position on complaints against aerial spraying? You have stated quite strongly your concerns about other land-use development, be it residential or tourist, et cetera. What is your position regarding public complaints? Do you have a mechanism for dealing with public complaints on these issues?

Mr WEATHERSTONE: Yes, although the way the EPA in New South Wales handles complaints, I would say 99 per cent of them go direct to the EPA rather than to our association. The individual operators, of course, are responsible for keeping the peace, so to speak, in their own area. Maybe Lindsay would like to elaborate on what happens in Moree, for example.

Mr KEENAN: Our complaint numbers have dropped through education, public understanding and awareness of what we are doing. As operators we tend to complaints promptly. A lot of the time it is an odour complaint, which is where our major problems come from. A lot of the time they just want to know. We find that the situation is improving as we go down the track with more education and understanding about our industry and what we are trying to achieve in relation to high-yield agriculture and the need to use an aeroplane as opposed to another medium to apply. As Peter said earlier, a lot of our complaints used to go to the Environment Protection Authority [EPA] and still do.

The Hon. I. COHEN: Does your organisation have any information about the prevalence of aerial spraying in other countries, such as the United States of America and Canada, and what directions are being undertaken in those countries?

Mr WEATHERSTONE: Yes. We are on very close terms with the industry in the United States. Our aircraft come from over there and the application equipment on the aircraft is also sourced from the United States. We keep in very close touch with what is happening over there. It is probably the only place in which of what I would call basic research into aircraft application techniques is occurring. There is little, if any, done in this country. We rely on the United States for this information.

The Hon. I. COHEN: Perhaps you could relate to any information coming from the United States or Canada, as well as New South Wales, in relation to spray trespass, which is an ongoing complaint from communities living in proximity to aerial spraying. Who is responsible? What position does your organisation take?

Mr KEENAN: Currently, the way we understand the regulation, the applicator is responsible. This is an area in which we have trouble defining. Currently we understand "drift " to mean any measurable amount across the fence. We would like to see it as being any amount over and above which environmental or economic damage is caused. To explain that further, for example, quite often we use products such as Bt, and the name is about that long, which is used in the waterways around Sydney for mosquito control. We use those products on the cotton, but we cannot have any trespass of that chemical, which is not causing

environmental or economic loss. Auckland city in New Zealand was sprayed with the chemical and no precautions were taken to move the people out. It has been used on the Gold Coast in waterways. We need to be able to use these tools which, even though they may be causing trespass, are causing no damage, and this would result in a lesser use of stronger chemicals on the environment.

The Hon. I. COHEN: I hear what you are saying, but perhaps we need to judge what the city councils do at another time. How often would that Bt be used on dry land cotton crop in a season?

Mr KEENAN: Probably twice.

The Hon. I. COHEN: Can you not see the validity of minimising trespass or keeping it in situ on the product it is aimed at, regardless of what method is used?

Mr KEENAN: Yes. We are contending with that. Our aim is to maintain all products on the property. So that we do not complete the job on the one day; we have to wait for wind changes. If an easterly wind is blowing, the western part of the farm may not get sprayed that day until there is a wind change.

The Hon. Dr B. P. V. PEZZUTTI: Shared responsibility is a vexed issue. The farmer contracts you to spray a particular paddock with a particular item, and you accept that contract. Why should the farmer pay any of the compensation should there be drift?

Mr KEENAN: As operators we get a lot of pressure from farmers to apply in conditions that we do not think are suitable.

The Hon. Dr B. P. V. PEZZUTTI: If you accept the contract to provide that spray on that paddock are you not accepting its conditions?

Mr KEENAN: That is right, but still they are getting pressure from the farmer to go outside that contract because he can stand back from it after the job is done and leave it with the operator to carry the responsibility.

Mr WEATHERSTONE: Perhaps if I could give another example: the legislation contains a requirement to get written permission from the occupier of a dwelling within 150 metres of an area to be sprayed. We have had incidents when farmers have said to the operators, "There is no-one in that house", or "No-one in that house will object", or, "I have written permission" and it has not been followed through and on at least two occasions that I know of the aircraft operator and pilot have been prosecuted for accepting misleading advice.

The Hon. Dr B. P. V. PEZZUTTI: Could this matter be dealt with by written contract between the operator and the farmer?

Mr WEATHERSTONE: We are working that way at the present time, yes. We would very much like to see a written contract as a regulatory requirement.

The Hon. Dr B. P. V. PEZZUTTI: But, surely, that written contract could not expect the farmer to take responsibility for drift?

Mr WEATHERSTONE: Not responsibility for drift, but I submit that they should take responsibility for information relating to adjoining crops and occupiers of dwelling on adjoining properties.

The Hon. J. R. JOHNSON: Do you ever run into a frustrated contract and its consequences: you may spray half the property and because of changed wind conditions you cannot do the other half and whatever is in that half comes back and infects the unsprayed half? Are you responsible to spray all of it again?

Mr KEENAN: No. We continually come up against that problem. We are not responsible for any lack of application due to environmental or other means, but that is a problem with reinfestation. We have buffer zones and that buffer zone may miss out on perhaps two applications in the course of that crop and suffer economic loss. But that is just a part of growing that crop in this day and age, so, yes, sometimes it is missed out, it does get reinfested and reinfests the crop that has been treated.

The Hon. J. R. JOHNSON: Do the spray croppers or spray applicators at Goondiwindi and Dalby do much work in New South Wales?

Mr KEENAN: Goondiwindi, yes, they are on the border. One of our companies is based in Goondiwindi, and 70 per cent of its work takes place in New South Wales. I know that operators in Dalby have other bases in New South Wales, but as to what extent they come from one to the other, I can only talk about our case and we are licensed in both States.

The Hon. J. R. JOHNSON: Do you run into difficulty with section 92 of the Constitution when a Queensland-based company does not land in New South Wales, gets its supplies from Queensland, comes over the border and goes back to Queensland?

Mr KEENAN: No, not as such as we know it. If they are working that close to the border they are generally aware of the legislation on both sides of the border.

Mr WEATHERSTONE: It is my understanding that if an aircraft operator actually applies product in New South Wales he has to be licensed in New South Wales, whether he is based in Queensland or not.

The Hon. J. R. JOHNSON: On page two of the document you submitted, on the third line in the centre of the first paragraph you say, "At present we are the only licensed and insured applicators of pesticides." Do you mean that you are the only licensed and insured applicators of pesticides in New South Wales?

Mr WEATHERSTONE: When I referred to that paragraph in my earlier comments I rephrased it to read, "farm chemicals" as I understand that industrial and household pest controllers are licensed.

The Hon. J. R. JOHNSON: How long have those policies been in place?

Mr WEATHERSTONE: Since 1987 in New South Wales.

The Hon. J. R. JOHNSON: Have there been many claims on those policies?

Mr WEATHERSTONE: Yes, although the details are not known to me. The insurance industry usually keeps details of insurance claims fairly confidential.

The Hon. J. R. JOHNSON: Do you have any idea of the magnitude?

Mr WEATHERSTONE: In terms of numbers of claims?

The Hon. J. R. JOHNSON: Yes.

Mr WEATHERSTONE: They could amount to at least five or six a year, I would say.

The Hon. J. R. JOHNSON: Are the majority of claims successful?

Mr WEATHERSTONE: It is my understanding that the insurance companies would normally pay a claim if they felt that it was legitimate, yes.

The Hon. J. R. JOHNSON: Have any of them gone to the courts for resolution?

Mr WEATHERSTONE: I understand so, yes.

The Hon. J. R. JOHNSON: Many?

Mr WEATHERSTONE: No. Just not on insurance. Probably 80 per cent of the chemical liability insurance, which is what it is called, is written by one company called the Australian Aviation Underwriting Pool.

The Hon. J. R. JOHNSON: In the second last line of that same paragraph you use the words "and a reseller/adviser recommends off-label use." Do you mean by that contrary to what is being advised?

Mr WEATHERSTONE: Yes. It is fair to say that the practice is becoming less and less as surveillance is stepped up. It was quite common in years gone by for resellers of chemicals to give off-label recommendations, but it is not so much the case now.

The Hon. J. R. JOHNSON: I presume that off-label use would be breaking the law, so how could a person be a successful litigant against an insurance company if you cannot break the law to benefit by the law? It would be an interesting court case to sit in on.

Mr WEATHERSTONE: Sure, yes.

The Hon. I. COHEN: In northern New South Wales there have been consistent complaints over a period of time with school buses, that at 8.00 a.m. there is no onshore breeze and that is the time to spray and buses are travelling on small country roads on their way to school being inundated with spray. How does your organisation deal with that?

Mr KEENAN: We know the area you are referring to. I do not know it personally as I have never been there, but we are quite disappointed that that is happening and it is still getting in the media. We thought that had been taken care of. But, like Peter said earlier, we have no teeth as an association to enforce or restrict that person's trading operation.

The Hon. I. COHEN: Do you take an interest in that particular issue?

Mr KEENAN: We talk to them.

The Hon. I. COHEN: Have you confronted the operator?

Mr KEENAN: Yes.

The Hon. I. COHEN: What has been the reaction?

Mr KEENAN: It is always a conflicting story, but I think there has been a breakdown in communication a bit. For example, we asked him to find out bus timetables and know the area and make a change to his operation. And also with the farmers, the operators he is working with, and share the responsibility of not requesting a spray at those times. This is part of the responsibility from the farmers. We need that shared responsibility to continue.

Mr WEATHERSTONE: That sort of publicity does not do us any good whatsoever.

The Hon. J. R. JOHNSON: How many members of your association are there, active and dormant? Is membership by licence of the Aerial Agricultural Association to not only the applicant but the contractor's employees?

Mr WEATHERSTONE: It is a trade association of operators of agricultural aircraft. We have a category for pilot membership but, strictly speaking, it is an employer organisation because we have some industrial responsibilities.

The Hon. J. R. JOHNSON: How many members?

Mr WEATHERSTONE: Just speaking of New South Wales, numerically the membership is in the order of 75 per cent to 80 per cent.

The Hon. J. R. JOHNSON: How many, not percentages?

Mr WEATHERSTONE: I am used to working in national figures.

CHAIR: Perhaps you could take that question on notice and send the details to the Committee.

Mr WEATHERSTONE: Sure. I will certainly supply you with that.

CHAIR: The Hon. I. Cohen mentioned a bus situation at Narromine just before Christmas in November or December when somebody spraying cotton accidentally sprayed a school bus. The Committee will get evidence about it later but it is my understanding that Narromine council has an agreement with local operators that they know bus timetables

and that normally there should not be a problem. In this particular case, even though the bus and the plane had two-way radios, I understand the pilot said the plane came three minutes early. Have you any comment on that particular situation in Narromine and also about buffer zones? You mentioned also that your association has not got teeth; what teeth do you want?

Mr KEENAN: I do not know how to answer what sort of teeth we want. I am not specifically aware of the incident at Narromine. The fact he turned up three minutes too early in my opinion is cutting it far too fine. A responsible operator should know. Where we can run into problems like that is if you have local operators working the area and other pilots are brought into the area to work the season and have not been fully briefed as to the environmental needs of the area. Whether that was the case with this incident, I am not sure, but we have standard operating procedures in place—and they should be in place—and it is laid down. Bus routes are all marked on a map, timetables are on a map and the responsibility is that the pilot can almost brief himself. He knows where he is going, he has to look at the farm on a map. He has to know the dangers associated with that, whether it be on a school bus route, waterway or whatever. I do not know why people would cut it so fine. That is just ludicrous.

CHAIR: There should be a bit of a buffer zone between the road and the field?

Mr KEENAN: Generally, and, with the wind, in a direction away from the school bus.

CHAIR: Do you not want to comment about the teeth the association needs?

Mr WEATHERSTONE: I could comment on that. After 10 years of having an accreditation program in place and finding that we can threaten to withdraw accreditation, all we can rely on at the present time is to encourage farmers to only use accredited operators. Like anybody else in the community, the farmer is often attracted by a little less in the cost of the operation. That has not been entirely successful, as far as we are concerned. We would like the ability to impose sanctions without fear of legal liability. This can be done probably in two ways. We really do not have anything we can withdraw from our members. We are not suppliers of chemicals or anything like that. So, we cannot say to them, "If you do not comply, we will chop off your supply of chemicals." Therefore, we can only think of the legislative route to follow.

CHAIR: You mentioned accreditation, and I presume you mean your accreditation?

Mr WEATHERSTONE: Yes.

CHAIR: Is there any other government regulation or licence they go through? Is it purely through accreditation so that, in other words, 20 per cent of operators may not have accreditation?

Mr WEATHERSTONE: Operators have to be licensed by the Civil Aviation Safety Authority to carry out flying activities. In New South Wales they have to be licensed by the Environment Protection Authority to carry out their spraying activities. Our accreditation program is separate and distinct from that and is aimed at improving the work the industry does.

CHAIR: Over and above the minimum standard the EPA requires?

Mr WEATHERSTONE: Like to not spray any school buses.

CHAIR: What about land-base sprays; they are not licensed?

Mr WEATHERSTONE: No. I would estimate that in this State 70 per cent to 75 per cent of all pesticides are applied by ground either by ground contractors or by individual farmers.

CHAIR: Again, I was not referring to the household.

Mr WEATHERSTONE: No, the broad acre contractors or individual farmers.

The Hon. J. R. JOHNSON: Would you be looking for the authority to police your own industry, to bring prosecutions against those that transgress, with an inspectorial staff and possibly to fund that with moiety from the courts?

Mr WEATHERSTONE: We would probably need flak jackets at the same time.

The Hon. J. R. JOHNSON: It is amazing what a piece of paper with a crown on top can do.

Mr WEATHERSTONE: That is right. That is probably going a little further than we envisaged because we feel that the responsibilities are such that the EPA, for example, does not have inspectorial staff on the ground to look at just what aircraft operators are doing. We feel that we know our own industry and the people in it better than anybody else. So, we are just looking for some little bit of extra assistance to enforce our accreditation program.

The Hon. J. R. JOHNSON: Some years ago, and I am not sure whether it applies today, both the Real Estate Employers Federation and the Real Estate Association had prosecution rights if they found that one of their members was transgressing. Indeed, it applied in the retail industry where, if the law was being transgressed, either the employer or employee associations could bring the prosecutions and they were remunerated by moiety from the courts, meaning that if the fine was \$1000, half of the moiety went to the prosecuting authorities, plus an agent's fee and court costs.

Mr WEATHERSTONE: But in the case of the real estate industry, I think it was doing its own licensing. What I referred to a minute ago is that our operators are licensed by the Civil Aviation Safety Authority and the EPA. We are accredited. We can withdraw accreditation, but that does not stop them from operating because they are licensed.

CHAIR: Has the association a view about the Civil Aviation Safety Authority [CASA] having to approve aircraft used for pesticide spraying?

Mr KEENAN: Only that it is a stringent inspection to get aircraft on type. If someone designs a new aircraft and somebody in Australia imports that aircraft from overseas,

it has to undergo a stringent set of guidelines to ensure its safe operation and suitability.

CHAIR: So, have you a problem with that?

Mr KEENAN: No.

CHAIR: Can you give any consideration to planning measures that could be introduced to alleviate conflict? You may be aware that Dubbo council's local environment plan [LEP] makes cotton farming a designated development that must go through a particular approval process?

Mr KEENAN: Our airstrip is based well out of town away from everywhere.

CHAIR: This is in Moree?

Mr KEENAN: That is right. Our council agreed with piggery operators that if they closed their piggeries they would subdivide the piggery into 80 dwellings, an area for 80 one-acre dwellings, basically to create a new village. This is without any consideration for farming operations in the area. At the moment the council has rescinded its approval and I think it will end up in the Land and Environment Court. However, this is a situation where there was no consultation. The only consultation with interested parties in the area was on the understanding that they were going to be 10-acre blocks, which would have meant eight blocks. We could have lived with that, but in the meantime they never went back for consultation or the fact that now there is going to be 80 blocks of one acre each. This sort of consultation does not seem to be happening. Are we just going to march on in and cause a major conflict? It was going to be a headache for all. They saw the short-term method of getting rid of the odour from the piggeries and then a huge impact on the farming operation.

CHAIR: Is that about 20 kilometres out of town?

Mr KEENAN: Yes.

CHAIR: What is the basis for your view expressed in the submission that restrictive legislation will lead to responsible pilots exiting the industry?

Mr WEATHERSTONE: It is the enormity of the penalties that are published.

The Hon. J. R. JOHNSON: That are published or in force?

Mr WEATHERSTONE: I am sorry, in force. The pilot reads that he is up for a \$30,000 or \$40,000 fine if he does the wrong thing. So, at the present more than a few of them, I think, are considering is it worth it.

CHAIR: What is your suggestion? If there were not more strict regulations, what is the other way of getting round it to stop the few?

Mr WEATHERSTONE: What I was saying is that the penalties at the present time are high enough without having to take them any higher. I believe that the deterrent exists in the size of the penalties at the present time. As an industry, we are very conscious of the fact that it is hard to get pilots. Not many people come into the industry each

year. If we start losing them, it will not only make life tough for the industry itself or for employers in the industry but also, as I mentioned in the submission somewhere, I think, it tends to leave only the risk-takers.

CHAIR: Thank you very much for your time. We do not necessarily propose to travel to Moree in this round of discussions on pesticides but we will be going there for some agricultural hearings in Gunnedah later in the year. I would be interested to see what has happened and what has changed particularly because people write to me about that situation.

Mr KEENAN: It is a major issue there.

CHAIR: Yes.

(The witnesses withdrew)

NEIL CRAIG SHEPHERD, Director-General, Environment Protection Authority, 48 Richmond Avenue, St Ives, and

MARK RUSSELL GORTA, Manager—Chemicals Policy, Environment Protection Authority, 298 Glebe Point Road, Glebe, and

SUSAN ELIZABETH DAWSON, Acting Assistant Director-General, Environment Protection Authority, 19 Gartfern Avenue, Five Dock, affirmed and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Dr SHEPHERD: Yes.

Mr GORTA: Yes.

Ms DAWSON: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Dr SHEPHERD: Yes.

Mr GORTA: Yes.

Ms DAWSON: Yes.

CHAIR: If any of you consider at any stage during your evidence that in the public interest certain evidence or documents that you may wish to present to the Committee should be heard or seen only by members of the Committee, the Committee will be willing to accede to your request and resolve into confidential session. The problem, however, would be that the Parliament has the authority to override our decision. I invite comments to start with, and then we will embark on a process of asking questions.

Dr SHEPHERD: I will make some general comments and then we will be happy to take questions either now—if they can be answered now—or on notice, if we cannot answer them immediately.

CHAIR: If we run out of time, we might put some questions on notice as well. It is up to you how you answer them.

Dr SHEPHERD: By way of introduction, I will look at the issues of availability of pesticides and then briefly at the perhaps contentious issues surrounding pesticides. Then I will look at what we might need to do to limit the adverse impact of pesticides. If we look at availability, there are some 3,800 pesticides currently available in New South Wales. They have very different toxicities and very different modes of action. Essentially, they are all toxic chemicals.

The Hon. Dr B. P. V. PEZZUTTI: These are the ones that are regulated and

approved for use in New South Wales.

Dr SHEPHERD: These are registered.

The Hon. Dr B. P. V. PEZZUTTI: There are many other poisons available in New South Wales which are not regulated.

Dr SHEPHERD: These are the registered pesticides. Obviously, there is a wide variety of uses for these things, a wide variety of users for them, and a wide variety of application methods extending from on-ground baiting to aerial application of the pesticides. The National Registration Authority is responsible for the assessment of the chemicals that are to be registered as pesticides. It actually registers the pesticides. The States have some input into that process but it is the National Registration Authority that registers the pesticides and determines the conditions of use. Those conditions of use are prescribed on the label or in some other document that is attached to the container in which the pesticide comes.

The potential for harm arising out of that availability comes where the label directions are not followed, or where the label directions are followed but some other circumstances intervene which were problematic for the use of that pesticide under those particular conditions. The contentious nature of pesticides appears to arise out of a number of things. The first is land use conflicts. What we are seeing is a substantial change in the proximity of some kinds of activities to others, and substantial changes in the nature or use of chemicals in some of those changed activities. In New South Wales, that has led to a boil-over on pesticides issues in a number of areas, particularly in the cotton-growing areas in the north west but also on the North Coast. More recently, the issues extended south with the gradual extension of cotton into the south.

The second thing that is causing significant contention is the increase in knowledge of pesticides and the impact of pesticides. We know a lot more about their impact on health, both the acute and chronic impacts, and we know a lot more about their effects on the environment than we knew a few years ago. Two decades ago we knew that DDT was highly toxic to many species of birds and some other forms of life. Now we know a lot more about the more subtle effects of substances such as endosulfan and their impact on aquatic ecosystems and so forth.

The third thing that creates contention in the use of pesticides is a direct effect on the amenity of people. That arises particularly in relation to odour. Some pesticides have very strong odours, and the use of those pesticides will cause amenity impacts on neighbouring properties if wind directions and so on are not right. The final matter is chemicals or pesticides affecting trade, particularly through the impact of chemical residues in livestock but also in other forms of produce such as vegetables. That is not a new issue. It has been highlighted recently, but it has been an issue since the mid-1980s—even before when we had the first of the beef residue scares associated with organochlorines, subsequently with organophosphates and more recently with things such as endosulfan.

If you want to look in a broad sense at limiting the adverse impacts of pesticides, a number of things need to be done. I will leave aside the issue of land use conflicts and focus pretty much on the pesticides themselves. Obviously, if you want to talk about land use conflicts and what might be done, we might come back to that later on.

The first thing that we need to do is to better educate people about the use of pesticides and about the nature of pesticides. That can be done in two ways. One is through general education, and the other is through much better attention to detail on labels and focusing much more on the National Registration Authority process to make sure that the label directions are clear and that they provide as much guidance as possible.

The second thing we need to do is to make sure that those people who are applying pesticides in a commercial sense are well trained so that they know the circumstances under which the pesticide ought to be used and ought not to be used from a label point of view, but also the sorts of things that might turn even a correct use of a pesticide, in terms of the labelling, into a disaster because of the impacts that might occur off farm, or because of changes in wind direction or whatever. We need to look at three groups of people: the aerial applicators, who receive training and are controlled to some extent; the domestic pest controllers, who are also controlled to a reasonable extent; and the biggest users of pesticides in New South Wales, the ground applicators. That group are not under any form of compulsory training or training assistance. The final thing that we need is a strong regulatory framework which ensures that label directions are followed and which discourages the causing of harm or the posing of real risk of harm to neighbours and their property or to neighbouring environments.

Just going back over those briefly, the first one was education. Work is going on with labels and labelling requirements. The National Registration Authority is taking a serious view of label requirements. There are some recent efforts in relation to endosulfan to try to improve the labelling or the label restrictions. We certainly need to move from where we are with training to get some structured training of commercial ground applicators of pesticides in order to cover the major area of pesticide application.

It is the EPA's view that we need a much stronger regulatory framework. The present structure does make it very difficult to bring actions in cases where there has been misuse of pesticide, unless some other statutory prohibition has fortuitously been transgressed—something such as the Clean Waters Act. If there is a breach of the Clean Waters Act arising from the use of a pesticide, then it is relatively easy to deal with that misuse. If it is just contamination of land or contamination of a neighbour's stock, then it is almost impossible to bring an action under the Pesticides Act.

In our view, the minimum requirements—I emphasise the words "minimum requirements"—are, firstly, strong powers to enforce label directions and to make sure that people use pesticides in accordance with the labels. Second is the ability to prevent the use of a pesticide where it will cause harm or a real risk of harm to persons or property. You need defences to that sort of a provision which would allow for honest and reasonable mistake, and also situations where the person causing the harm or real risk of harm had no control over some of the factors involved and had exercised due diligence in utilising the pesticide.

Then a more serious offence is needed when the pesticide is misused in a way that wilfully or negligently causes harm or real risk of harm to persons or property. That is analogous to the distinction in both the environment protection and the occupational health and safety legislation between the two classes of offences. Finally, we need to make it an offence to cause harm or real risk of harm to flora and fauna outside the boundary of the farm to which the pesticide is being applied. That is simply analogous to the property offence. It is exactly the same in concept as the one preventing harm or real risk of harm to persons or property.

We believe that all persons involved in the decision to use the pesticide need to be potentially liable for the consequences of its use. If only the applicator is potentially liable then pressure can be applied inappropriately to the applicator because the other people who are involved in the decision to use the pesticide know that they are not likely to be implicated or caught up in the process. They can put considerable commercial pressure on to the applicator to use the pesticide in inappropriate circumstances or they might withhold information from the person who is to apply the pesticide. It quite crucial that all people involved in the decision to use the pesticide are potentially liable for the misuse of that particular pesticide.

They are the general comments that we wanted to make and we are happy to answer any questions.

CHAIR: By spreading the responsibility is there potential for the applicator to have some reduced responsibility? Could an instance occur of applicator saying that he was not fully informed and a farmer saying that he did not really know about it and the instance falls through the cracks and no-one gets pinned? Should the primary responsibility be that of the applicator?

Dr SHEPHERD: Not necessarily, the primary responsibility should lie with whoever was most involved in making the decision to apply the pesticide in the circumstances that caused the problem. That is very similar to the way that we currently deal with offences under the environment protection legislation. My recollection is that it is also similar to the way the occupational health and safety legislation operates.

The Hon. Dr B. P. V. PEZZUTTI: The Department of Agriculture might well advise on the use of a pesticide in certain circumstances.

Dr SHEPHERD: If it advises as a consultant specifically in the use of the pesticide in a particular way that caused harm or real risk of harm then, as a matter of principle, it ought not be any less liable than the person who actually applied the pesticide.

The Hon. Dr B. P. V. PEZZUTTI: If the Department of Agriculture produced an Agfacts document that says to do something one month would it be liable if it was wrong?

Dr SHEPHERD: That would normally be dealt with as a civil law offence, not under pesticide legislation, for provision of negligent advice. In Pesticide Act offences, which are criminal offences, a general advice of that kind would not be immediately associated with the decision to apply the pesticide in the particular circumstance. The two things are reasonably separate. The farmer may decide to sue the Department of Agriculture, as happened in South Australia years ago—not with pesticides but with subclover cases and so on—or the farmer might decide to sue the department for the negligent advice, but it would be severed from the criminal prosecution.

If a Department of Agriculture officer were involved in decision making around the table with the property owner and the aerial applicator and clearly the decision of the pesticide applicator was fundamentally wrong then there is no logical reason why that

person should be differentiated from the applicator.

The Hon. I. M. MACDONALD: Should we train applicators to the highest degree possible?

Dr SHEPHERD: Yes.

The Hon. I. M. MACDONALD: They should have training and meet professional standards in all parts of the operation of applying various sprays to properties. There should be high standards and training for people who operate these spraying companies, particularly aerial spraying?

Dr SHEPHERD: Yes, and also on ground. I do not disagree with you.

The Hon. I. M. MACDONALD: At this point I am talking about aerial spraying primarily because there are other factors relevant to ground spraying. Do you license the operators?

Dr SHEPHERD: The aerial operators we do, yes.

The Hon. I. M. MACDONALD: People cannot come into the industry and spray aerially without a licence?

Dr SHEPHERD: Theoretically, no.

The Hon. I. M. MACDONALD: Are there conditions on their licence stating the sorts of standards they should apply in their spraying operations?

Mr GORTA: The licensing is more about meeting the requirements in order to get a licence. They must have undertaken training and must have the civil aviation authority licence and insurance. It is more of a qualification than a condition. The conditions are applied through label directions and through the other requirements of the Act about what they can and cannot do in a general sense.

The Hon. I. M. MACDONALD: Are you suggesting that their ability to fly the plane safely is checked but there is no training imposed on them to spray?

Mr GORTA: Yes, they have passed examinations in relation to the application of pesticides.

CHAIR: Before they are given a licence?

Mr GORTA: Yes.

The Hon. I. M. MACDONALD: If they have such a licence surely with their training they should know when and when not to spray, given that I would have thought that in that body of training would be some ground rules as to when, how and what to spray?

Mr GORTA: Yes, but there may be circumstances in which the farmer engaging them, or his consultant, gives them information about the circumstances of that application. He may tell them that there is a residence downwind which is not owned by the farmer which he needs to make sure he does not spray if the wind is blowing in that direction, or there is a susceptible neighbour's grazing property. The aerial applicator has to get that information from the farmer in order to have the complete picture. If the farmer or his consultant do not give that complete picture, or withhold information then Dr Shepherd is suggesting that they should also be liable.

The Hon. J. R. JOHNSON: Along with the person who was the applicator who knew nothing about it. Surely he would take the Nuremberg defence?

Dr SHEPHERD: That is an issue of fact within the court. Investigations under the environment protection legislation are conducted and at the end of the investigation with all the evidence a decision is made as to who are the most likely defendants from the brief of evidence. Then the court determines their level of involvement as a matter of fact in the court case. Originally I suggested that all the people involved in the decision being potentially liable merely gives access to the full normal spectrum of potential defendants for the particular action. It is a matter of fact as to which ones are most involved.

The Hon. J. R. JOHNSON: That would be terribly bad to apply in every situation of employment. Would the 16-year-old shop assistant involved in the Garibaldi case in South Australia also become liable?

Dr SHEPHERD: In these situations under the environmental legislation the prosecutor has a strict set of prosecution guidelines put in place by the board of the Environment Protection Authority (because the board is the prosecuting authority, not the Minister). Those prosecution guidelines set out very clearly who should be looked at first, second, third and so on. As a matter of practice if a corporation is involved we will deal with the corporation, and not with the individual employees unless the individual employees were off on a frolic of their own.

The Hon. Dr B. P. V. PEZZUTTI: They are then covered by the Employees Protection Act anyway?

Dr SHEPHERD: No, they are still liable technically.

The Hon. I. M. MACDONALD: If someone is contractually employed to do a job, and are told what the employer wants done, surely the person contracted should have sufficient training and understanding of what they are doing to be able to make the decision about whether they fly at a certain point, at what height, in what winds and what have you, competently and professionally. That would thereby overrule any little instructions that may have been given by the person who wants the job done. In other words, professionalism should override the decision of an individual person who wants the job done?

Dr SHEPHERD: If all professions worked in exactly that way then there would be no need to have recourse to other parties in the decision-making process but, in fact, they do not. We see enough problems with legal and medical professions and quite a few others of them being susceptible to pressures from third parties, if you like, the person issuing

the contract to a withholding of complete information. It is important to be able to look behind the person who actually applied the pesticide to see who else was involved in the making of the decision and their degree of culpability in the commission of the particular offence.

No-one from the Environment Protection Authority's point of view is suggesting that we should absolve the applicator of the pesticide from responsibility. Quite clearly, the applicator of the pesticide will be the primary person to look at but if they were influenced, pressured or were not given sufficient information, in other words, information being withheld—

The Hon. I. M. MACDONALD: Then they move on and deal with someone else.

Dr SHEPHERD: But they do not.

The Hon. Dr B. P. V. PEZZUTTI: Doctors or lawyers cannot hide behind that excuse.

CHAIR: A large cotton farmer may well know all the regulations, and a pilot should know about spraying something. Presumably any pesticide legislation would cover all farmers. There are a lot of little farmers, say, on 600 acres who know nothing about pesticide legislation but just ring up the local contractor to come and spray their weed at a certain time when convenient, and that is the end of the contract. It really should primarily be the concern of the applicator.

Dr SHEPHERD: Yes, and I am not saying anything that is different from that.

The Hon. Dr B. P. V. PEZZUTTI: No, you are saying the same thing.

CHAIR: It should be solely the responsibility—

Dr SHEPHERD: I am saying that you cannot make them solely responsible because there may be factual circumstances that they did not have sufficient information—that the person who is making the contract knowingly misled or whatever. By going down a path of preventing access to people behind the applicator you are setting up a situation where those people could be encouraged to do the wrong thing in order to achieve their own objectives and they would be shielded from any sort of investigation or prosecution.

The Hon. Dr B. P. V. PEZZUTTI: A farmer decides to use poison X—let us call them all poisons; it is easier—on, say, 40 acres on this day. That is a decision that the farmer makes with or without advice. Under the regulations he is responsible for working out the application rate and the proper method of applying it—in water, in water mixed with oil or some darned thing—at a certain rate per acre. Acting in good faith he instructs the pilot, "I want you to apply this at this rate to that farm and these acres. Here is your contract." It is so many dollars. The pilot's only responsibility then is to check that he has the right poison, that he twiddles and sets his dials to do it at the right rate, and to apply it at the right speed where he is asked to apply it, and nothing more. If the pilot knocks off one of those three bits—the poison, the rate or the location—surely he alone is responsible for that.

Dr SHEPHERD: Under those factual circumstances, yes.

The Hon. Dr B. P. V. PEZZUTTI: So having got the contract right, which is what Ian is talking about, then the pilot is responsible for doing precisely what he is asked to do. You cannot expect the pilot to know what rate he is meant to apply the stuff, what sort of poison he is using or whatever. They are a decision by the farmer or the farmer's consultant. But where he applies it and the rate at which he applies it are entirely the responsibility of the pilot because nobody else can do it.

The Hon. I. M. MACDONALD: No, that is not quite right.

The Hon. Dr B. P. V. PEZZUTTI: Only the pilot can work out how much he is going to apply per acre, by fiddling with his dials and going at a certain speed in certain wind conditions. So if he applies twice the rate to that farm that he has been asked to apply the pilot is responsible for that.

CHAIR: Solely.

The Hon. Dr B. P. V. PEZZUTTI: In other words, if he overdoses something when he is asked to dose it at a certain rate the pilot has to be responsible for that.

CHAIR: Do you agree with that?

Dr SHEPHERD: In that factual circumstance that you are describing you are quite right but if the circumstances were a little different—

The Hon. Dr B. P. V. PEZZUTTI: Like?

Dr SHEPHERD: For example, where the farmer was aware of a particular set of circumstances that should have made the aerial applicator leave a wider buffer or do whatever—we are talking hypothetically at the moment—and the aerial applicator was not aware of those circumstances but they were within the knowledge of the farmer then I think it is much harder to sheet the whole of the responsibility home to the aerial applicator and you should be looking elsewhere.

The Hon. Dr B. P. V. PEZZUTTI: The farmer could say, "This particular spray you must not under any circumstances allow to drift on to that property."

The Hon. I. M. MACDONALD: That is the case with every one.

CHAIR: The aerial applicator should know that, though.

The Hon. Dr B. P. V. PEZZUTTI: No, some drifts are less important than other drifts. It depends on what the farmer next door has got growing.

The Hon. I. M. MACDONALD: But you try to avoid drift.

The Hon. Dr B. P. V. PEZZUTTI: Sometimes it is more important than at other times.

CHAIR: Have you encountered any resistance to that shared responsibility

projected change in relation to discussions for liability of acts of employees or contractors? What effect do you think that will have on agricultural producers?

Dr SHEPHERD: It should not have any effect on any agricultural producers as a class for the simple reason that we are dealing only with the bad end of this process, where people have actually caused harm or real risk of harm. That will be a very minor group of cases and all we are suggesting here—

CHAIR: The whole reason behind a lot of our questioning is that we do not want to see the responsibilities watered down in any way. We do not want to see anybody falling through the cracks because the thing has not worked in the way it was planned.

Dr SHEPHERD: What I am concerned about is that if you go down the path that perhaps has been suggested you will leave significant gaps where the responsibility cannot be properly apportioned on the factual circumstances that exist in each case. If you leave a gap where the consultant and the landowner are still not potentially liable within the spectrum then you create the climate in which they can put pressure on the applicator—because they transfer all their responsibilities onto the applicator in effect—and withhold information. They cannot be approached under the legislation; only the applicator can.

The Hon. Dr B. P. V. PEZZUTTI: I am sorry, I do not understand that. How can they possibly transfer all the responsibility to the applicator if they have made the decision what chemical to use and what dose they want used? The applicator then has to comply with those two requirements.

The Hon. I. M. MACDONALD: I do not agree with that.

The Hon. Dr B. P. V. PEZZUTTI: Why?

The Hon. I. M. MACDONALD: Because on the chemical drums there might be specific guidelines as to what to do and how to do it, including rates and the conditions in which it is to be done, et cetera.

The Hon. Dr B. P. V. PEZZUTTI: But they are not the responsibility of the pilot.

CHAIR: They should be.

The Hon. Dr B. P. V. PEZZUTTI: I do not think that the pilot could possibly understand the pesticide legislation about the type of chemical used and the rate of application. You would not hold a pilot to that, would you?

The Hon. I. M. MACDONALD: The training should include that, should it not?

The Hon. Dr B. P. V. PEZZUTTI: Would you apply to the pilot the need to know whether he should be spraying this chemical in this month or this chemical at this rate?

The Hon. I. M. MACDONALD: How extensive is your training?

Dr SHEPHERD: I want to take that question on notice and come back with details. The only reason is that I think that with some pesticides that would be more important than with others, because of the toxicity and the potential downstream effects of those things. I want to go back and check what is actually incorporated in the training program in relation to that. So I will need to come back to you on that. Sue has drawn my attention to the fact that the same sorts of provisions that I was talking about in relation to broadening the liability net have just been brought into the Tasmanian legislation. We did not get much opposition to that concept as a result of the discussion paper.

CHAIR: What opposition did you get to that? That was the first part of the question.

Dr SHEPHERD: The only thing we did pick up was that the New South Wales Farmers' Association had one expressed concern and that was that there ought to be a statutory defence available for the property owner and the consultant: that they could not be liable if they had no control over the circumstances that caused the problem, and that they had exercised an appropriate level of due diligence. They are exactly the same defences as we are proposing for the offences in relation to people, property and the environment because we think that gives the appropriate balance between the need to use pesticides and the need to use them responsibly.

CHAIR: So basically the only objection you had in your process of asking for submissions was that one, and you are addressing it anyway?

Dr SHEPHERD: Yes, and we are addressing it in all the offence provisions because we think that it makes sense to have that defence available.

The Hon. J. R. JOHNSON: Has the pilots union been consulted?

Dr SHEPHERD: The aerial applicators were certainly consulted.

The Hon. J. R. JOHNSON: The aerial applicators—I said the pilots union.

Dr SHEPHERD: I cannot answer that. I can find out.

The Hon. J. R. JOHNSON: Were they served with the documents or were the documents made available to them?

Mr GORTA: We advertised the discussion paper in the press. I do not think we deliberately solicited a response from the pilots' union.

The Hon. J. R. JOHNSON: I think that once they find out that it could all devolve on the pilot, who is an employee in lots of cases, they will certainly have something to say.

The Hon. Dr B. P. V. PEZZUTTI: The employees protection Act would cover them.

Mr GORTA: Currently the applicator is solely responsible. In the case of aerial application that is the pilot. There is the other thing that Neil was talking about earlier:

The corporation that employs him could also be responsible. But the primary responsibility lies with the person who carries out the job. What we are talking about is broadening the responsibility to others who are involved in the decision making.

The Hon. I. M. MACDONALD: Dr Shepherd, when you answer this question in due course could you give us further detail on what is involved in your training programs and to what level you take them? In other words, do pilots have the ability to make the appropriate decision about when to fly, whether it is feasible to go up on certain days, whether the rate that has been asked for is the appropriate one; and what rights do they have not to spray at a certain level beyond what is on the label of the product and so on and so forth?

CHAIR: You will be given a copy of *Hansard* so that those questions can be taken on notice.

The Hon. J. R. JOHNSON: This morning the Department of Agriculture indicated that in 1996 it was ready to go with legislation on pesticides and then the responsibility of pesticides was transferred to you and the legislation is still laying dormant. Are there reasons why the legislation prepared by the Department of Agriculture and then passed over to your department has not been acted upon?

Dr SHEPHERD: There are probably a number of reasons. The Government decided to put out a discussion paper on pesticides. The discussion paper drew a polarised response, for want of a better expression. The Government then decided to refer the matter to this standing committee so that it could provide advice as to the sort of framework that might be required to manage pesticides in the longer term. As you correctly pointed out, draft legislation has been available since 1996. A redraft has been available for some time as well. But until we resolve the strong community issues associated with the use of pesticides there is not much point in bringing forward a one-sided piece of legislation, if you like.

The Hon. J. R. JOHNSON: What are the major areas of concern to the department in relation to pesticides and where is the best model throughout the world?

Dr SHEPHERD: There are a number of issues associated with the use of pesticides in New South Wales that are of very high significance. As I mentioned originally, in the last decade over a fairly wide area of New South Wales land use conflicts and the changed use of pesticides and the changed use of land have put communities that are pesticide users in direct conflict with people who would prefer not to be exposed to pesticides. That is increasing rather than decreasing as the pressures of urbanisation and the alienation of prime agricultural land continue to occur. That is clearly a major issue.

The Hon. J. R. JOHNSON: Prime agricultural land?

Dr SHEPHERD: Basically prime agricultural land. If you look at the two areas we spoke about before, Gunnedah and the north-west, and the North Coast which in its time has been prime agricultural land, there are certainly agricultural uses of land. The same problems occur along the coast regarding vegetable growth. That prime agricultural land has been alienated. The second issue from our point of view is that the regulatory framework is weak and needs to be strengthened considerably. That will have substantial benefits for the rural community as well as the urban community. It has substantial benefits for the rural community in improving protection of trade, dealing with residue issues and so on. It will also

mean that pesticides we use currently are likely to be available for much longer periods than they would be if their use is continually controversial. A good example of that is endosulfan, which is becoming an extremely restricted substance.

In my discussions with Dr John Keniry, the Chairman of the National Registration Authority, it became clear that that authority is seriously considering the banning of endosulfan not too far down the track if its pattern of use does not improve. At the moment the system under which we regulate its use is inherently weak, if it were stronger we would not necessarily get into the position where the continued use of pesticides is threatened.

The Hon. J. R. JOHNSON: Endosulfan is used mainly in which industry?

Dr SHEPHERD: The control of a pest in cotton.

Mr GORTA: It has broader uses, but its main use is in cotton.

The Hon. J. R. JOHNSON: Would it be paramount to the cotton industry?

Dr SHEPHERD: As I understand it, its continued use is exceedingly important to the cotton industry. Certainly there are alternatives which are environmentally less desirable than endosulfan. We could be in an even worse situation if the use of pesticides associated with cotton are not regulated effectively. That does not mean we should stop its use, but we should regulate them effectively. At the moment it is the extremes rather than the legitimate uses of the pesticides that is the problem. Most of our discussion is about dealing with the extremes, the regulatory framework is there to deal with the people who do not use them in the appropriate way.

The Hon. I. COHEN: Gary Punch, representing the cotton growers industry, said that cotton growers were getting a bad reputation, undeserved according to him. He said unregulated users were at fault and that some 70 per cent of endosulfan used in Australia is used in the cotton industry. Would you agree?

Dr SHEPHERD: It is a high proportion of use; I can check the figures. I will take that question on notice.

The Hon. I. COHEN: I am interested to know what percentage is used in other industries. When talking about research and development to reduce pesticide use, have you heard of Envirofeast as a concept? Why is that program not being rigorously pursued?

Mr GORTA: It is used to encourage beneficials, those insects that eat pests and otherwise help reduce the need for pesticide application. I understand it is used in the cotton industry and other industries.

The Hon. I. COHEN: Do you know if it is being pursued as rigorously as the genetic engineering option?

Mr GORTA: I cannot say about the extent to which the industry is using it.

The Hon. I. COHEN: Dr Shepherd, you mentioned the power that the EPA has to operate under the Clean Waters Act as the most effective means of dealing with most

pesticide issues. I wonder why you have not had a field day with it. The Total Environment Centre stated in its paper that while pesticide problems are high on the agenda of concerns from Gunnedah residents, tensions over ground water supplies, die-back in trees, degraded rivers and flood plain manipulation are other problem areas. Do you have a comment?

Dr SHEPHERD: It is much easier to deal with a pesticide matter if it happens fortuitously to infringe the Clean Waters Act than to deal with it under the Pesticides Act. I would not waste my time trying to deal with that under the Pesticides Act if I could deal with it under any other legislation because the chances of dealing with it effectively are much greater, fortunately. Most issues do not involve the Clean Waters Act; from an environmental point of view that is fortunate, but it is unfortunate from an enforcement point of view. Apart from some degradation of the river ecology as a result of endosulfan and some other pesticides, most of the other issues you mentioned are land-use issues and not necessarily related to the use of pesticides. Die-back in trees is not necessarily related to the use of pesticides. Decreasing ground water supplies are not related to the use of pesticides. A lot of degradation of rivers is not associated with the use of pesticides. They are all land-use decision problems associated with the use of intensively grown crops and irrigation.

The Hon. I. COHEN: Perhaps I misquoted the document. All chemical audits conducted in Australia to date have identified that there is lack of accessible data on usage of Agvet chemicals. All have had to rely on estimates, inconsistent records and sometimes outdated aerial photographs or satellite images to determine land use. Do you have a comment?

Dr SHEPHERD: As far as I know there is a standing committee on environment protection and a standing committee on agricultural resource management; there is a task force looking into data on the use of Agvet chemicals. That is occurring at the moment at the national level.

The Hon. I. COHEN: Do you have any information on the current status of aerial spraying in Great Britain? I understand there is a significant cutting down, or even banning, of that process. How would your department view a ban on aerial spraying in New South Wales?

Dr SHEPHERD: To answer your second question first, aerial application of pesticides properly carried out is sometimes a more efficient and effective method of applying pesticides than ground application. Given the very different nature of the agricultural enterprises in the two countries I think that transferring a projected ban, if there is one, from the United Kingdom to Australia would be a mistake. The issues with aerial application in New South Wales are much more associated with the best practice and quality of that use of aerial spraying than with a decision to either allow it or not allow it. I can check on the United Kingdom issue and I take that on notice.

Mr GORTA: I understand that in Great Britain there is not a ban, but it is restricted. The restrictions plus the circumstances of British agriculture are such that there is virtually no aerial application.

The Hon. I. COHEN: Is it possible that circumstances developing in New South Wales may be similar, given the rural residential developments that are occurring and the changing face of agriculture in terms of interaction with land use and people living in the area?

Dr SHEPHERD: It may get to that point if the application of pesticides is not effectively regulated, either by air or ground. That is one reason we argue for a properly structured regulatory framework to deal with these things. That does not preclude the various associations, be they aerial applicators or other commercial applicators, or the agricultural associations such as Cotton Australia, from putting their best practice, self-regulatory systems in place. In order to improve the quality of the application of pesticides and pesticide use we suggest that you need an overarching, strong, regulatory framework within which those things can operate.

The Hon. Dr B. P. V. PEZZUTTI: How many inspectors do you have in New South Wales?

Dr SHEPHERD: Eleven. We inherited less than that and the EPA has added some resources to the pesticides function since that function was taken over. The funds for that have come from the general environment protection budget.

The Hon. Dr B. P. V. PEZZUTTI: Do you have enough inspectors if you rejig the Act to reasonably respond to community concerns, or if third parties appeal to you, or if farmers want information?

Dr SHEPHERD: If a new Act were brought in that encompassed the things we have talked about for an effective regulatory framework, that number of inspectors should enable us to do an effective job of policing and make sure that the frameworks are in place.

The Hon. Dr B. P. V. PEZZUTTI: Have you done a cost assessment of the new regulations in terms of regulatory requirements?

Dr SHEPHERD: We would have looked at the costs and benefits at the time we put out the discussion paper.

The Hon. Dr B. P. V. PEZZUTTI: I do not mean overall costs and benefits; I mean the costs to you for its implementation?

Dr SHEPHERD: Yes, we will do that at the time that we take a final proposal to government for changes to the legislation. We cannot work out exactly what we need until we know what we need them for. At this stage we think that within the framework we have talked about, the existing pesticides resources should be able to cope with the issues. Bear in mind that the pesticide inspectors are not on their own, they are backed up by the EPA legal department, the chemicals policy people, and by a whole raft of operations staff.

The Hon. Dr B. P. V. PEZZUTTI: Yes, but the person on the ground who handles a call from Gunnedah when someone has sprayed a proof at the same time that someone from Newcastle has a problem, do you have enough people to cover the time needed to get the information needed for a prosecution?

Dr SHEPHERD: We will never have enough people to deal with every single issue.

The Hon. Dr B. P. V. PEZZUTTI: I am aware of that. If this change in regulation comes about, and it is easy for you to prosecute under the Pesticides Act because of the changes in the way that people deliberately or fraudulently act, will you have enough people on the ground to respond to those problems?

Dr SHEPHERD: Within the context that we have talked about, my view is that we would have enough people to do the work. However, that does not mean that every single incident can be dealt with effectively, because things often occur in a batch. It would not matter if we had 100 people, there will be some days and some locations that I cannot service within three or four hours.

The Hon. Dr B. P. V. PEZZUTTI: One of the problems I have identified from the hearings today is that cotton is a point source of pollution and is relatively confined within a number of areas within New South Wales. The biggest problem I have is the cumulative impact of a lot of little problems. How does the EPA attack that cumulative impact as opposed to the single-point polluter?

Dr SHEPHERD: You mean the cumulative impact from what?

The Hon. Dr B. P. V. PEZZUTTI: People like me who spray their dahlias and it goes into the stream or a market gardener who might have an acre or someone who has broadacreage.

Dr SHEPHERD: With the cumulative impact, the first thing is to identify that you have problems. So, that requires you from time to time doing surveys of market produce or of rivers or of rainwater tanks to determine whether or not you have a problem. Once you know you have a problem, you need to work out what is the primary source. If it is a large number of small operators, education, with limited regulatory enforcement against a few really bad eggs in that process, is probably the appropriate way to deal with it and, possibly, some additional restrictions on the substances if they are significant, even down to banning, which occurred with some of the termiticides.

The Hon. Dr B. P. V. PEZZUTTI: You can advise, say, New South Wales Agriculture, to de-list certain products for certain uses?

Dr SHEPHERD: We would advise the National Registration Authority [NRA] or even recommend banning, which happened with some of the organochlorines, for example. If, on the other hand, you found it was a few reasonably significant operators, you would use a different set of tools to get at them.

The Hon. Dr B. P. V. PEZZUTTI: That is really the basis of the new Pesticides Act, the point-source polluter?

Dr SHEPHERD: The objective of the new Pesticides Act is to deal with the whole raft of those things, in fact, but remember we have already dealt with some of them because we already have a registration process in place and we have our input to the National Registration Authority processes, to the assessment of chemicals and to the conditions that need to be put on labels. We also combine with New South Wales Health or whoever else needs to be involved—New South Wales Agriculture in the case of market surveys—to do the survey work. So, we are already doing a fair bit of that. The powers we are talking about today

for the proposed Pesticides Act would be to clean up that other part of the system, primarily aimed at point sources, but it would also pick up the worst examples of use by the smaller users as well as, say, pest control operators.

The Hon. Dr B. P. V. PEZZUTTI: In your submission you say that New South Wales Health has the capability of detecting pesticides in water samples and that the Department of Water and Land Conservation has the monitoring of ground and surface water, and you do that too. Why on earth can we not have one person who tests water samples and who is responsible for surveying? Why do we have three in the same paragraph? On page 9 of your submission you identify two organisations responsible for doing the same thing and you do it as well, which is three people.

Dr SHEPHERD: They are not actually doing the same thing nor are they doing it for the same reasons.

The Hon. Dr B. P. V. PEZZUTTI: It does not matter if they are doing it for different reasons, but they are doing it. Three laboratories are testing water for pesticides.

CHAIR: We will have to move to a situation of asking questions on notice. I think that would be a good one to start with.

The Hon. Dr B. P. V. PEZZUTTI: Then, on notice, why are there three departments at least, identified on page 9, including your own, who can and do test water for pesticides? The second question on notice I have is why does your organisation carry out toxicology studies on pesticides when, in my view, it should be a matter for the NRA? On page 6 of your submission, part one, you make the point in the section on the endosulfins study—and I am sure much more should have been put in there for me as a scientist to understand—that the observed change was only explicable on the aqueous concentration of endosulfins, when the Total Environment Centre's report on that matter said there were five times the level of endosulfins in the sludge. Given that invertebrates live in or have some contact with the sludge, I would have thought that would be equally as important as the aqueous concentration.

Dr SHEPHERD: I will give you the published papers on this. They have only just been published.

The Hon. J. R. JOHNSON: During a previous inquiry undertaken by this Committee we visited the upper echelons of the Richmond River. The acid sulphate soils had contaminated the rivers to an extent that astonished me. Is that a result of aerial spraying?

Dr SHEPHERD: No.

The Hon. J. R. JOHNSON: Fertiliser only, is it?

Dr SHEPHERD: No, actually it is the result of drainage of low-lying lands and exposing soil containing a particular iron compound to the air. This allows it to oxidise and turns it into sulphuric acid.

The Hon. Dr B. P. V. PEZZUTTI: Another question I have, which you can take on notice, concerns the issue of odours. My understanding is that many odours are simply

added so they can be detected when something has been sprayed.

CHAIR: Like liquid petroleum gas—it is odourless.

The Hon. Dr B. P. V. PEZZUTTI: How many insecticides and pesticides have an odour and in what percentage of them have the odours been added and therefore spread at a different rate?

CHAIR: You can take that question on notice too, but the reason behind it is, does the odour sometimes go a bit further than the pesticide?

Dr SHEPHERD: Can we split that? Can I deal with it just in the agricultural context?

The Hon. Dr B. P. V. PEZZUTTI: Yes, do not talk about houses. The only other question on notice is, what percentage of endosulfins is used by home gardeners compared to industry? I am aware it was taken off the market for stone fruit many years ago and the industry said the world would end and it did not, but I still use endosulfins on my hibiscus, and obviously I will have to stop using them, but they are available in the shops. It is a serious matter. I am using it, and I am as likely to be as careful as a farmer who has everyone looking over his shoulder.

CHAIR: Very well, if you could check that. I have a number of other questions I would like you to take on notice. Would it be realistic for chemical producers to share liability with those people who use their products? The EPA submission highlights the fact that land-use planning could be used to reduce issues of conflict associated with pesticide use. This issue is not dealt with in any detail in the EPA discussion paper. Could the EPA expand on the possible use of planning measures as a mechanism to alleviate conflict about pesticide use and application? Would planning measures be best introduced at a State or local level? Could the EPA explain what steps are being taken by some local councils to address the planning issue? Some chemical companies are seeking to reduce the odour associated with pesticide use. The EPA has verbally advised that most odours do not carry the actual pesticide, although this is not always the case. What is the EPA's view about the removal or reduction of the odour of pesticide chemicals? Should there be legislative regulations relating to odour? Is this practical? The EPA has assisted in mediation processes in the Gunnedah and Middle Pocket communities. Could the EPA briefly tell the Committee about its experience in mediation of disputes relating to pesticide use?

A number of other quick things came up. One was the licensing of land sprayers as opposed to just aerial sprayers. I have asked the question about the odour. It was mentioned today by the New South Wales Farmers' Association that the Sydney Markets do testing for pesticides in vegetables. I used to be on the Sydney Market Authority and I think at one stage some changes took place there. I am not sure what testing is done there now, so you might let us know what testing is done on vegetables. It was suggested today there have been no prosecutions of cotton farmers. Perhaps there might have been some of spray operators. You might give us some comment on what prosecutions have been laid in relation to pesticides in the past few years.

The final one is, there has been some comment about how the new Act might work, how effective it might be, and there has been a lot of comment from everyone that they

want to end up in the same place—the farmers, the cotton growers and the Total Environment Centre. They all want to get rid of the rogues and make it a better place to live. They do not all have the same view on how the proposed legislation may work. One of the suggestions has been that there be a two-year review process of the legislation; in other words, that the legislation be reviewed at the end of two years. Perhaps the EPA might give this Committee a six-month or one-yearly comment on how the Act is going in that two-year period, so we can keep an eye on it. You might have some comment on that suggestion as well. Unless you would like to do that now.

Dr SHEPHERD: I might just make a comment on it now, if I may. The problem with a two-year review is that it is too early in the life of a new piece of legislation to have the thing completely bedded down and all the stakeholders understanding how it works. The vested interests who did not want it to look as it does might still be reasonably active and anxious that it reverts to its original form.

The Hon. J. R. JOHNSON: What about interim reviews?

Dr SHEPHERD: Certainly providing advice to this Committee would be fine. The earliest one can realistically review a piece of legislation, particularly one that is complex and controversial, would be three to four years. Then you can have a meaningful review. Anything earlier than that means the thing has not had time to bed down at all. I recommend strongly that you suggest a longer period for the formal review but we would not have a difficulty coming back on an annual basis and saying this is how it is working, these are the things we think are still issues, and obviously there is an opportunity then for you to get other advice.

(The witnesses withdrew)

(The Committee adjourned at 4.00 p.m.)

REPORT OF PROCEEDINGS BEFORE

STANDING COMMITTEE ON STATE DEVELOPMENT

INQUIRY INTO THE USE AND MANAGEMENT

OF PESTICIDES IN NEW SOUTH WALES

At Dubbo on Monday 26 July 1999

The Committee met at 9.30 a.m.

PRESENT

The Hon. A. B. Kelly (Chairman)

The Hon. I. Cohen
The Hon. J. R. Johnson

CHAIRMAN: I advise that under Standing Order 252 of the Legislative Council any evidence given before the Committee and any documents presented to the Committee which have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any Member of such Committee or by any other person. Copies of the guidelines are available on the side table.

Motion by the Hon. J. R. Johnson agreed to:

That, in accordance with the Legislative Council resolution of 11 October 1994, the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held this day.

SAMUEL AMEY, Retired Farmer, of 14L Dulcidene Road, Dubbo,

DAVID CHARLES YEO, Regional Manager, Graincorp, of 31L Dulcidene Street, Dubbo, and

RICHARD NOSS, Small Businessman, of 136R Burraway Street, Dubbo, sworn and examined:

CHAIRMAN: Mr Amey, in what capacity are you appearing before the Committee?

Mr AMEY: On my own behalf and as a member of the Citizens Against Pollution.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr AMEY: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr AMEY: Yes.

CHAIRMAN: David, in what capacity are you appearing before the Committee?

Mr YEO: As a member of the Citizens Against Pollution.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr YEO: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr YEO: Yes.

CHAIRMAN: Richard, in what capacity are you appearing before the Committee?

Mr NOSS: On behalf of the business and as a member of the Citizens Against Pollution.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr NOSS: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr NOSS: Yes.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, then the Committee would be willing to accede to your request and take that evidence in camera. However, I would warn you that, whilst this Committee resolves to hear the evidence in camera and therefore treat it as confidential, Parliament always reserves the right to overturn the Committee's decision and make the evidence public.

Would you like to make a short opening statement before we ask you questions?

Mr AMEY: Yes, Mr Chairman. Before I do so I would like to table a document for each member of the Committee. Honourable members of the Standing Committee, ladies and gentlemen: As a concerned resident of the community and a member of Citizens Against Pollution, I am concerned about the excessive use of pesticides and the control of such. I wish to tender a map and refer to a local proposed development to illustrate what should not happen, regardless of the nature of the project, where intensive use of pesticides is anticipated.

In my opinion, in this particular case, Layfaire Pty Limited, the applicant responsible for the development application to grow cotton – a crop requiring intensive use of chemicals – should have, in the first instance: (1) conducted a complete survey of the immediate area, to establish a good neighbourly relationship; and (2) produced a map showing the population density and sensitive areas, including the organic oil crushing factory, cattle studs, olive and nut plantations, vineyards, fish farms, public reserves and the general environment. Human health should be of the utmost importance. In this particular case, the concerns of 500 residents with a 4-kilometre radius of the proposed development received no consideration or were not contacted in any form.

Many residents in this area suffer respiratory problems, while some have experienced pesticide contamination. Their right to a clean atmosphere and environment could be denied with approval of a development relying on repeated use of chemicals. Spray drift from pesticides is of great concern to our community, for no matter how careful or experienced the operator, spray drift cannot be completely controlled, as many cases of contamination have been documented. Unfortunately, compensation is not easily obtained. While some compensation for damage to crops and animals have been secured, human health appears to be of the least concern and rates the lowest priority by responsible bodies. The reason for this appears to be in the wording of section 37 of the Pesticides Act, which states:

“A person shall not wilfully and without reasonable cause do anything likely to cause a risk of injury by pesticides to himself or another or damage by pesticides to the property of another.”

Some experts believe this clause virtually provides immunity to the offender. I quote a case. In December 1991 a party of cotton chippers was sprayed by plane, and the incident was reported. In 1993, two years later, the case came to court under section 73 of the Pesticides Act. Although the pilot admitted that he knew that chippers were in the immediate area, he was acquitted by the Supreme Court. It would appear that section 37 of the Act should be amended to make a conviction more easily obtained. This, in turn, might well deter careless operators and make all users of pesticides more aware of their responsibilities.

It is interesting to note from recordings that only one successful prosecution has been obtained under section 37 at the time of the above court case. Legislation to alter the above should receive a quick passage through Parliament. I thank you for the opportunity to speak at this inquiry.

CHAIRMAN: If I could clarify whether this is a typographical error in the submission. You say section 37 of the Pesticides Act, and in the paragraph of the middle of the last page you refer to the fact that in December 1991 the case brought under section 73. Was it section 37 or section 73?

Mr AMEY: It was section 37. It is a typographical error.

CHAIRMAN: David, do you have any comments to make?

Mr YEO: Not really, not on that. I think Sam has covered it pretty well. I am following a different line. I would like to deal with a problem that we have with fumigants in our community. I have worked within this industry for 33 years, and I would like to follow the subject of fumigants phosphene, phostoxin and those sorts of gases that are used on the farm. They are a very toxic sort of a gas, and if you run through the first page of the submission you will see what the boiling point of this gas is. It is 87.4 at room temperature. It is highly poisonous.

If we go to the next page, you will see – and this is very important – the safe working is 0.03 parts per million in any one 8-hour working period. This phosphine gas is in pelletised form, or it is in liquid gases. It is very highly used in the grain industry. The trucks have been detected at our storages at up to 380 parts per million, which is 380-odd times the safe working of this gas. Now, these trucks are passing through the city, townships and other small towns.

In the submission you can see the effects of the gas. It severely irritates the nose, throat, respiratory passages, and causing coughs and shortage of breath, et cetera. It causes deep lung damage. It irritates the eyes, the nose and the throat and the nervous system. It causes headaches, nausea, vomiting. People become confused, have double vision, have an unsteady walk, and suffer tremors and stutters. It can be fatal. It affects the liver and kidneys, the heart, and causes a drop in blood pressure.

So, if you could take those matters on board. If a person is following these trucks for long distances and the truck has a contamination at those parts per million and it is escaping when that transport operator is travelling to the seaboard or to the end user of that product, the driver or passengers in the following vehicle could become drowsy and sleepy, and that could cause some major problems. Severe single exposure can cause any of the above. It is a lethal gas.

We in the industry certainly are having our problems with it. About 14 months ago we had a site opened. There were seven semitrailers turned up to deliver their grain. The first truck got past the inspection point; that grain was delivered into rail trucks; we then tested the second truck and got 100 parts per million of phosphine gas. We then checked the rail truck that that grain had gone into, and it was at 298 parts per million. Those trucks left our site and returned to the farm, a distance of 120 kilometres. So the enormity of that danger to the community or anyone travelling in the event that that truck tipped over, for the rescue workers, et cetera, is obvious. It is a major issue. There should be some means of convicting these people who are wilfully and deliberately doing this.

The other day a truck was detected at the Port of Newcastle. A truck was detected there with phosphine at a rate of more than 100 parts per million. That truck had travelled from the Central West of New South Wales all the way to that port, a distance of 400 or 500 kilometres. I am very concerned about that, and so should this Committee be very concerned about the prospect of death or serious risk, in case of accidents, to people who are following these vehicles. There were six trucks returned to the farm, and again those drivers complained of exactly what this meeting was saying: nausea, double vision and whatever. These vehicles are grossing 42 tonnes.

The document is regarding the proper use of fumigants. These fumigants can be readily obtained off the shelf at any of the farm suppliers around town. There should be some regulation to control this problem. It was only 14 months ago that a child ate one of these tablets and was killed immediately. What the truck operators are doing now is loading the trucks with grain that is infested with live insects. The quickest way to activate the fumigants is to place them in a tin with a few holes and add water. As you can see, it is very combustible.

CHAIRMAN: Would you like to formally table this document?

Mr YEO: Yes. It is an extract from the Graincorp Pesticide Manual.

Document tabled.

CHAIRMAN: Richard, do you have any comments to make before we ask questions?

Mr NOSS: Only from a social point of view. I am a small businessman in Rawsonville. I operate a non-GMO and organically-based oil crushing business. I am lucky I do not get, to my knowledge, affected by chemicals. I know we all use chemicals; we have become dependent upon them. But I don't think chemicals are the way of the future. I think the use of chemicals is the biggest problem facing mankind right now. We cannot keep pouring these products onto us and into us and hope to sustain life as we have known it.

We are now going into GMOs, which is a side track, and terminator genes. It is interesting stuff, but this country cannot feed the world. Why not feed the people that we can feed with pure food? We cannot be clean and green and at the same time cover ourselves with chemicals. But you cannot blame the farmers. They have got to be weaned off chemicals, or maybe helped off them. I just speak as a layman. I think it is obvious that we must all take social responsibility for what we do. Chemicals just don't fit in with our future life. I have nothing more to say than that. I had a prepared statement, but what I have said will suffice.

CHAIRMAN: We will now ask some specific questions to flesh out some comments that you have made. Before we ask you some questions, could I ask you a question about the map that you have given us. What is the shaded area?

Mr AMEY: It is proposed development.

The Hon. I. COHEN: Could you elucidate your concerns by giving any specific information regarding pollution, water quality, the effect on fish stocks in the local area, and other water-dependent birds, and also the effect on humans of escape into the environment of these chemicals? Could anyone enlarge on that?

Mr AMEY: There have been ample cases documented over the years. I have got books full of them there. They are personal statements from people that have been affected by chemicals, and also their effect on the environment and such. There is any amount of that information documented. But, apparently, it is a very difficult thing to prove that there is contamination by spray. It is easier to prove in animals than it is in humans, unfortunately. That is one of the hold-ups, I think. That is why the investigations get pushed under the counter – they are too hard. People will not complain because it is too difficult to get a conviction.

The Hon. I. COHEN: Are there any proven cases, to your knowledge?

Mr AMEY: There are people in this room who have been contaminated by chemicals.

The Hon. I. COHEN: Are you aware of the responses of other communities overseas of the outlawing of aerial spraying and the impact of aerial spraying on the environment?

Mr AMEY: I could show you documents about it. Yes, I have two books of documents there.

The Hon. I. COHEN: Perhaps you could make those books available to the Committee.

Mr AMEY: Yes, I will.

CHAIRMAN: Thank you.

The Hon. I. COHEN: What are your main concerns about the cotton development application at Rawsonville? What are your specific concerns?

Mr YEO: Our main concern out there is water pollution, because it is a known water table. The water is very close to the surface for us to pump from. We are concerned about the type of soil that this crop is going to be grown on. It will not hold water. The product that they use on cotton is very soluble in water, and therefore it will go back into our basin of water. We are very concerned about the environment issues of Midway Creek and also Ambrose Lake, because once these insecticides – not pesticides – kill all the small insects and whatever, the next step is the small birds that eat those insects. Then they move on, or die. Then, all you have left are black crows, magpies and galahs. It is as simple as that. We are very concerned about that issue.

The Hon. I. COHEN: Mr Noss, you did express interest in supporting the organic industry. But, looking at organic, genetically-engineered free industry in this area. What do you think that would mean in both economic and social terms if there was more pressure to go that way, that is, restricting genetic engineering and restricting pesticide usage?

Mr NOSS: I think it is the biggest issue facing mankind right now – forget the bombs.

The Hon. I. COHEN: In terms of the economy in this region, how would you weigh it up?

Mr NOSS: I think it is leading towards having a very big impact in the community. Being organic or GMO is a choice. The track that the community is being led down by large multinational companies that are promoting their use is, if you put it in the extreme case, food manipulation.

The Hon. I. COHEN: Could I put it to you this way. Would the community lose out in terms of value of production? I mean, how important are the chemicals in this process, and will the community suffer greatly if there are restrictions on the use of chemicals?

Mr NOSS: In the long term they will. In my business, if we are affected then we are out of business. We are supplying many pharmaceutical and food companies in Australia, and we are also exporting to Europe. So it just knocks 15 or 20 jobs directly.

The Hon. I. COHEN: Is the organic industry strong in this area?

Mr NOSS: No. Well, world-wide it is not strong, but it is growing because more people realise that we cannot keep doing what we are doing to ourselves.

The Hon. I. COHEN: Could I direct the next question to any of you gentlemen. Would you support the use of chemicals if there was a ban on aerial spraying and other acceptable methods of application were found? How would you feel about that?

Mr AMEY: You cannot control contamination by spraying. That has been proved over the years. There are dozens of cases, probably hundreds of cases. The cotton industry this year has paid out \$450,000 in cattle compensation due to contamination from last season. That is possibly only a portion of the claims. Yes, contamination is a big concern. Spray drift, no matter how the chemical is applied, will cause contamination for some distance.

Mr NOSS: May I ask a question?

CHAIRMAN: Yes.

Mr NOSS: Are we dealing solely with the cotton issue and the requirement for a development application in Dubbo?

CHAIRMAN: No. The terms of reference of this Committee include looking at the Pesticides Act and potential changes to it, because the Environment Protection Authority currently is reviewing the Act. A draft bill has been prepared. The purpose of this Committee is to get additional information on all sorts of pesticides usage. Obviously, the particular situation here in Dubbo is of interest, because this is probably one of the first occasions where the council has applied the use of town planning. In other words, the council is trying to control, perhaps, dangerous chemical usage before, rather than after, the process begins. It just brings a different aspect to it.

Mr NOSS: I think, in the first place, Dubbo City Council is to be congratulated. People living in Canberra don't have problems with it. People in the country may be okay. But, within the Dubbo city limits, surely the will of the people must prevail. The council has to consider everyone who is living within their city limits. I think the council is to be congratulated on this move, and hopefully it will be copied in other councils. But, when it comes to looking at pesticide use in New South

Wales and Australia, members of the Committee have got a huge job – a mammoth job – because you will have everyone pushing their own barrow.

The Hon. I. COHEN: Indeed. We all do.

Mr NOSS: Sure we do.

The Hon. I. COHEN: That is why we are here today – hopefully to get information on the record. We would be very interested in finding out more from different areas of the community. In terms of organic production in the local area, are niem and pyrethrum sprays considered successful?

Mr AMEY: I really cannot answer you on that. I am not an expert; I am a layman.

The Hon. I. COHEN: In terms of the heavy use of pesticides, are there alternative methods that have not been properly promoted, in your opinion, in dealing with various agricultural crops? Are there any other strategies that may be effective if they are given the opportunity? Are you aware of any of those?

Mr AMEY: They have got organic cotton which is claimed to require less chemical sprays throughout the year. But, by all comments, even from the cotton industry itself, this year has been the worst year for heliothis that we have ever had. Therefore, they have got to use more chemicals on it. So it depends on each individual season as to just how much and how often the pesticide has to be applied. It is not restricted to cotton of course. I don't want to be seen as singling cotton out. However, we all know that the cotton industry is one of the biggest users of pesticide. Sometimes there are only two days between sprays, and that can go on. It depends on the insect infestation. If it is required twice a week, it has got to be applied twice a week. It is up to Mother Nature, really.

Mr NOSS: I think the organic industry would have made a submission to this Committee, would it not?

CHAIRMAN: Yes.

The Hon. J. R. JOHNSON: Mr Yeo, the fumigants that you have talked about, what is the advantage of these high levels?

Mr YEO: The advantage of high levels of phosphine is to kill all stages of the insect, that is, from the egg larvae through to the adult stage. A proper fumigation to kill all stages of these pests is supposed to run over a minimum of 16 days and up to 25 days. It all depends on the level of phosphine that you put in. All I am talking about here is the abuse of phosphine.

The Hon. J. R. JOHNSON: But what is the advantage in the abuse?

Mr YEO: The advantage of the abuse is to have all those insects dead when they arrive at the end user. So they are fumigating in transport.

CHAIRMAN: Quicker action.

Mr YEO: Yes, quicker action. And, to dip them in water causes the phosphine to produce a gas over time. It reaches its highest levels within the seventh day. So it is producing the gas in the right situation for seven days, and then it declines. When you add water to it, it instantly reacts and produces those high parts per million which kill the adult insect overnight or within a day or so. So, what they are doing ---

The Hon. J. R. JOHNSON: Who is "they"?

Mr YEO: I would say the farming community, grain traders – anyone who trades grain between companies, from farm to port, from farm to the export ports, from farm to the dairies, from farm to the beef industry – any of those sorts of things.

The Hon. J. R. JOHNSON: When they arrive at your establishment and you have tested the product – and I think you say you got one out of seven that you passed – what happened to the other six?

Mr YEO: The other six were rejected at site.

The Hon. J. R. JOHNSON: But what happened to them?

Mr YEO: They returned to the farm.

The Hon. J. R. JOHNSON: And?

Mr YEO: It is out of our control then. The thing I am wondering about is how much control we have. What authority would you call for when these levels are so high? What right has anyone to contain that truck until safe levels were achieved? At the moment, there is not a great deal of power to lock that truck up because we do not own the truck.

The Hon. J. R. JOHNSON: Has the matter been taken up with the men's trade union or with the WorkCover Authority?

Mr YEO: We have not brought it up with the trade union, of course. I think WorkCover may be able to assist in this regulation.

The Hon. J. R. JOHNSON: But have they been taken up with the trade union?

Mr YEO: No.

The Hon. J. R. JOHNSON: Are the men covered by a trade union?

Mr YEO: Yes.

The Hon. J. R. JOHNSON: So it has not been taken up with the trade union that is there to protect their interests. Second, it has not been taken up with the WorkCover Authority, which is there to prevent accidents or help to prevent accidents of all types.

Mr YEO: We have not brought it up with WorkCover yet. The trade union is not really required, because we are here as managers for them, to look after their safety and welfare under the Occupational Health and Safety Act. We must try to supply a safe workplace, which we do with this monitoring. What we are saying is that what we are finding is only a small part of the problem. This stuff is being transported fairly regularly.

The Hon. J. R. JOHNSON: It may be worthwhile pursuing both of those avenues.

Mr YEO: WorkCover would be one of the best avenues and perhaps our next avenue.

The Hon. J. R. JOHNSON: You can decide that for yourselves. A bleak picture was painted of the effects of some of the chemicals that are being used. I think Mr Amey made the point. Do local health reports show up these calamitous situations?

Mr AMEY: Yes. The local Environment Protection Authority is quite aware of most of these cases that I refer to.

The Hon. J. R. JOHNSON: I will ask the question again. Do the local health reports show it up?

Mr AMEY: Well, if you call walking people evidence, yes. But the Health Department does not want to hear too much about it

The Hon. J. R. JOHNSON: If these people have sought help from the various health outlets, such as the hospitals or the private practitioners, and the effects are as they have been painted, have you not seen any reports from any of the local health authorities on that matter?

Mr AMEY: I do not think the Health Department or the local doctors will make any comment on it because they cannot actually prove it.

The Hon. J. R. JOHNSON: Mr Amey, I am asking you: Have you seen any health reports?

Mr AMEY: No.

The Hon. J. R. JOHNSON: You have not seen any?

Mr AMEY: No.

The Hon. I. COHEN: Was the name of the fumigant phosphine?

Mr YEO: Yes.

The Hon. I. COHEN: You clearly indicated the toxicity of the gas and the problems with transporting. Is there a toxic residue as well? You were saying that over a period of hours the gas would come off, do its job, and also be highly toxic to people and animals in the immediate area. What is the immediate to long-term effect of that? Did that grain truck go somewhere and sit for a while? How is its safety assessed after, say, a 48-hour period?

Mr YEO: It is re-tested for levels of gas, until the gas is dispersed into the atmosphere.

The Hon. J. R. JOHNSON: Is it re-tested back at your authority?

Mr YEO: No.

The Hon. J. R. JOHNSON: By whom is it re-tested?

The Hon. I. COHEN: Any receiving body? Would that be correct?

Mr YEO: Once they are rejected, they go back to farm.

The Hon. J. R. JOHNSON: So they are tested by the farmer?

Mr YEO: I would assume that the farmer has not got the technical or the instruments to test for phosphine levels.

The Hon. I. COHEN: Does it leave a residue after it has gassed off?

Mr YEO: No.

CHAIRMAN: If you have any supplementary information that may come to hand in relation to some questions that we have asked you, you are quite at liberty to send that information on to us. For example, if tomorrow someone were to give you some health reports to show either a greater or lesser incidence of abnormalities or illness in these particular areas, then by all means send those reports along. But we also sometimes ask some questions that are a bit more difficult to answer and that we would ask you to take on notice. The three in particular that I am about to ask you may be taken on notice. We will provide you with a copy of *Hansard* for you to check, and the questions will be in that transcript.

1. Is there the potential to alleviate your concerns surrounding the cotton development plan through the imposition of a buffer zone around the area?

2. What is your organisation's response to the economic benefits that the development of the cotton farming would bring to the region? In other words, what comments would you make on the extra jobs that would be created by the cotton farm, as against what jobs might be lost throughout that period of operation?
3. What would your position be with respect to a development application for another agricultural group, such as wheat or vegetables, that may use similar pesticides or pesticides that have as many problems?

If you have some quick answers on that, well and good. If not, would you take those on notice and send written answers to the Committee on those matters. How would you like to handle it?

Mr NOSS: The quick answer – and I would like to respond later in more detail – is that we live in an agricultural area, with wheat, vegetables and everything else being grown all around. We do not have a problem with that. We know that pesticides and insecticides are used. It is the sheer quantum and the time span of their use on particular crops that are causing our grave concerns. As to the economic benefit, I don't know. Maybe a dozen chippers will be used for a month every year. I have got 12 fellows, and it affects us. There are 12 full-time jobs. What was your other question?

CHAIRMAN: Buffer zones.

Mr NOSS: How big an area or distance do we need as a buffer zone? How are the sprays to be applied? Is it just by a ground rig? Does it have a skirt on it? I do not know.

CHAIRMAN: My understanding is that the development application suggests that they be ground rigs, except for wet weather, when it may be spread by helicopter. So you might like to take that on notice as well. I thank you very much for your time this morning.

(The witnesses withdrew)

JOHN FURNEY, Flour Miller and Farmer, of 24 Meek Street, Dubbo, and

PETER HENRY CONE, Senior Area Manager, Cotton Australia Limited, of 44 Kamilaroi Road, Gunnedah, sworn and examined:

CHAIRMAN: Mr Furney, in what capacity are you appearing before the Committee?

Mr FURNEY: As a farmer.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr FURNEY: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr FURNEY: Yes.

CHAIRMAN: Mr Cone, in what capacity are you appearing before the Committee?

Mr CONE: As Senior Area Manager with Cotton Australia, representing John Furney.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr CONE: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr CONE: I am.

CHAIRMAN: You said you are representing John Furney. You would also be

Mr CONE: Representing the cotton industry as well.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, then the Committee would be willing to accede to your request and take that evidence in camera. However, I would warn you that, whilst this Committee resolves to hear the evidence in camera and therefore treat it as confidential, Parliament always reserves the right to overturn the Committee's decision and make the evidence public. But you may have your evidence heard in private, as

opposed to in camera. Would either of you like to make a short statement first before we ask questions?

Mr CONE: I would, if I may. I propose to give a very brief outline of the proposal before the Dubbo City Council regarding the proposed cotton development on John Furney's property. By way of background information, John Furney acquired his property in the Rawsonville area back in 1976. It was one of a larger properties in that area. Most properties at that time were larger. Subsequently, a number of them have been subdivided. John's property, Oakben, remains whole by comparison.

In 1976 it had been developed in a small way for irrigation, primarily for the purposes of growing fodder for feeding lambs. Over the period 1976 through the mid-80s John Furney has developed it extensively for irrigation, during which he has grown crops including lucerne, soya bean, rye, millet, mung beans, wheat, sorghum and linseed. In 1998 John Furney decided to look at the possibility of expanding his options on his farm, particularly from the point of view of an additional rotation crop, and cotton was attractive both from the point of view of the current price at that time and because it simply slotted in with his existing system and did not require massive changes to his irrigation system or his normal farming practices.

In preparing to introduce cotton to his property, the Furneys subsequently found out that they would need a full development application, that would have to be put before the Dubbo City Council. In addition to that, they also became aware that the cotton industry would require that they prepare a best management practices document, which is standard within the industry at this stage. For the past three months John Furney has been putting things together to meet those two requirements.

In developing his best management practice program John Furney has advanced this fairly significantly. I think it is worthwhile to note the objectives that he has set out for that program. There are five major objectives. The first one is to develop Oakben into an environmentally sustainable irrigation property based on current environment management system principles. The second is to maintain Oakben as an economically sustainable rural production unit. The third objective is to develop 400 hectares of cotton on the property, to be produced in accordance with the Australian cotton industry's best management practices. The fourth objective is to minimise any impacts on neighbours, their properties and the general public as a result of farming activity on Oakben. And, finally, to introduce effective occupational health and safety procedures to the property.

In growing irrigated cotton on Oakben, very little change to the existing irrigation and farming systems is required. The irrigation set-up and farming system is much the same for lucerne and soya beans as the Furneys have been practising for a number of years. The only real major difference is that they are changing their seed type to cotton.

As part of the best management practice process, a spray and drift management plan is required to be put in place. It is a very comprehensive document, but a very practical one, that systematically identifies areas of risk to his neighbours, to the

environment and to any other relevant area. It specifically sets out procedures to minimise risk to those neighbours, et cetera. It also specifies individual people, be they regulatory authority people, be they agronomists, be they farm workers, et cetera. It specifies the responsibilities that each of those people has on the farm. Above all, it involves the Furneys approaching neighbours and discussing the proposed spraying regimes, et cetera, with them prior to the spraying season commencing.

In addition to that, the spray and drift management plan sets out specific parameters for monitoring things such as wind direction, wind speed and other meteorological data. It also specifies buffer zones for specific blocks on the property. In addition to areas of risk with respect to the riverine environment, the best management practice plan also identifies these in particular. The priority in a situation such as on Oakben is to put in place a storm water management plan, which basically is an emergency response plan as to how the irrigation system will be operated in the event of a large thunderstorm or a large rainfall event. It specifically ensures that the property has the capacity to store rainfall runoff and a system for managing it so that, in particular, water off the farm does not find its way back into the river or the riverine environment.

In planning to grow cotton on Oakben, John Furney has made a number of concessions, which are at considerable cost to his farm. These are aimed at minimising the risk to neighbours, the public and the environment. Those concessions include the planting of 100 per cent Inguard cotton, which is the trade name for genetically-engineered cotton. This specifically has been done to reduce the reliance on pesticide application, synthetic pesticide application. He has undertaken to withdraw one complete block of cotton closest to a concentration of small-acreage neighbours. He has planned extensive use of tall, forage sorghum crop buffers on boundaries to neighbours, firstly to reduce the potential for drift and secondly to provide a refuge for the Inguard cotton. He has undertaken not to use endosulfan, which is the primary insecticide currently used in the cotton industry, and he has also undertaken not to use a pesticide called Curacrom, which is a major problem from its odour problem.

As far as possible, all applications will be made using ground equipment. In the event that wet weather dictates, a helicopter may be used in that situation. There will be the installation of electronic weather-monitoring devices, and finally the implementation of a spray and drift management plan which includes consultation with neighbours.

In conclusion, I would like to draw to your attention that best management practice has been developed over a period of nine to ten years by the cotton industry following a major environmental audit of that industry. Out of that, procedures and planning measures have been put together which are now in the form of best management practice. Secondly, cotton is grown on a rotation basis. There is no such thing as a farm that grows only cotton. Specifically, soil management requires a very strict rotation, of which generally cereals and legumes are a major part.

The cotton industry has led the field in rural Australia in developing environmental management systems. Finally, the cotton industry leads Australia's

cropping industries in their research effort into pesticide reduction, insect pest management, system soil management, genetically-engineered crops, and the breeding of physical characteristics to make the crop less attractive to insects.

CHAIRMAN: A comment was made by a previous witness that the jurisdiction of this particular hearing is really to look at the process in the whole of the State of New South Wales for the future, and to consider what legislation might be brought in. It is not really in any way looking at your current development application that is before the Dubbo City Council. We would hope that what we do here today will not have any influence, either way, on that particular application. We are looking at it merely to give us a bit of an idea, for the future, on what is happening in other areas and considering whether what has happened here is a good or bad thing. For that reason, I would like to thank you both for coming along today. I appreciate that you may have been hesitant about doing so because it could be seen as inflaming the situation. I thank you for coming along and giving us the benefit of the process that we are going through today.

Are you aware whether this is the only council in the State that has provision within its local environmental plan (LEP) that the proponent has to have a development application for cotton growing?

Mr CONE: Yes, as far as I am aware.

CHAIRMAN: It specifically mentions cotton, does it?

Mr CONE: Yes.

CHAIRMAN: A couple of weeks ago, after we had Cotton Australia come to our hearing in Sydney, there was a comment, if I remember it correctly, that Monsanto had taken Inguard off the market for two years. Could you clarify that for the Committee?

Mr CONE: Yes. Monsanto is the commercial marketer who holds the rights to market the Inguard technology in Australia. They have not taken it off the market for two years. What would have occurred there is that their – and it is a very complicated process – but, basically, there is technology that has two toxic genes, technology that has four toxic genes, and so forth. The thing that you would be referring to is that Monsanto are holding off giving Australia the four-gene technology and that we are stuck with the two-gene technology. Basically, what the two genes versus the four genes means is that the four genes technology is stronger.

CHAIRMAN: And therefore you would use less of the four-gene pesticides?

Mr CONE: Yes.

CHAIRMAN: There was great concern by Cotton Australia and some others that it was a shame that it could not have been introduced quicker. But it is only a two-year period anyway, was it not?

Mr CONE: Yes.

CHAIRMAN: The buffer zones that you mentioned in relation to sorghum, what width are they?

Mr CONE: I might clarify this in regard to comments that you made earlier in relation to Oakben and the cotton industry. What we are applying in the cotton industry to Oakben is no different to what is being supplied to any other cotton farm. It is not a case of special requirements here. Extensively, throughout our existing cotton growing areas, we have been using buffers of very tall forage sorghum, which is roughly 10 feet high. What we are doing there is simply running a 16-foot combine width along the fence, which essentially is a physical barrier.

CHAIRMAN: Like a filter?

Mr CONE: Like a filter. But, again, a buffer is a fairly complex thing. There are several things that can constitute a buffer. It can be a physical buffer, such as our sorghum; it can be distance; and, typically in sensitive cropping areas, Inguard for example is not just grown in a paddock as a solid block. We strategically put it as a buffer in sensitive areas, so beside neighbours' properties we would put the Inguard there. So, as a buffer, we may have a physical forage sorghum buffer, backed up with a further buffer of Inguard cotton. There may even be open space there. So the buffer can be several things – giving distance and several different methods of reducing drift.

CHAIRMAN: In Cotton Australia's best management practice guidelines regarding approval to neighbours or notification to neighbours, does that apply to the immediate neighbour, or do you go right out?

Mr CONE: In the cotton industry at the moment, as a result of the National Registration Authority requirements applying to endosulfan, notifications are mandatory. Those notifications are something in the vicinity of 1,500 metres outside your property. In the case of ultra low volume formulations of endosulfan, then there is a scale, reducing back to 200 metres, for emulsifiable concentrate, which is the water-based large droplet type sprays. Those applications are subject to legislation, because there are label requirements to endosulfan. In a case such as we have with Oakben, we would apply those same requirements to all sprays, not just endosulfan.

CHAIRMAN: Is that 1,500 metres to a residence or to another property?

Mr CONE: To another property - to the boundary, I believe it specifies.

CHAIRMAN: You mentioned a rotation practice. The Committee has heard before that in rice irrigation areas they have a one-to-three rotation: that is, in any one year, two-thirds of the area is out of production, and only one-third is in production. Is there a similar thing with cotton rotation?

Mr CONE: It is very much a set rotation. It is aimed specifically at soil management, improving soil structure and so forth. As a general rule, it is three years cotton, two years of cereal crops, generally wheat, and one year or maybe two years of legumes.

The Hon. I. COHEN: Mr Cone, you went into some detail about the strategies that are being undertaken, particularly in regard to neighbours. How do the neighbours feel?

Mr CONE: That is part of the process when the plans are put in place. That will be John Furney's responsibility.

The Hon. I. COHEN: Are you getting support from the neighbours?

Mr CONE: Not that we are aware of, at this stage, no.

The Hon. I. COHEN: Are you getting opposition from the neighbours?

Mr CONE: We have not approached the neighbours at this stage.

The Hon. I. COHEN: Are you not aware of their feelings about a development like this?

Mr CONE: We are aware of their feelings through the media reports.

The Hon. I. COHEN: You are?

Mr CONE: Yes.

The Hon. I. COHEN: And what are those reports of their feelings?

Mr CONE: Negative.

The Hon. I. COHEN: Despite these defensive strategies that you have put in place, are you still going to be aerial spraying at any time?

Mr CONE: It is possible that aerial spraying could take place in a situation of very wet weather, where we could not drive a ground-based vehicle on the property.

The Hon. I. COHEN: Who would be responsible if there was a study on this type of development that identified that there was an escape of chemical, regardless of how you are doing your application, into neighbouring farms and into their rainwater tanks? Who would be responsible? Would you take responsibility for that?

Mr CONE: We would have to take ultimate responsibility. The legislative responsibility, if that occurs, falls into the hands of the State's Environment Protection Authority. So, if it was obvious that there had been a drift outside the bounds of the property, the Environment Protection Authority in the first instance would be obliged

to investigate that one. The cotton industry would also investigate it because it would be contrary to our best management practice principles.

The Hon. I. COHEN: We have been hearing in the media some horror stories about this in the cotton industry. Are you concerned?

Mr CONE: We are concerned, and that is why we are working on putting these measures in place.

The Hon. I. COHEN: Do you think your strategies are foolproof?

Mr CONE: No strategy is foolproof. But we have a lot of experience and research to draw on, and we have to start somewhere.

The Hon. I. COHEN: Given the substantial density of the population immediately around the proposed development, does that not concern you?

Mr CONE: Anywhere there is a risk of contact with the community concerns me, to the point that I would be very insistent that very tight rules are followed. The other thing that gives me some confidence is that we have cotton growing on some 1,500 farms in eastern Australia, and we have a lot of areas such as Moree, Gunnedah and Narrabri where cotton is grown much closer to the towns than the proposed development is to Dubbo, and without major problems.

The Hon. I. COHEN: When you say closer to those towns, are you saying closer to any other habitation? Let me get this clear. I understand that the area you are talking about may not be the town as such, but it does have quite intensive land use and also habitation immediately surrounding it. So is that a bit of a fudge on the concept?

Mr CONE: No. If you take Narrabri, for example, there is a cotton crop within two kilometres of the main population area of that town. At Wee Waa there would probably be cotton crops grown within a kilometre of the residential area.

The Hon. I. COHEN: I was interested that you mentioned that you are actually using Inguard cotton as a type of buffer zone because of the reduced need for pesticide. I understand that the reduction is about 30 per cent. Is that correct? You are still using pesticide on the Inguard cotton first generation.

Mr CONE: Yes.

The Hon. I. COHEN: If you are still using pesticide on cotton alongside the Inguard cotton first generation, still using two-thirds of the quantity of chemicals that you are using on the other crops, does it not concern you that after a number of generations there could be significant problems and that you may have to use an increased amount of pesticide on a genetically-engineered crop?

Mr CONE: That certainly is a concern. The cotton industry has a specific scientific committee, called the Timms committee, which specifically monitors that

situation. So Inguard cotton is not just available to anyone who wants to use it; it has to be monitored, it has to be limited in the quantity so that we do not build up resistance to the point where more chemical would have to be used to overcome that resistance.

The Hon. I. COHEN: You have not achieved that in any other area of cotton production, have you?

Mr CONE: I am sorry?

The Hon. I. COHEN: To actually control the build-up of resistance to chemicals over generations. I am really concerned about that. We see a new you-beaut system of genetically-engineered cotton, and we say that we are using less pesticide, but over a period of a number of crops we end up with a compounding effect of a genetically-engineered product and a significant increase in pesticide usage. Would you agree that that is a reasonable fear?

Mr CONE: That is a possibility. In the real world, you have to look at the assumption that the cotton industry is moving towards reduced reliance on pesticides to reduced-use pesticides. We have a very sophisticated research program that focuses heavily on insect pest management and that uses a range of tools, such as predatory insects, biological insecticides such as bacillus thurengensis.

The Hon. I. COHEN: What is the common name for that?

Mr CONE: I do not think there is one. Dipel is the trade name for that product. We have very successful commercial trials of feeding compounds, where we actually apply foodstuffs to crops from aircraft to feed the predatory insects, in order to build up large populations of them. So that we are actually managing predatory insects to control detrimental insects, which predominantly are heliothis. So it is an overall program.

Inguard cotton is only one part of that reduction, as are feed sprays a part of it. A very important aspect is the scouting and monitoring, whereby each cotton farm hires a qualified agronomist. They just have to do that. That agronomist looks at the crop, on average, every two to three days, counts the eggs that have been laid by the detrimental insect, mainly the heliothis, counts the eggs numbers and the presence of the predatory insects, and balances them up. So it is just not a case of, "It's Monday morning, so it is time to spray."

I have heard comments that we spray every three days. That is simply not correct, because we would not spray for three days running for an insect that has a life cycle of 14 days. That would simply be a waste of money. So we have got all these insect pest management tools, where we are actually juggling measures. In effect, the last resort is to apply synthetic chemicals such as endosulfan.

The Hon. I. COHEN: You are actually mixing two modalities. Has the industry conducted studies or made any assessment of the value, economically and socially and environmentally, of developing an organic genetically-engineered-free

production process? I understand what you are saying about predatory insects and so on, but you are really mixing the processes there because the effectiveness of that is in an organic production mode, would you not agree? And has the industry looked at that?

Mr CONE: The answer to that is yes, the industry has looked at pure organic cotton production. In fact, we have had probably three major cotton producers attempt that. They have since withdrawn their attempts, simply on the economic ground that they could not produce an economic crop on current-day organic processes.

The Hon. I. COHEN: Did they factor in environmental impacts and downstream impacts in terms of the cost to the community?

Mr CONE: Yes. But I must qualify that. They have attempted organic cotton production. It did not work, economically, because the insects simply beat them; they could not get an economic yield from the crop to cover their costs. But that does not mean that that has been pushed aside as a bad idea. That is still being fostered, because all these things do not happen overnight, and research is ongoing. Some of the lessons picked up out of the organic experience are now being picked up in the insect pest management. Trapping crops, for example, is one thing that we have pulled out of the organic experience and put it into the insect pest management program.

The Hon. I. COHEN: Does the region supply cotton seed oil for the vegetable oil industry?

Mr CONE: Yes.

The Hon. I. COHEN: Is the production of that differentiated from the normal cotton production? Is that a separate crop altogether, or is it part of the major crop?

Mr CONE: It is part of the major crop.

The Hon. I. COHEN: So, is there a proper assessment of it as a food crop at the time of production in terms of pesticide usage – different from the levels of scrutiny that are occurring for the cotton crop that is going to be used for material production?

Mr CONE: Yes.

The Hon. I. COHEN: Who does that?

Mr CONE: That is done through our CSIRO people, who monitor our food quality and so forth. That has to be watched very closely, because the seed is also used as a stock food, along with the hulls and so forth. Of course, with the bad experiences we have had with Helix and so forth, we have to be very careful about keeping the tab on that one.

CHAIRMAN: We have a few questions that we would like you to take on notice and that you might respond to in the couple of weeks. Rather than you try to

take a copy of them, we will give them to *Hansard* and they will be included in the transcript. I understand that you want to go into a short private session after that.

Mr FURNEY: Yes.

CHAIRMAN: The questions on notice to Mr Cone are:

1. Can you explain any potential advantages to the community that are available from the proposed developments?
2. Does Cotton Australia see any potential impacts of the cotton development upon the region's population, property or environment?

The questions that I would ask Mr Furney to take on notice are:

1. Could you outline the reasons behind your decision to lodge a cotton development application in the region?
2. What is your response to the opposition by people in the area to the introduction of cotton farming?
3. What measures have you taken to minimise any impact of pesticides on persons, property or the environment in your development proposal?

(Evidence continued in private session)

Evidence of PETER CONE and JOHN FURNEY taken in private session:

CHAIRMAN: John, did you want to make any comment or make any statement?

Mr FURNEY: No. I think Peter has said enough about what we are doing.

CHAIRMAN: There is a fair bit of local interest. The reason that the remainder of your evidence will be heard in private, as opposed to in camera, is that the evidence can still be used publicly, but that procedure obviates the opportunity for hecklers to disrupt the proceedings. I invite members of the Committee to ask questions.

The Hon. I. COHEN: Mr Furney, I might ask you a question. Have you, in your experience, witnessed ill effects on any of your workers in the industry in terms of contamination through chemicals used in cotton growing?

Mr FURNEY: No.

CHAIRMAN: I might just clarify that. Mr Furney is not in the cotton industry yet.

The Hon. I. COHEN: So you have not started cotton growing yet?

Mr FURNEY: No.

CHAIRMAN: Nor is the industry in this district, but it is close by at Narromine.

The Hon. I. COHEN: One of you mentioned about irrigation. How much of that is going to be on farm and how much of it will be by way of extraction from the river?

Mr FURNEY: It will be all from river water. We have got an irrigation licence to water from that area. We have an area of around 400 hectares of cotton.

The Hon. I. COHEN: In doing that, do you take into account the effects on the quality of the water flow in the river systems?

Mr FURNEY: Yes. We have allowed for that in the best management practices for cotton farming.

CHAIRMAN: In this particular area, there are no new irrigation licences that have been issued, not this decade anyway.

The Hon. I. COHEN: So you are functioning on your existing irrigation licence for this production, are you?

Mr FURNEY: Yes. We have been here since 1976. We are using the same irrigation, the same water and the same licence on the same ground. The only difference is that we are going to put a different seed in the ground.

The Hon. I. COHEN: Have either of you had any experience with non-irrigated cotton?

Mr FURNEY: No.

Mr CONE: I have a lot, yes.

The Hon. I. COHEN: Is it successful?

Mr CONE: It is successful in the right climate. You are reliant on natural rainfall to supply your water. In the Namoi Valley, for example, in the Gunnedah area, last season – because we had masses of rain in August, September and October – the dryland cotton was almost as good in some cases, yield-wise, as irrigated cotton. However, the previous year only about two crops survived because of lack of rain at a critical time. So non-irrigated cotton growing is very risky. The inputs are much less, however, the risk of getting a good yield is high.

The Hon. I. COHEN: In terms of the proposed development, what percentage of the cotton would be grown from genetically-modified seed, and what percentage would be seed owned by non-Australian companies or multinational companies?

Mr CONE: One hundred per cent of his crop is going to be Inguard.

The Hon. I. COHEN: One hundred per cent?

Mr CONE: Yes. He has got approval specifically to do that.

The Hon. I. COHEN: I thought you had said it was important not to go in wholesale with Inguard.

Mr CONE: Yes. But, taken over the Narromine area, other farms have been cut back there to allow for this. The maximum that we allow for Inguard in any one season this coming year will be 50 per cent. So that, in the valley, 50 per cent has to be Inguard and 50 per cent has to be conventional cotton, in order to maintain a susceptible gene pool. So, in this case, John has been extended the privilege of having 100 per cent of his farm, at the expense probably of someone else's farm.

The Hon. I. COHEN: In your situation, have you seriously looked at organic cotton?

Mr FURNEY: We have had a look at it, but all the consultants say it is not quite ready yet.

The Hon. I. COHEN: Could I say this. I have been looking at an advertisement in a glossy magazine in the city about organic tampons. There appears to be a colossal market for this, absolutely huge on an international scale. When you take into account that Sainsburys and other significant retail importers in the UK et cetera are going ballistic over the genetically-engineered issue, it really is something worth giving serious consideration to.

Mr CONE: There were three properties that we had. One was out here at Narromine and two of them were in Queensland. They identified that very motive: that, if they could produce organic cotton, they would make a killing. They went into it on the basis: Okay, we are going to lose three-quarters of our yield, but we will get a price premium that will compensate for that. But John O'Brien's lost the lot of his crop at Narromine; he just did not have anything to pick. So he has gone back to normal work. But he still has not lost sight of that premium price if he could actually grow organic cotton.

The Hon. I. COHEN: Are you concerned that your current usage on the cotton crop could negate your opportunity, at a later date, to go organic on that product?

Mr FURNEY: If you can go organic, grow it, and get a better price for it, you will do it.

The Hon. I. COHEN: You may not get a better price per hectare, but you may well find yourself with a sustainable crop.

Mr CONE: In overall cotton production, we spend something like two-thirds of our yield on insect control. We would dearly love to be able to get rid of that cost. That is the reason for the sharp focus on insect pest management and better ways of weaning ourselves off synthetic chemicals. Certainly, over the last ten years, we have come a long way. When we first kicked off growing cotton in Wee Waa back in 1961, it was sprayed up to 24 or 28 times per season. On average, in the Namoi Valley last year, it was a total of nine applications. So it is research that has done that.

(The witnesses withdrew)

(Public hearing resumed)

DOUGLAS ALLAN HERD, Director, Environmental Services, Dubbo City Council, Church Street, Dubbo,

PAUL JAMES ANDERSON, Manager, Building and Development Services, Dubbo City Council, Church Street, Dubbo, and

JOHN STANLEY DAVIS, Manager, Environment and Health, Dubbo City Council, Church Street, Dubbo, sworn and examined, and

GREGORY JOHN GEOGHEGAN, Manager, Strategic Planning, Dubbo City Council, Church Street, Dubbo, affirmed and examined:

CHAIRMAN: in what capacity are you appearing before the Committee?

Mr HERD: As Director of Environmental Services, Dubbo City Council, so as to give you information on behalf of the Dubbo City Council in respect of an application for cotton farming in Dubbo.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr HERD: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr HERD: Yes, I am.

CHAIRMAN: John Davis, in what capacity are you appearing before the Committee?

Mr DAVIS: As Manager, Environment and Health.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr DAVIS: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr DAVIS: Yes.

CHAIRMAN: Paul, in what capacity are you appearing before the Committee?

Mr ANDERSON: As Manager, Building and Development Services, Dubbo City Council.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr ANDERSON: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr ANDERSON: I am.

CHAIRMAN: Greg, in what capacity are you appearing before the Committee?

Mr GEOGHEGAN: As Manager, Strategic Planning, Dubbo City Council.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr GEOGHEGAN: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr GEOGHEGAN: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into camera and take your evidence confidentially. However, I would advise that the Parliament has the right to override our decision to take your evidence confidentially and make it public. I remind everybody that we are not here to look at the merits of a particular application that is before the Dubbo City Council. The Committee would particularly like to know what made Dubbo City Council decide to require a local environmental plan to start with, as it is one of the first councils to adopt that course. So it is the big picture that we are looking at, not an individual application. Would you like to make an opening statement?

Mr HERD: Thank you. Just very briefly, the reason we are here today is to give you a brief overview of the application that has been presented to Dubbo City Council in respect of cotton farming in the local government area. I would take you through it quickly, and deal particularly with the terms of reference that the Committee has given us. We believe it falls within those terms of reference. I have asked three of my managers to come here so that, if there is any question that you would like to ask on the detail of certain aspects of this application, or how it got there and what it is up to at the moment, they will be able to answer those questions for you.

There is one other aspect. John, the Manager of Environmental Health, might have some other issues besides cotton farming that he may wish to deal with and give you some information. It is not necessarily related to cotton farming, but to other

issues within your terms of reference. I do not know whether we can proceed on those lines or not. But we will deal with that when we get to that point.

CHAIRMAN: I am certainly interested in hearing evidence on the disposal of chemical drums and a whole host of other issues that relate to the management of councils and their operations and the operations of their residents.

Mr HERD: There is a plan that I can tender to you. This is the area in question so far as the development is concerned. I think you may have a black and white that has been produced to you, but it may be easier if you have the coloured copy.

The Hon. J. R. JOHNSON: Is it the area shaded in green?

Mr HERD: No. It is the area that is outlined in the dark border. If I could make a statement on how we got to where we have on this particular development. I would open by saying that the Dubbo local government area historical situation is that there is no previous experience of cotton farming as part of the established agricultural environment. Consequently, irrespective of the potential scope of interpretation of the terms “intensive agriculture”, in theory or practice in other areas, within the area of planning control exercised by Dubbo City Council as the responsible authority there is no known case of cotton farming established as an “existing use” or anything like that in the Dubbo local government area as far as we know.

Cotton farming is not part of the environment within which the agricultural enterprises operate in the Dubbo local government area. In the course of preparation of our rural LEP in 1997, the consultations with the rural land owners identified concerns (those related principally to the agricultural practices necessary to produce a cotton crop, especially the intensive use of pesticides and the consequences to nearby crop and animal farming enterprises) expressed by them about the potential impacts on existing agriculture should cotton farming be introduced into the area of Dubbo City Council’s planning responsibility as a new agricultural enterprise. That was the public consultation process by which we arrived at a particular decision insofar as our strategy was concerned.

In response to the concerns expressed by the Dubbo community, and having regard to the Dubbo City Council’s duty of care on behalf of that community, Dubbo City Council ultimately recognised that cotton farming was not currently a part of existing “agriculture” or “intensive agriculture” in Dubbo, and resolved that, before it could become so by de facto means – that is, through being introduced – to define cotton farming independently of those generic terms. Again, that is just reiterating where we have come from.

Council’s action therefore was to ensure that the issues were carefully considered, and not to prohibit cotton farming in Dubbo, in good time prior to any proposal to actually farm for that purpose. So it was more of an issue as far as the community was concerned, so we took on board their concerns and we explored their issues and determined that, rather than prohibit the actual cotton farming in these areas,

at least it should be actually permitted, but that the council should have a look at it and get the consent required before any determination can be made.

A number of the issues that people brought up can be explored at a later date if that be the case. That was our concern. In other words, we are treading very carefully, and we are trying to be unbiased as far as the whole of this development is concerned. Obviously, we are the people in the middle who have got to make the decision one way or the other, as far as whether it should or should not happen, given the circumstances of the case. So that is, very briefly, where we got to to determine that cotton farming was an activity that did require council consent.

I would now give a brief history of where the application has come from. I think some of that information may have been imparted to Stephen at one stage. We did get our development application for the cotton farming. The proposal was to plant cotton over an area of about 675 hectares, with up to 400 hectares of cotton being planted with cotton during any one season. The proposed cotton crop was to be irrigated. Crop spraying by ground rig or by helicopter application was to take place in wet times. The property was known as Oakben. A combination of cotton and Inguard was to be planted. It was also to follow best management practices.

Since that time there has been a minor amendment to the application, whereby they are putting in some buffer areas. But, essentially and in principle, it is still the same application over a slightly different area of land. The property is still Oakben and there is still another property just down the road from there but still in the Rawsonville area. We undertook the public advertisement and notification period that we considered appropriate at the time. We thought it should be advertised; we thought it should be publicly notified simply because of the concerns and the interests that the people in that area had at the time that we were formulating the strategy and, in turn, the local environmental plan. So we advertised that, sent out letters, and we received responses from 1,289 people. I think out of that roughly 1,300 people, 1299 were basically against it and one was for it.

We then referred the information that we had before us to the government authorities for their advice. They are under no obligation to give us any information or to assist us if they did not so desire. There were no licences or approvals that were required from the government authorities. But they, in their wisdom, have come along and agreed to help us and give us advice in respect of the issues that have been raised by various people, and there are quite a number of people. The government authorities, in turn, have also got their own detailed and specific information on some of these issues, and we are very interested in getting hold of that material.

We had a meeting with the applicant, the developer and the representatives of the council and the government authorities in mid-May, and the government authorities who were at that meeting explained the issues from their specific points of view, and as a result of that meeting the developers went away to address quite a few of those issues. To date, of course, we have not had any meeting or response to those issues. We are still awaiting that information to come back so that we can better assess the application with the information that we do have before us.

It is possible that we still might not have sufficient information to be able to properly assess it, and it may have to go back to the developers or the applicant. We are not sure until we get this further information. But, as I say, we are in the middle of the developer and the people who are objecting to it. We have got to be very careful what course we take, and we have got to be very certain about the information that we do gather. The council then needs to make a determination on that application, given all the information that is before the council.

As I said earlier, I have asked John, Paul and Greg to be here. They are specifically here to answer any questions that you may have on details relating to the application. Greg, who is concerned with the strategic planning aspect, looked at the strategy and the LEP; and Paul and his branch have responsibility, on behalf of the council, to assess the development information. John, of course, from an environmental point of view, has issues that do arise from time to time, and he has another area of concern that he wishes to discuss with you.

CHAIRMAN: Perhaps, John, we might go on to some of those other areas of concern that you have.

Mr DAVIS: The areas of interest do not relate to the cotton development, but I think they fall within the terms of reference of the Committee. Firstly, I would like to read a statement that I have prepared.

Governments, the Murray Darling Basin Commission and government agencies are presently calling for innovation in farming in an attempt to halt, and over time, reverse land degradation, which is evident to most of us and of major concern for future generations.

I am concerned, as a result of my own dealings with officers of the New South Wales Department of Land and Water Conservation that for defendable, but in my opinion unwarranted, argument previously proven land use practices may not be trialled at a government level in western New South Wales. As an example, I would advise that regional landowners, field workers and scientists are agreed to a proposal to trial proven land management techniques proposed by Mr Peter Andrews of Tarwyn Park, Bylong. Those trials are proposed to be in the Dubbo area.

Assistance for the proposed trial has been denied at a regional level by the department. This is the second time such denial of opportunity has occurred with respect to this matter. I believe that departmental officers are not being adequately guided to make decisions on innovation, and accordingly real opportunities to advance sustainable land management are being lost.

Secondly, I would like to refer to an incident in relation to pesticide management. A complaint was received within the last few years from within the Dubbo City Council area regarding a claimed chemical sensitisation occurring from previously living among intensive agricultural activities in another rural centre and that local domestic activities, such as spraying, within a residential area were actually

contributing to that chemical sensitivity. That is one issue that has been raised but that has not been raised before the Committee.

Thirdly, I would like to raise the issue of the "Drum Muster" program. I assume that the Committee is aware of the Drum Muster program. For those of you who may not, I will speak about this matter. The Drum Muster program was organised to assist in the collection of used chemical containers on farms. The responsibility for Drum Muster was placed upon local government. Councils had tried to work with the Drum Muster organisation to make this possible, but unfortunately there have been a lot of problems in relation to adequate cleaning of the chemical containers.

There are 29 councils here in western New South Wales involved in a regional waste co-operative called Netwaste. We are not getting involved with the Drum Muster program at this stage because of an incident recently that we were told about in Gunnedah, where a number of drums were collected and shredded and were found to be still contaminated and not useable in another form. So the Drum Muster program, for all its good intentions, is very difficult at this particular point to implement. It is a pretty important issue.

CHAIRMAN: How do you see it being corrected? How do you solve the problem?

Mr DAVIS: At this particular point in time we have got to ensure that the chemical containers are cleaned to a standard that is suitable for their proposed use. We intended, through Netwaste, to offer the Drum Muster organisation the opportunity to work directly with contractors who could provide a use for the shredded and processed material, but Drum Muster has said it cannot deal directly with contractors because of controls within the Environment Protection Authority and that it is necessary for local government to be involved.

Local government is not in a position to provide those end markets for these products. It seems to me that we have a situation where we are being asked to collect the drums, process those drums, but, at the end of the day, the product cannot be used. I really do not know what the answer is.

CHAIRMAN: What is regarded as suitable cleaning? Is it triple lock, or what?

Mr DAVIS: Triple rinsing and piercing the drums. But it does not seem to be doing the job.

CHAIRMAN: I thought we were told in Sydney that the drum muster was supposed to be done by the agents who sell the chemicals. So they are actually asking the councils to do that now, are they?

Mr DAVIS: They are asking the council to be part of the process, to act as the middle men to provide the collection facilities and to work with the contractors.

The Hon. J. R. JOHNSON: You talked about the Drum Muster organisation. What is the organisation?

Mr DAVIS: I am not quite clear on that. We act directly with a particular gentleman who represents Drum Muster. Drum Muster, I believe ---

The Hon. J. R. JOHNSON: Is it a private venture, or a co-operative of various councils, or what?

CHAIRMAN: I think it is the chemical companies themselves.

Mr DAVIS: The chemical companies are using the Drum Muster program as a way of bringing the chemical containers in.

The Hon. J. R. JOHNSON: They are using the program, but who is the causing cause of it?

Mr DAVIS: I do not know what the genesis of the program is.

The Hon. J. R. JOHNSON: Has it got a headquarters or an office?

Mr DAVIS: The Local Government Association has offered its approval to the system but, as far as I know, we are only dealing with a gentlemen via a mobile phone.

CHAIRMAN: You might take that on notice and get some more information on that. We will also ask Peter Howat from Nufarm about that.

Mr DAVIS: I would appreciate that.

CHAIRMAN: I know that the Drum Muster did not work, but how was it proposed to work? Were the farmers to bring their chemical drums in and leave them at the tip at a certain spot?

Mr DAVIS: That is correct, yes, on a certain day. There were a number of ways that it could be administered. Then a contractor would come round, shred the drums and would be responsible for the disposal of those drums.

CHAIRMAN: It is a pity it does not work, because empty drums are a major source of contamination.

Mr DAVIS: I agree.

CHAIRMAN: Most farms end up with numerous drums, and if they are near the river, as soon as there is a flood we end up with a slight blockage in the river caused by a number of trees, you can get 20 or 30 chemical drums sitting in the middle of the water.

Mr DAVIS: That is correct.

CHAIRMAN: There has got to be a solution to that problem. Is there any other comment before we go to questions?

Mr ANDERSON: I have no specific comments, no.

CHAIRMAN: Greg, have you got anything to enlighten the Committee on how you, as a strategic planner, incorporated this proposal in the LEP to include cotton? I presume it was not as a result of concern that you did not like cotton per se, but that it was to do with chemical use associated with it.

Mr ANDERSON: The history of this goes back about four years. The process of preparation of what is now the 1997 rural LEP began in 1995 with a series of three rounds of community meetings throughout the rural area. There were about 25 meetings in all. We went out with a quite open mind as to where we were going to go ultimately, initially with a strategy and then the LEP which would give expression to that.

The issues raised by the community ultimately drove many of the provisions of the LEP. Perhaps the most unique of those is the ultimate status of having defined cotton farming as a specific use and assigning it a consent status. That came specifically from the repeated concerns expressed by the rural attendees at those meetings – for the most part, people who lived on the land or who worked the land. Their concerns derived principally from pesticide use and practices related to their use, and their concerns about conflict – conflict with their own agricultural enterprises; and, secondly, but I guess more by reputation than by any specific scientific evidence that was available to them or to us, the allied concerns relating to health and so forth.

So, as a result of those concerns, we drafted an LEP which identified cotton in the manner you see. That is ultimately what was exhibited. At the time of the exhibition of that LEP we received no expressions of concern as a consequence of that exhibition relating to that proposed status of cotton farming.

The Hon. J. R. JOHNSON: Mr Davis, is there any intensive spraying in this area on any other properties?

Mr DAVIS: It has not been brought to council's attention if there is. But I imagine there would be seeing there is intensive agriculture here.

The Hon. J. R. JOHNSON: We have been told that there are numerous health risks. I want to know whether it is fact, or whether it is hearsay, that there has been deterioration of certain people's health, and more particularly on a regional basis. If there are considerable numbers of people affected by aerial spraying, among others, would that phenomenon be reported to the local area health boards and would that information be made available to the councils?

Mr DAVIS: I have not been made aware whether that sort of information is available to the council in relation to the specific development. We are still collecting evidence in relation to those matters.

The Hon. J. R. JOHNSON: It was said that this Drum Muster organisation would undertake the shredding of the drums. I take it that they are all metal drums. It was said, however, that the end product could not be used for their proposed use? What is their proposed use?

Mr DAVIS: My understanding in relation to the incident in Gunnedah was that the drums were plastic and that the shredded material was intended for re-use in children's play equipment as a recycled plastic product, but the product was found to be at a level of contamination that was not suitable for that use.

The Hon. I. COHEN: Could you let the Committee know if you think that councils have the expertise and resources to effectively manage the issuing of penalty notices as outlined in the Environment Protection Authority's discussion paper.

Mr DAVIS: I could not comment on that without further investigation.

CHAIRMAN: You might like to take that question on notice.

Mr DAVIS: I certainly will.

The Hon. I. COHEN: I appreciate that, thank you. I wonder what occupational health and safety measures council adheres to in relation to the use of pesticides by council.

Mr DAVIS: Council is involved in pesticide use in our Parks and Landcare Division. We have two codes of practice: one in relation to weed spraying on parks and ovals, and the other one is in relation to weed spraying for noxious plants. Both those documents are available to the Committee if it so desires.

CHAIRMAN: Would you mind tabling those?

Documents tabled.

Mr DAVIS: Dubbo City Council also has a management plan for orphan hazardous materials. So, if there are hazardous materials that are found on the side of the road from time to time, we have a plan for dealing with those issues as well. That document also is available.

Document tabled.

The Hon. J. R. JOHNSON: Does that happen often?

Mr DAVIS: No. I would suggest that in the last five years we would not have had more than a handful of incidents.

The Hon. I. COHEN: Does the council receive complaints from workers using chemicals? If so, how many complaints are received? Do you receive complaints from the community expressing concern about chemical use?

Mr DAVIS: I am not aware of any complaints from workers in that regard. That is another section of council that would handle that. But we can take that question on notice as well, if you so desire.

The Hon. I. COHEN: Thank you. I would appreciate that.

Mr DAVIS: Once again, without having the figures in front of me, I would suggest that there would not be more than a handful of complaints related to chemical usage over the last five years. However, the issue of spraypainting in residential areas has been an issue. But I do not think that is covered by the terms of reference of this Committee.

The Hon. I. COHEN: Have there been any reports of damage to other crops from spray drift at all?

Mr DAVIS: I am not aware of any.

The Hon. I. COHEN: In terms of release of contaminated tail waters, have you had any complaints regarding this being a breach of the New South Wales Clean Waters Act?

Mr DAVIS: I cannot think of any instances at this stage. I can certainly check that matter out through our records.

The Hon. I. COHEN: If you might take that matter on notice as well.

Mr DAVIS: I will. But, in relation to the previous question ---

The Hon. I. COHEN: Damage to adjoining crops from spray drift.

Mr DAVIS: Yes. I have recalled that an incident did occur where a landowner advised that the council spraying regime on the road had caused some problems to his grapevines.

The Hon. J. R. JOHNSON: Had it?

Mr DAVIS: It was some time ago, and it was not investigated to my knowledge. It was brought to my attention well after the event.

The Hon. I. COHEN: Is your council aware that some other councils in New South Wales have actually banned roadside spraying? Bellingen and Byron are two that I know of.

Mr DAVIS: I am not aware of that. But that may be known by our Parks and Landcare Service. I am not personally aware of that.

The Hon. I. COHEN: Would you be interested in investigating that and alternatives methods of dealing with the problem?

Mr DAVIS: Council is currently developing an environmental management plan for the city which is intended to rationalise issues that are relevant to spray drift, and we will be looking at all methods of control. Certainly, that will be an issue worth following up.

The Hon. I. COHEN: We had some discussion about the pesticide containers and their disposal. Is there an issue, or potential issue, in the council's opinion, in the burning of the stubble and the burning of containers that have not been stored? Is that a significant issue?

Mr DAVIS: It is something that has not been talked about at this stage.

CHAIRMAN: You raised the issue of residential pesticide use, whether it be for spraying fig trees where the spray might blow over the fence or onto vegetables in a backyard and perhaps even spraying for spiders and ants. What comments would you care to make to the Committee on those issues? Do you get many complaints about those sorts of things?

Mr DAVIS: No, we do not get a lot of them. I think it is a community education issue. Those people that are sensitised, I think, need to make their neighbours aware of what is going on. Perhaps it is appropriate for council to become involved in that process of education on the use of pesticides. I think it is a community issue that needs to be dealt with by the community, and we can be of assistance there.

The Hon. I. COHEN: What is your opinion regarding a minimum that residents, school bus routes, waterways or areas of environmental significance should be away from pesticide application in order to avoid spray drift? Do you have a policy on that?

Mr DAVIS: No, we do not. My own opinion is that different circumstances warrant different buffer zones and there is a lot of work that would be required before we could suggest anything there.

The Hon. I. COHEN: A previous witness who appeared before the Committee today mentioned that the application was dispensing with the aerial spraying from aeroplanes but that in certain circumstances a helicopter would be used. Has the council investigated the impact of that? I am wondering whether helicopter usage is a step forward, or whether the downdraft could create problems of its own. Does council have any opinion on that?

Mr DAVIS: Paul might be able to answer that.

Mr ANDERSON: That is one of the parts of the additional information that we are seeking from the applicant at this stage. There is some concern that application of chemicals by helicopter may have an impact that is as adverse as there is by fixed-wing aircraft. But, as I say, we are in the process of gaining additional information from the applicant in that regard. We do not believe that we have the expertise to answer that question at this stage.

The Hon. I. COHEN: Do you have any other area that you can call on for that expertise? Have those studies been done? Given that cotton is such a significant industry, has it been trialled in the United States? And are there reports on spray drift resulting from different methods?

Mr ANDERSON: I am not aware of a trial being done anywhere else in Australia or in the US. Under the best management practice guidelines that are issued by Cotton Australia, there is a little bit of information in there on cotton spray drift and the control of spray drift. In respect of the particular application before Dubbo City Council at the moment for the commercial growing of cotton at Oakben, there is some information that has been provided by the applicant in a draft format for a spray drift plan. That illustrates how this applicant intends to control spray drift in respect of his particular applications.

The Hon. I. COHEN: Who is responsible if that goes through the EIS and is given the go ahead and complaints arise from neighbouring farmers about contamination of their crops, or from the school bus proprietor, or someone else is affected? Who is actually responsible for that?

Mr ANDERSON: In the consideration of a consent, if council were to issue a consent in this regard, it would also be approving the spray drift management plan. So I would assume that there is really a two-pronged attack for a breach of that consent: one being through the Environment Protection Authority and its pesticide inspectorate, and the other one being through the Land and Environment Court regarding a breach of a consent condition.

You raised a question about setbacks. The only setback that council actually specifies under its local environmental plan is in relation to our 1S small farm estates. We require dwelling-houses to be set back 150 metres from a zoned boundary, where that zoned boundary abuts either the 1A or the 1I intensive or dryland agricultural zones. That 150 metres was a direct derivative from a State legislation for the Environment Protection Authority for spray drift and other nuisance chemicals.

CHAIRMAN: I would just follow up a question that the Hon. Ian Cohen asked. This has got nothing to do with any local application. Who does the council feel should be responsible if there is cowboy spraying? Should the consultant be responsible for suggesting that a particular chemical should be used on a particular crop? Should the spray rig operator or the aerial operator be responsible? Or should the farmer be responsible? Or should it be a combination of all three?

Mr ANDERSON: I think it should be a combination of all three, with joint and several liabilities. The contractor, on my understanding, would actually say to the property owner, "You need to spray this certain chemical at this time to prevent impact from a certain bug or disease." Then a contractor is appointed to come in and do the job. It is my opinion that they would all be liable for non-compliance with a spray drift management plan as we have suggested.

CHAIRMAN: But, if the farmer says, for example, "I want you to go and spray that crop with this particular recommended chemical, but don't do it outside the guidelines," and the sprayer goes and sprays outside the guidelines, should the farmer be responsible?

Mr ANDERSON: I would argue that the farmer still has a degree of responsibility insofar as the contractor is operating on land under the control of the farmer, and therefore he should have the control that would enable him to stop that contractor from acting outside the guidelines when the farmer becomes aware of that fact.

CHAIRMAN: And say, "I won't pay you if you do it outside the guidelines"?

Mr ANDERSON: Yes.

CHAIRMAN: Certainly, in a situation where the farmer wants a particular crop sprayed with a chemical at a stronger mix than normal and the applicator says, "No, I won't do that," the farmer could keep going until he finds one who will, obviously he should be liable.

Mr ANDERSON: That is right. And the aerial applicator himself should also be liable for working outside the set of recommended guidelines. If you look at the circumstances with crops other than cotton, such as the cereal crops and those sorts of crops grown throughout New South Wales, the landowner virtually provides the land and grows the crop, whereas an agronomist comes in and actually takes control of the crop, deciding what it is to be sprayed with, when it is to be sprayed, and in what quantities. So there is a liability in the agronomist coming in and virtually taking over control of the growing crop, whereas the agricultural landowner provides the land and whatever is required to grow the crop.

CHAIRMAN: In other words, you are saying that the Act should be drafted such that commonsense should be to the fore and that if a matter gets to court the Act should not prevent someone who has contributed to it also being liable?

Mr ANDERSON: That is right. If you take a parallel to some of the recent legislative amendments to the Environment Protection Authority, whereby joint and several liability clauses were built in. Those are the issues that I am saying probably still need to be brought into this sort of legislation.

CHAIRMAN: Obviously, there obviously needs to be a legislative provision so that, for example, if a farmer took reasonable steps to stop spraying at the wrong

time, or with the wrong chemicals, and did everything reasonably possible, he should not be liable?

Mr ANDERSON: Yes. There is a duty of care, and if he has maintained that duty of care and taken all reasonable steps that are required, there is probably an argument that that liability is reduced or diminished.

The Hon. J. R. JOHNSON: I ask this question of John Davis. There is no cotton grown in your local government area at the present time, is that right?

Mr ANDERSON: I think I might ask Paul to answer that question.

Mr DAVIS: At this time, sitting here in this hearing today, the council is not aware of any crops that are grown ---

The Hon. J. R. JOHNSON: I am talking about cotton.

Mr DAVIS: Yes, cotton crops that are grown within the city with any consent. We were aware of a crop that was grown for trial purposes, in a different location to the one over which the actual application has been lodged. When we interviewed the person involved, he was unaware, or claimed that he was unaware of council's planning requirements and the requirement for consent, and he has undertaken not to grow any additional trial crops or any crops for any other purposes until such time as he is able to gain consent from council.

The Hon. J. R. JOHNSON: People who are concerned about the effects of cotton growing and any of the applications that may be made to control or eradicate bugs or whatever. If the council makes a decision that grants a landowner or leaseholder permission to plant cotton, and subsequently a number of actions are taken, can you see council being enjoined in any legal action? If so, does the council have or envisage having indemnified itself?

Mr ANDERSON: As with any determination that council makes, be it an approval or a refusal, there is a chance – probably an even chance – that the council will end up in the Land and Environment Court, either through a disgruntled applicant not being happy with the conditions of the consent or the reasons for the refusal, or on a third-party appeal on a point of law under class 4 proceedings under the Land and Environment Court Act. In either case, council does not have the ability to indemnify itself under the Act. Council's decision is a decision that is made under the Act, and a determination which is made under the Environment Protection Authority Act is open to appeal and challengeable by a person taking it to the Land and Environment Court. In those circumstances, as I previously said, there is no indemnification available for council.

The Hon. J. R. JOHNSON: After all these consents have been granted, could you see a time where concerned citizens, other landowners who maintain that their crops have been affected, or the water that they may have in tanks on their property has been affected – and I emphasise that this is after the council has granted consent, and

after it has gone through all the processes – can you see that the council ultimately can be held responsible for granting the application in the first instance?

Mr ANDERSON: A lot of it would depend on the application that was lodged with council and on what information was available to council when it made the decision, and whether or not that application in itself actually contained a spray drift management plan or other form of management plan that said that what you are talking about would not actually occur. In my opinion, if council were to grant consent to an application that said that was not to occur, and it did occur, the applicant or the person controlling the development – and cotton farming in the Dubbo city area is development – would themselves be liable because they would not be complying with the consent that was issued by council.

It could be argued that council could be joined in any action taken in the Land and Environment Court because the council issued that consent without having properly researched that matter. But my experience would lead me to say that in those sorts of cases the onus comes back to the person taking the action to prove that council did not take that matter into consideration when determining the application. So I suppose the short answer to your question is a yes, but it is also a no.

CHAIRMAN: Basically, councils are not liable provided they have taken due care.

Mr ANDERSON: Provided we have taken due care.

CHAIRMAN: And researched it thoroughly.

Mr ANDERSON: And researched it thoroughly, and taken all steps necessary to determine the potential impacts, which is what council is required to do for any development under section 79(c) of the Environmental Planning and Assessment Act. If we have followed those requirements set out under the Act and we have issued a consent or made a determination in accordance with that Act, we have a certain degree of protection afforded to us by the State government, which is the owner of the Act and which also is the owner of our local environmental plan because an LEP is a legal document that is gazetted in the *Government Gazette*, and hence it becomes legislation, the same as a speeding restriction.

CHAIRMAN: I thank you for your time and for the information that you have given the Committee. However, there are a few questions that I would ask you to take on notice and respond to as soon as possible. Those questions are:

1. In which areas would you like to see improvements by State government agencies such as the Department of Urban Affairs and Planning and the New South Wales Environment Protection Authority to minimise the risk of impact on any person, property or environment from use of pesticides?
2. How important is town planning to minimising incidences of local conflict between incompatible land users?

(The witnesses withdrew)

SHIRLEY CHRISTINA JEFFERY, School Bus Operators, of 94 Warren Road, Narromine, and

ANDREW JOHN MONTGOMERY, Primary Producer, of “Taranah”, Nyngan, sworn and examined:

CHAIRMAN: Shirley, in what capacity are you appearing before the Committee?

Ms JEFFERY: I am appearing for myself and my husband, who are school bus operators.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms JEFFERY: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Ms JEFFERY: Yes.

CHAIRMAN: Andrew, in what capacity are you appearing before the Committee?

Mr MONTGOMERY: As a private citizen.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr MONTGOMERY: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr MONTGOMERY: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, then the Committee would be willing to accede to your request and take that evidence in camera. However, I would warn you that, whilst this Committee resolves to hear the evidence in camera and therefore treat it as confidential, Parliament always reserves the right to overturn the Committee's decision and make the evidence public. Shirley, would you like to make a brief statement before we ask you questions?

Ms JEFFERY: I have some notes and I would like to read from those, if I may.

CHAIRMAN: As long as we will have time for questions.

Ms JEFFERY: I will start, and you tell me if I am being too long, and then you can keep me quiet. How about that?

CHAIRMAN: Right.

Ms JEFFERY: We left Nevertire in January 1974 because we could no longer tolerate the chemicals associated with the cotton industry. We had put up with ten years of chemical assault. Spray drift affected everyone and everything – our home, our school bus and even the local school.

We moved to Narromine, purchasing a home and school bus runs, never imagining that cotton would spread so far east. Unfortunately, it did. The Buddah-Byron school bus service that we operate on the Warren Road, Narromine, is regularly sprayed by chemical applicators. On some occasions I needed to use the windscreen washers and wipers to clear the chemical off the windscreen.

It is not just aerial spraying that has been a problem but also ground rigs used by traditional farmers for weed control, fire breaks and normal crops, et cetera. Narromine Shire Council weed control spray rigs have had little or no regard for the school bus or children standing waiting at their pick-up/set-down stops. No spray warning signs are displayed on the roadside by council, and the sign on their spray rigs is useless. By the time one reads the sign on the vehicle it is too late to close vehicle windows and shut off air vents, et cetera.

On one occasion, while operating my school bus, I met the Narromine Council spray rig with its boom spray in full operation. As we passed each other the operator made no attempt to stop spraying. There have been many occasions when council spray rigs have failed in their duty of care and have put the community at risk. How can the Narromine Council implement, monitor or control spray practices for the district when the council staff are not spraying chemicals safely.

Some farmers put up signs when they are going to spray, and instead of removing them when spraying is finished they leave them on the roadside for weeks and weeks. Others do not bother putting signs out at all. How can this be good neighbour policy or best management practice?

After I reported a spray incident on 9 December 1996, the Environment Protection Authority asked to interview me on video as the Hon. Pam Allan wanted a video of my complaint. This was organised by Dubbo Environment Protection Authority staff the next day. The perpetrators took nine days after the same request to take part in an Environment Protection Authority video interview – quite long enough to practise or cook up a good yarn to get themselves out of trouble. They said it did not happen. Why would I report the incident if it did not occur? I had no ulterior motive.

Some months later I decided to have some blood tests done. The test results showed I have multiple chemical contamination and the medical specialist involved

suggested I stop driving the Buddah-Byron service to stop further deterioration of my health. It was obvious that 30 years of driving school buses under spray drift conditions had created health problems for me.

We employed an extra driver, and my husband took on the Buddah-Byron service. On 9 February 1998 my husband reported a helicopter incident to the Narromine Chemical Liaison Committee and the Environment Protection Authority. His report is as follows:

I encountered an aircraft spraying a cotton crop while travelling south along the Warren Road having just picked up four children in my school bus. I slowed speed to allow the helicopter to finish its run, thinking it would then hold back and let me pass. This did not happen. The helicopter continued with its spraying. I had to stop the bus to avoid being sprayed and then waited. The helicopter continued spraying and made no attempt to let me pass.

A very detailed fabrication of the incident given by the perpetrators was eventually received by us some five months later. Why would my husband, a man with more than 30 years experience owning and operating bus services, report the incident if the helicopter pilot had not put the school bus and its occupants at risk? He had no ulterior motive.

It is interesting to note that after my husband's complaint the family with the four children who had been on the bus at the time of the spray incident was asked to leave the house they were renting. The house was then relocated out of our bus pick-up area. Some bus operators are reluctant to report careless chemical spray drift and try to keep the incidents quiet. They do not want retaliation.

The Narromine Chemical Liaison Committee is not a broad representation of the community. It was meant to have an independent chairman. Instead, it has a cotton grower as its chairman. The committee members are predominantly cotton farmers and people earning income from the cotton industry. The only exceptions are the Narromine Shire Council Director of Environmental Services and the Dubbo Environment Protection Authority representative. Our local community has become disillusioned with the Narromine Chemical Liaison Committee. Two friends of ours have left Narromine. They were sick and tired of getting nowhere and receiving the run-around when they made a spray drift complaint.

Narromine's population has dropped by 200 since the last census. If cotton brings money and people to a town, why has the population dropped? Some banks have closed, some shops have closed, and as student numbers drop teachers have been lost from the schools.

The irrigation industry's good neighbour policy, and now best management practice, are only words. We need all people using chemicals to be accredited and accountable for their actions. Until they are forced to be accountable for their actions, there will be no improvements for communities at large. Irrigators and their employees have learned over the years that they are untouchable.

Chemicals sprayed on paddocks and roadsides are not the only problem. The Orana Aviation chemical evaporation pond, situated at Narromine aerodrome, has been a problem for years. The pond puts off a vapour drift when not maintained properly. I have lodged numerous complaints, the latest on 25 May 1999. On each occasion council intervention has not rectified the problem – there has never been anything by band-aid solutions.

Narromine Council staff have told me that Orana Aviation will be moving to a new site closer to Trangie before the next cotton season. Council staff have also told me that the pond will still be used at Narromine aerodrome for part of each cotton season. Environment Protection Authority chemical services executive, Mark Gorta, visited my home about two years ago, when we discussed a number of issues, including the evaporation pond. He said it was too close to the residential subdivision that we live in and should not be allowed so close to the town.

An Environment Protection Authority monitor was placed at our residence and samples were sent away for testing. Samples were also taken from the pond site. I have never received the results from the pond site sampling, only a note from the Environment Protection Authority saying that the sample results were late.

Aerial applicators are the people we are told to trust while they are spraying our crops. They can't even use best management practice with their evaporation pond! What chance does the community have when the Clean Air Act is not being adhered to or enforced? Where are the rights of ordinary people? Surely we are entitled to clean air and a safe environment.

The problems I have spoken about today are a concern to many, not just for my husband and I. Hopefully, the Standing Committee will take on board the issues I have raised and something will come out of this inquiry.

CHAIRMAN: Andrew, do you have some comments to make?

Mr MONTGOMERY: Yes, I will make an opening statement. I also have some documents that I would like to issue to members of the Committee.

CHAIRMAN: What are they?

Mr MONTGOMERY: There are some chemical analysis results from a fish kill on my property in 1993. I will refer to them as I go through. I have got an opening statement to make.

CHAIRMAN: Before you do that, we will have a motion to table them.

Documents tabled.

Mr MONTGOMERY: There is one portion of that evidence that I would like to be looked at in private. I will refer to that before I get to it.

CHAIRMAN: Proceed.

Mr MONTGOMERY: My name is Andrew Montgomery, and I live at Nevertire. I have lived there all my life on my farm, named "Taranah". I have become more and more horrified at the problems that are being caused by widespread agricultural and other chemicals being used around our district, and it seems everywhere else, but more particularly in the Warren-Nevertire-Nyngan area, as this is where my wife, my family and I live.

Things like the deterioration of the native vegetation that is left, especially around the perimeters of cotton farms, and also the unexplained birth defects et cetera around our area are a cause of concern. For example, there are three birth defects from three families who live here or work on my neighbouring farm.

There are also other major problems created by the agricultural pesticides being used, specifically in the beef industry, eg Helix and endosulfan, with seemingly no repercussions on the two industries that are responsible, that is the contract chemical applicators and the cotton industry.

Having lived in Nevertire all my life since 1956, I know that there are many less people living in this small district now than there were. When I was in primary school during the years 1961 through to 1967 there were in excess of 100 children going to the local primary school. There are now 36 students. I may stand to be corrected, but I can remember only one child with any serious problems who was going to school when I was there. As I recall it was eugenic; it was not caused by the environment.

From my observations over the past 30 years of cotton farming around our district, there are some major problems confronting everybody living and working with agricultural chemicals, and that is through their application by aeroplane. It is just too uncontrollable and too inaccurate, especially with the use of ultra low volume formulations. May times I have witnessed chemicals being applied by air, and the drift was astonishing.

There was one incident on my neighbouring farm where our neighbour was spraying a sovereign yellow, pre-emergent chemical I believe it to be, and I was watching from the shire council road. If you would like to look at the documents I have given you, it is page 3 on the map. The aeroplane was spraying in a pattern to and from the shire road at 90 degrees to it.

The Hon. I. COHEN: Are you talking about the circle now?

Mr MONTGOMERY: Yes. There is a little square written on there, and Elsenor is the property that I am referring to, and "Taranah" is my property alongside it. There are a heap of little banks and drains and things drawn on it. The spray could be seen at least 400 metres – or one and a half power pole spans – away from where the plane was spraying, before it got to the stage where you could not see it any more.

I have also witnessed the results of aerial application of selective herbicides to a wheat crop, with large gaps where the chemical was not sprayed. And, when the spray was applied at the correct rate there was almost a 100 per cent kill. This hit-and-miss approach must be having serious effects on the resistance of the target pests to all chemicals.

I would really like to see this Committee think seriously about the limiting of aerial spraying in the light of some of the evidence that you will look at in a minute. That concludes my opening statement.

The Hon. I. COHEN: You have both had separate experiences with aerial spraying. Would you consider it acceptable if there was ground spraying? Would you support the use of chemicals under a ground spraying regime? Also, in terms of aerial spraying, you referred to light aeroplanes. But what is your opinion, Ms Jeffery, being a bus operator moving through the areas and the experience of the helicopter spraying as opposed to aeroplane spraying?

Ms JEFFERY: We have found, from the experiences that we have had, that helicopters beat the chemical. You only have to see what happens when a helicopter is leaving the ground or coming down to land how it beats up the dust. We have found that it has the same effect of the aerial spraying application; it beats the chemical and disperses it. We have found no improvement with the application by helicopter.

Mr MONTGOMERY: It is interesting that you ask about ground spraying. On my trip to Dubbo, about 3 kilometres east of Nevertire this morning, there was a ground spraying rig some 500 metres from the public road, I presume spraying a weedicide as it was on a wheat or barley crop, and the smell of the chemical almost made me ill while I was driving on the highway.

I purchased a Mercedes tractor in 1978, and in some of their publicity material was information about some boom sprays that were available in Europe 21 years ago that had shields over them for the express purpose of stopping drift, and Europe is very much more closely settled than we are. Now, that technology was available 20 years ago; I want to know why it is not even being looked at out here.

With regard to my interest in pesticides and oversprays, it goes back to 1978 and 1979. On my own farm I grew a small plot of linseed. If you refer to page 2, which is the diagram of my farm, there are two hatched areas. In 1978, I had a 73-acre – about 30 hectares – area of my farm (of 2,045 hectares) sprayed with a specific non-DDT based chemical. If you refer to page 1, on 18.9.78 what did I have in my cattle? It is 0.09 parts per million of DDT. The following year I planted another small block of linseed, 120 acres, sprayed by the same contractor. Again I specified a non-DDT based chemical. And we have got 0.15 parts per million in my cattle straight after the spray.

So I took the decision then that, if I had ordered a DDT based chemical, it was my responsibility that I got overspray. I specifically asked the company, which was Grazcos, not to use a DDT chemical, and now I have got this turning up in my cattle on

my own land. I took the albeit goody-two-shoes attitude to ban chemicals from my farm altogether, and I have not used chemicals on my farm since that 1979 incident.

If you look at page 1, again in 1986 I had more DDT contamination. Next door just happened to be growing soya bean. They were controlling insects. I was advised in 1978 that I was very close to being quarantined because of the chemical overspray. That is why I took the decision not to allow any agricultural chemicals on my land from that day till now.

I am now in the process of doing a cattle care course, which also required me to take a farm chemical users course – of which I do not know the results yet as to my ability to go and buy and use agricultural chemicals. It seems to me that what I learnt at the farm chemical users course is certainly not being applied by the aerial applicators in almost all instances. That is despite all these sorts of overspray problems, and they are still occurring.

I am sorry I have not got copies of each of these for each of the members of the Committee, but the land clean-up now is one headline, and that was dated 28 January 1999 – remember this is not me saying this; this is what has been printed for public viewing. There are other instances. I go back to a family at Trangie fighting to retain clean-green image – another Land expose on February 16, 1995. CUZ was the culprit then. It is now endosulfan.

The cotton industry has been at pains to point out that it won't be another E list. No, it may not be, but they are still going to be using aircraft for spraying their crops. It may be some other chemical next year. That is my biggest concern.

The Hon. I. COHEN: Mr Chairman, could we have those tabled?

CHAIRMAN: Do you want to table them? We can get copies of The Land easily.

Mr MONTGOMERY: They are only newspaper articles. That is all that is there.

CHAIRMAN: If those are the only ones that are there, you can table those.

Mr MONTGOMERY: You can have a list of all of those. That is no problem. It is just so that you know it is not just me going on about this. Page 1 that I have tabled came from the Department of Agriculture. With our cattle care, we are required to have a tail tag history of chemicals on our farms, to see whether we have a problem with regard to chemical contamination of our cattle. That is the big buzz word thing in the cattle industry at the moment. It really does frighten me that we are continually seeing this all across New South Wales and in southern Queensland.

If we could go on to page 4 (a) through (c), there is an Environment Protection Authority results of an analysis of samples taken in 1994. I would invite you to have a look at page 4(c) and the right-hand column where it has been circled. That was a

control dam of 1 kilometre, measured by the Soil Conservation vehicle from the closest cotton. That was taken as a control. The chemical they were looking for was endosulfan. There was very minimal drift conditions on the particular morning that these chemicals lobbed in my dams. I urge you to think about buffer zones when you look at all the other evidence that has been coming in from all the other applicants. But that was a kilometre away, and the wind drift in that particular situation is almost zero.

There are lots of things there from the Environment Protection Authority. I will go on to pages 5 and 6. After we had this chemical overspray incident with regard to the fish kill that page 4 refers to, we were notified by the Environment Protection Authority that they would not pursue the matter with the offending company, which in that case was Bundamba Pty Ltd, formerly Macquarie Valley Air Spray. We were asked to go to mediation.

The mediation took two or three days of our time down here in Dubbo and it cost quite a considerable amount of money. The letters regarding the mediation are there, at pages 5 (a) through to (e). The mediation, as far as I was concerned, was a total waste of time. In the very first spray that took place after the mediation they were back over the boundary fence again.

CHAIRMAN: Before you go off that one, I would like to refer to the Environment Protection Authority letter, which says:

We are satisfied that there is sufficient evidence that the waters of the dams in question were polluted by the activities, but at this stage it is decided not to institute any legal proceedings.

Did they tell you why they decided not to institute proceedings?

Mr MONTGOMERY: No. You might refer to page 6 of the Pesticides Act, which I have supplied there.

CHAIRMAN: That is the answer.

Mr MONTGOMERY: I presume that is why, but I do not know that to be the case.

CHAIRMAN: In other words, section 37 of the current Pesticides Act states that it is an offence to cause risk, and that a person shall not wilfully or without reasonable cause do anything likely to cause a risk. So, what you are saying is that it is difficult to obtain a prosecution.

Ms JEFFERY: It is impossible.

Mr MONTGOMERY: How can you prove wilfulness?

The Hon. I. COHEN: I think that will change, actually.

Mr MONTGOMERY: I certainly hope so.

CHAIRMAN: That is exactly the sort of thing we are looking at. We are running a bit behind time, and members would like to ask you a few questions, so would you bear that in mind.

Mr MONTGOMERY: By all means.

Ms JEFFERY: Can I just say that I would like to contradict what Peter Cone from Cotton Australia said.

CHAIRMAN: If we can allow Andrew to finish first.

Ms JEFFERY: I am sorry, Andrew. I thought you had finished.

Mr MONTGOMERY: That is alright. The next little bit is on page 7 of the documents I have tabled. I would like this particular part to be dealt with in private.

CHAIRMAN: Could we leave that till last?

Mr MONTGOMERY: We certainly can. That is not a problem. As I stated, I am a primary producer, primarily involved in cattle production. I draw your attention to page 8 (a) through (f). I do not know whether any of you gentlemen run a business selling primary products or whatever. As I stated, I have not used chemicals on my farm since 1978, and yet on 20 December I received a letter from the New South Wales Department of Agriculture, with my tail tag on the top of the list, saying that I was on a Helix monitoring list.

If you look through those documents, you will see that we had to fill out a form from the Pastures Protection Board with regard to whether we used chemicals - in this particular case CFZ. In part 2 on page B it says, "Since January 1994 have any of your cattle been grazed on land adjacent to a cotton farm, including stock routes or private property? Answer "yes" or "no" or "not sure"." Well, because I am physically right alongside a cotton farm, we answered "yes". So, straight away, I am on that list whether I need to be there or not. If you look down a little bit further, you can see that we wrote a letter to ---

The Hon. I. COHEN: Could I ask you a question while you are on that one?

Mr MONTGOMERY: Yes.

The Hon. I. COHEN: Are you on that list because of results of tests?

Mr MONTGOMERY: No, because of my proximity to a farm. If you look at the map on page 3, you will see "Taranah" is an L-shaped block alongside "Elsenor", and that is why I am on it. You might also note that the people on the other side of the highway are on that list as well. That means that they have a physical buffer zone of some 500 metres, because there is a railway line and a highway.

Because we had been having a bit of a look at this, we started to look through how we could get ourselves off that listing. I was able, at great pain, to extract from Macquarie Valley Agricultural Services a letter stating that they had not used CFZ on "Elsenor" during the 1993-94 cotton season. So therefore we were able to get our tail tag number removed from that. It was still a problem, because we now have to modify our whole management process because of what our neighbours do. I am finding that more and more distasteful.

I have had all the country along my boundary quarantined for the last six months, simply because they are growing cotton there. I cannot use that land without some risk to my own cattle or cattle that I may have there on agistment. That is a real worry to me. I do not know whether you people who are in business would like it if the statutory authorities came to you and said you must cease trading or quarantine that much of your business for six months of a financial year. It makes trading pretty awkward. And I think it is all due to the fact that the Pesticides Act is very hard to police.

CHAIRMAN: We might go to questions before we run out of time.

The Hon. I. COHEN: Mr Montgomery, as a landowner do you see any avenue for redress there? Is there any way that you can go to make the neighbour or authorities responsible at the present time?

Mr MONTGOMERY: It has been related to me that if I see that the cotton industry is not doing the right thing that I should take them to the civil courts. Mr Kelly just read from a letter from the Environment Protection Authority, which decided not to take on this particular incident of the fish kill. I ask you why. I suggest it could be financial. I certainly would not be willing to risk my whole farming enterprise on the off chance of being able to successfully prosecute my nextdoor neighbour. It is almost financially impossible for a small farmer like myself – and there are lots of other small farms round the area and elsewhere in New South Wales – because, whilst that word "wilful" is in the Act we have almost not got a leg to stand on.

The Hon. I. COHEN: You set out details of incidents clearly in your evidence, even though they might not be supported by action under the Act. Do you have any other evidence from other communities of this type of situation?

Mr MONTGOMERY: I do. I did not bring them with me today. The Gunnedah area is rife with the same sorts of problems.

The Hon. I. COHEN: Perhaps you could furnish us with that information on notice.

Mr MONTGOMERY: I would be able to put you in touch with people in the Gunnedah district that are having these same sorts of problems, yes.

The Hon. I. COHEN: Ms Jeffery, I understand you have concerns with the type of chemicals that are used in cotton production, as well as what is said to be used as against what is actually being used. Could you explain that to the Committee?

Ms JEFFERY: You mean what the Cotton Australia representative said?

The Hon. I. COHEN: Yes.

Ms JEFFERY: No. What I wanted to say was that he misrepresented the situation when he said cotton was not grown twice in the one block of country. That is not right. Having operated buses for 30 years and having gone the same road day after day and year after year, we have found just the opposite. They use a cotton trash machine, like a big lawn mower and mulcher type of thing, and they mulch all the cotton trash up, and the cotton goes back in the following year. We have seen that over the last 30 years. It is still going on. So I feel that he misrepresented the situation there.

The Dubbo City Council seem to have a lapse of memory. I do not know which one said it, but one of them said that he could not recall any spray incidents being reported about their spray rigs in Dubbo. I know for a fact that they received several reports, and one from the Orana Heights Primary School because they sprayed the oval right nextdoor to the school and the principal and some of the parents complained. So I feel that is a lapse of memory there.

The Hon. I. COHEN: Mr Montgomery, as a farmer, can you see any application method that you would consider to be safe and appropriate? Are you opposing the use of pesticides per se, or are there methods which in your experience could be undertaken that would do the job and protect the neighbours?

Mr MONTGOMERY: From equipment that I have seen advertised, especially in literature from Europe, there is equipment available for use on ground rig applications. These shielded boom sprays have to be something that should be looked at, simply because they alter the very fine floating droplet to the stage where it either goes onto the target crop or it drips onto the ground in a larger droplet form that cannot just float off in the breeze.

With regard to whether I do or do not like chemicals, I have chosen not to use chemicals on my farm. I will qualify that, however. Twice I have had spot spraying done by the Castlereagh Macquarie County Council for Bathurst burr control, because by law I am required to control Bathurst burr on my farm. Both times it was not very well done. I don't know whether the applicator really did not know what he was doing or what, but I was very disappointed in the results, to the point that I would not do it again.

CHAIRMAN: What was used?

Mr MONTGOMERY: They used a Roundup, but I don't know whether it was Monsanto's Roundup, this last Bathurst burr season. I think it was MCPA, but I am not

sure of that. But that was done to fulfil a legal requirement. I did not like having to do it, but I had a Bathurst burr problem and I did not have the time nor the physical ability to get at the burrs because it was very wet and it was impossible to physically plough them out. So it was a case of give it a go and spray what we could.

But the results were very disappointing. Okay, it was probably an application problem. But I get back to the aerial part of it. I have been through the terms of reference, and some of the terms of reference relate to sustainable agricultural activities which currently rely on pesticide use. As I see the aerial spraying of pesticides, it is really asking for a major problem with resistance by the continued use of aerial application, simply because there are big areas that are missed.

I have seen this in a wheat crop. They are large paddocks admittedly; they were 1000-acre paddocks, and there are strips 100 metres wide, right down the middle of the paddock, every second or third run of the aeroplane. That means there is a resistance patch that must be in the middle of that crop. The crop is still infested, and the insect that survives the spraying will reproduce itself. There will be a certain proportion of those insects that will be resistant simply because they have been in touch with that chemical. It is too much of a hit-and-miss thing with aerial application of chemicals.

The Hon. J. R. JOHNSON: Mrs Jeffery, as a result of your blood tests, what is the prognosis?

Mrs JEFFERY: That I have multiple chemical contamination. I have that documented.

The Hon. J. R. JOHNSON: That is what the results have shown. What is the prognosis? What is likely to happen?

Mrs JEFFERY: I was tested for organochlorines?

The Hon. J. R. JOHNSON: But what is likely to happen?

Mrs JEFFERY: I come from a long line of Scottish long-livers and tough nuts, and I will be flat out if I can keep up the tradition, the way I'm going. Is that simple enough for you?

The Hon. J. R. JOHNSON: It is too simple for me. What does the doctor say is the likely effect?

Mrs JEFFERY: He said to get out of the area and to try to keep myself away from chemicals. I wear a mask when I go out to hang my clothes on the line or to work in the garden, because I never know when there is going to be a drift or there will be odour from this evaporation pond at the aerodrome. I tried to wear a mask on the bus run, but that was just plain ridiculous so we pay an extra \$500 a week to put a driver on, and you don't do that unless you have got a problem.

The Hon. J. R. JOHNSON: As a result of the buses being sprayed, have you heard of any of the children having a health problem?

Mrs JEFFERY: Nearly all of the children that came from the cotton growing area on this particular service – like, that came from Byron agriland – they all had continual respiratory problems: runny noses, coughs, and the majority of them had puffers. They all seemed to be puny, sickly type of children.

The Hon. J. R. JOHNSON: Mr Montgomery, you have told us that you have taken a very conscious decision to use no chemicals. Has that reduced your income?

Mr MONTGOMERY: I don't honestly believe so. I did use two yearling or less-age calves last year that could possibly have been put down to pulpy kidney. But, out of a herd of 230 head, I think two calves is a very small loss to sustain. I do see the absolute use of chemicals with regard to agricultural and the sustainability of agricultural being a major problem in the future simply because the genetic base is getting very used to being supported by chemicals. I cite the chicken industry in particular.

I have a small amount to do with the chicken industry up above Newcastle, and they use a lot of hormones, et cetera, to grow their chickens. When I first became involved with these people, when I met my wife in 1983, they were getting one runt per batch of 25,000 birds. They are now getting runts to the order of 400 and 500 per batch. If I were a chicken grower, I would be starting to worry pretty drastically about that, especially when they are looking at a turnoff period of some six weeks. That is what is down the track for all our other industries, cotton included, as I see.

Back at the turn of the century, whilst the cotton yields were very low, because of close genetic proximity to tobacco, and therefore the nicotine in tobacco, it had a natural chemical resistance. I just see that the cotton industry has bred itself into a hole, literally chasing high yields. The cattle industry I see going the same way because of its use of the 7-in-1 and 5-in-1 vaccines to stop the likes of pulpy kidney. The weak side of the genetic base is being supported.

Mrs JEFFERY: BT cotton was held up as the answer to the chemical problem. It has been shown that it is not. This last cotton spraying season Inguard, or BT cotton, has been sprayed 16 times. If it was such a wonderful plant, why did it need to be sprayed 16 times? That has been in the paper several times, and there has never been a cotton grower stand up and say, "That is incorrect" and ask for a retraction.

CHAIRMAN: What is your comment about Dubbo City Council having some through planning in advance?

Mr MONTGOMERY: I think it is a great thing because nobody seems to know or care or be looking for any problems in the future. That is what I see. I went to a meeting of the Bogan Shire Council on Monday night, and they are having the same sorts of problems. The people that are looking at putting the cotton in, the ones that are right close to their water supply, say, "Oh, no, we're not putting cotton in." But, at this

very moment it would be a very stupid move to put cotton in simply because cotton prices are terrible.

CHAIRMAN: I thank you very much for your documents and for the evidence that you have given us this morning. I do have some questions that I would like you to take on notice. They are:

1. Can you briefly describe your concerns regarding industry-sponsored efforts to manage and regulate pesticide use?
2. Can you expand on your concerns raised in your submission about Narromine Council's use of pesticide spray rigs?
3. What has been Narromine Council's response to the concerns you have raised regarding council's roadside application of pesticides?
4. Can you expand upon the view raised in your submission that the New South Wales Environment Protection Authority should have the capacity to overturn local council relating to pesticide use and management?

(Mrs Jeffery withdrew)

(Evidence of Mr Montgomery continued in private session)

Evidence in private of ANDREW JOHN MONTGOMERY:

CHAIRMAN: I understand Andrew wants to talk to us in private briefly about an agreement that he has with a neighbour about spraying.

Mr MONTGOMERY: If you would refer to page 7 of the information I have given you. We had a fish kill, which is documented, along with the chemical analysis. The Environment Protection Authority went down this course of mediation. Just for your interest I should say that, after being through mediation, I consider mediation to be where the wronged party is made to feel guilty. I say that tongue in cheek because of what has happened since.

I draw your attention particularly to item No. 3 on page 7. It says that if aircraft are to be used for spraying of pesticides on Elsenor, the aircraft is not to be turned over the Taranah property. I would take that to mean not go over the boundary, which is on page 3 of the map of the Elsenor and Taranah boundary, which is common for the whole length of Elsenor and about three-quarters of the length of Taranah.

I was ensured by the Environment Protection Authority that solicitor, who at that stage was Murray McArdle, that my fears were totally unfounded with regard to the policing of this matter. The very first time Bundamba Pty Ltd sprayed Elsenor I had a canary-yellow dual-cab Hilux parked on the boundary fence, and the plane literally flew over the top of me three times, as if to say, "Up yours, Jack, we will do as we like." That was only two months after this agreement was signed.

So, with regard to policing specifically the aerial agricultural spraying industry, I really have a worry because I have been through it. I am watching this very plain country; there are no trees between me and the cotton. I can see everything they do from my living room – and they know I am watching them. But they treat me with disdain – after this agreement. It is my concern that this Committee should look very seriously at re-writing the Pesticides Act, especially looking at the word "wilful" in it. That is a sincere worry of mine that this should not happen again.

When you go through all the documentation that I have given you, and you get to the endosulfan survey for instance, again we ran the risk. If I had to sell my cattle in Dubbo, I ran the risk of taking a 20 to 30 per cent dockage – just simply because I am alongside a cotton farm. There is another overspray incident at the moment that is being investigated by the Environment Protection Authority. That involved a helicopter. So, if you are thinking that the helicopters are okay, I would like to say that this is also a problem. It has already happened.

I was rung by my neighbour, "Please come and have a look at the helicopter and how much less drift we are getting." That was after we had already been sprayed. It is not cricket. And yet the cotton industry – and I single the cotton industry out because it is the one that I am next door to, and it does not necessarily mean the cotton industry only; it is anybody who uses aerial application of chemicals.

The Hon. I. COHEN: The cotton industry would be fairly intensive?

Mr MONTGOMERY: About 85 per cent.

The Hon. I. COHEN: Is there any other crop that has a similar use?

Mr MONTGOMERY: Soybean. I don't know whether you people watch television much, but you see advertisements for soy products, putting them forward as being healthy. If there is contamination in cotton, why isn't there contamination in soybean? It is exactly the same chemical regime that is being used.

The Hon. J. R. JOHNSON: There was an article in yesterday's or today's *Herald* about soybean.

Mr MONTGOMERY: I don't get any of the local papers or any papers because we live out of town. But it is a problem, and it does not seem to be being addressed by anybody. The Environment Protection Authority, when we went through this mediation, seemed to have the attitude, "So what? Who cares?" The attitude of the cotton farmer in this particular case, Robert Pengilly, was, "It's only a few fish in a farm dam. They won't do anything." He was right. This was two days after it happened. That is a real worry to me.

The Hon. J. R. JOHNSON: Tell us about those fish. Were they introduced fish?

Mr MONTGOMERY: They were put there by flood. There were mainly bony bream, but we also found Murray cod and yellow belly dead. One of the men from Fisheries at Condobolin or somewhere came and had a look, and National Parks and Wildlife came and had a look because they have got the same problem with cotton alongside the marsh. As far as I can see, that is an environmental disaster waiting to happen because there is nobody watching them. That is about all I wanted to tell you.

The only reason I wanted this in private was because the only way they would be party to this agreement was if it was not publicised. This has got to the stage where I think it needs to be publicised. I have been approached by another farmer that I am doing work for at the moment in my other business, in earthmoving. He has been approached by his nextdoor neighbour with regard to using endosulfan this coming cotton season. He said, "What am I going to do? I don't know what to do. I don't know what to ask for." I am going to show him some of the things that he can ask for. I cannot give him this agreement as something to go by. But there is a real problem.

The industry has this perception that they are untouchable now. It has been said to me, "If you use 2,4-D," - and 2,4-D is the big thing that the cotton industry hates because 2,4-D is extremely toxic to cotton - they just trot the label out and say, "Here, brother, look at this." It says on the label that you cannot use it near a susceptible species. I don't know whether you know it, but the cotton industry is a fairly big user of 2,4-D during the winter period because it controls weeds that they cannot control

with anything else. But, talk about it during the cotton period and they go off their brain.

(The witness withdrew)

(Evidence in private session concluded. Public hearing resumed)

BARBARA DOREEN ELDERSHAW, Home Duties, of 3 Hyronimus Avenue, Wellington, sworn and examined:

CHAIRMAN: In what capacity are you appearing before the Committee?

Ms ELDERSHAW: As publicity officer for the Australian Network of Environmental Watch People Affected with Chemicals, known as ANEW PAC.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms ELDERSHAW: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Ms ELDERSHAW: Yes.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into camera. However, I should warn you that Parliament can overturn that decision of the Committee and make your evidence public. Would you like to make an opening statement before we ask you questions?

Ms ELDERSHAW: In 1994 I rose and spoke at the National Environmental Law Conference in Melbourne and asked questions regarding chemicals. From about 1995 onwards I have done a lot of broadcasting, travelling, researching, and writing up of cases of chemically poisoned people all over Australia. Chemical poisoning includes chemical sensitivity and multiple sensitivity. Chemical poisoning, I believe, is when a person goes grey, usually the left side is paralysed, and goes right out to it.

Imagine sitting and driving a car and you have your foot on the accelerator. When that paralysis hits, the foot automatically goes down on the accelerator. One of the few people in Australia, a doctor, actually witnessed the paralysis striking. That was in 1973 in the lower Blue Mountains. My doctor actually saw it happening. I have found another doctor in South Australia who actually witnessed it happening to a little boy six years old. I believe that that factor is one of the things that could well be the answer to a lot of accidents on the land, on roads, and even in the sky in aeroplanes and helicopters. Pilots have told me that the left side of the body is very necessary when flying. I know nothing about planes or helicopters. But this is happening all over Australia.

It particularly affects people from 45 to 50 years onwards. There is a build-up of chemicals over a period of time. Usually, when they get to a certain age, there is a certain amount of build-up and stress can bring on a chemical attack, and you just go out to it. This is happening to a lot of rural men. One thing that my research has done is bring the rural men out; they have spoken up. A lot of them have stayed quiet for

years. A lot of them, when they ultimately got to their doctors, were told they were initially made ill when they were only 16 to 24 years old.

A lot of rural women also have told me a lot of stories, particularly relating to arsenic. The old sheep dips were arsenic-based, and a lot of the women were ill when they were only little girls. Of course, as they have got older, the arsenic has built up. Of course, you have the natural chemical arsenic and then you have got the synthetic chemicals, like the endosulfans, the DDTs and all the rest of it.

I used to be on the land; I used to breed cattle. My biggest fear is for the cattle industry. I went on radio in 1994, as soon as I got back from Melbourne, and warned about the chemical Helix, warning that any cattlemen who were feeling a bit odd or a bit funny should not try to drive but should get to a doctor fast, because what was on that data sheet on Helix was not what everybody else was trying to say at the time.

There is so much illness; it is not only children being born but our grandchildren who are affected. I have photographs of a farmer and his son in another State, and I have even got a photograph of my own face, when I just walked past an open doorway, and the eye looks as though I have been socked in the eye. But that was from the hydrocarbons on the dance floor and the fumes came out and hit me. I had one inhalation and I was sick for three months.

So that is basically what I have been doing. I have been recording and writing up medical histories. A copy of each batch went to the AMA. Another copy went to the Minister for Agriculture, and another copy went to the Minister for Health. Both Ministers of this Government moved on my recommendations. I pointed out, for instance, that Parkinson's disease was affecting much younger men further out west in sheep areas, where there are a lot of chemicals used on sheep.

CHAIRMAN: What particular pesticides are you most concerned about?

Ms ELDERSHAW: All of them, really. It is all the synthetics. For instance, endosulfan is part of a group of chemicals. You do not talk about a chemical; you talk about which chemical of which group. Endosulfan and DDT and dieldrin are all a member of a group. That is one group of chemicals that attack and damage the central nervous system. That came out in 1982 in the US Armed Forces of the World chemical list. I have got a copy of it there.

In the next column are chemicals that cause irreversible damage. That is now hitting men in the sheep industry. The Diazinon and Roundup are in the same group of chemicals. Many times I have read in papers that have been acknowledged overseas that Roundup will prove to be the monster of them all because of the inert surfactants. This is where I clash with chemical companies, both in Melbourne and Sydney, over the inert surfactants, because my argument always is that if our doctors know what the inert surfactants are, then they know what they are up against.

But the chemical companies keep saying to me, "It is our trade secret." Of course, I have always come back and said, "Put a chemist in the laboratory and we will

soon tell you what your chemical is made up of anyway.” So why not give our doctors a fair go? Our doctors just do not know what they are faced with. At present, we are fortunate enough that we have the testing facilities at Newcastle University, but it costs about \$450, and most of these affected people have got families and they do not have that sort of money.

The Hon. J. R. JOHNSON: Ms Eldershaw has considerable documentation, and she might like to make that available to the Committee. It could be returned.

Ms ELDERSHAW: Yes, I have material here from 1993 from America and all over. Some material from Sweden just came in in May.

CHAIRMAN: If you could make that available, we will peruse it and send it back to you within the next couple of weeks.

Ms ELDERSHAW: If you could copy it, that would be fine.

The Hon. I. COHEN: I am interested in what you are saying about Roundup. There has been a great deal of debate about the various models of Roundup and Monsanto’s assurances that the surfactants in the more recently produced Roundup are far more inert than in earlier products and that there is not the same environmental or health problems. Would you like to comment on that?

Ms ELDERSHAW: Monsanto do not produce it any more.

The Hon. I. COHEN: They do not produce it?

Ms ELDERSHAW: I do not believe so, no. I think that period where they own the product ---

The Hon. I. COHEN: The patent.

Ms ELDERSHAW: I think the period where they own it for 20 to 25 years has run out now.

The Hon. J. R. JOHNSON: So it is open slather.

Ms ELDERSHAW: Yes. The trouble is that three years ago I was told of chemicals coming in through Western Australia being unloaded in Western Australia and being shipped across to the eastern coast by truck. I tried to tell that to somebody in Canberra, but down there they are just a pack of idiots in the government departments. It could well be that the Roundup is being manufactured in a country like India – although the Indian government has come down pretty heavily on a lot of illicit chemical companies and shut many of them down. But they could be manufacturing it and we would not even know what is in it.

The Hon. I. COHEN: I have given information that it is not the surfactant so much as the chemical component of the product that has been shown to be the problem. Do you have any comment on that?

Ms ELDERSHAW: Do I have any comment on what?

The Hon. I. COHEN: The current status of Roundup and what is causing the problems.

Ms ELDERSHAW: I have a Roundup summary, if you would like that.

The Hon. I. COHEN: Perhaps we could have a look at that. The Glycosate was not taken into very big regard with glyphosphate. Formaldehyde and all the other chemicals are in that, as is mentioned in the Roundup summary, but that was put together by scientists from all over the world. It was published in New Zealand. But then, in May, one of the scientists in Sweden sent me some of the papers, and I have copies of them here. He has urged that glyphosphate be reviewed.

The Hon. I. COHEN: What is your opinion of the genetically-modified products?

Ms ELDERSHAW: I fear for the grain industry because, if it comes in 2001 with the genetically-modified wheat and barley and so on, I think it is going to be the biggest trap for our grain growers, because it virtually means, as you probably know, that Monsanto have taken over just about 54 or 56 grain companies in the world, and they want to control all of the grain market and the seed market. However, a lot of countries are starting to rebel.

I know a lot of the wheat growers – and I know a few of them because a little bit of wheat used to be grown on my place – are starting to think twice too, because if they do not have their own seed in the future, particularly the smaller countries, they won't have any food. It is as simple as that. Already, reports have come in that grain producers in America who go to a bank to get a loan to plant a crop they have to sign a piece of paper to say that they are going to use X amount of chemicals. When I was down at Orange at a Landcare meeting I was talking to a farmer there. I was telling him about this. He said to me, "Don't be surprised if you find that it already is happening in this country." I said, "I hope not."

The Hon. I. COHEN: Earlier today a witness talked about phosphine and the gas that is given off in the grain trap as a pesticide.

Ms ELDERSHAW: Yes. I have interviewed men who have actually worked on those grain dumps. Those who were fortunate enough to have a companion, and realised there was something wrong when the paralysis hit them, because they could not talk, are still alive. But those who were on their own and working on grain dumps dropping the pellets, they are now dead.

The Hon. I. COHEN: In terms of the toxicity of the gas given off, what is the condition? Has it a short-term effect, or is there a residual effect of that chemical?

Ms ELDERSHAW: It is the atmospheric conditions. I can give you an example. About two years ago in Wellington my cat started to go berserk, jumping up against the window and the door and so on. The cat is the most chemical-sensitive creature on this earth. I opened the door, and a smell came in. People started to get sick. Now, that is chlorpyrifos gas. It escaped out of the silos. It travelled as far as Bakers Swamp, which I think is about 12 miles away.

A couple out there rang me when they recognised the smell, because they were off the land themselves, and they became sick. Then I found that people in Wellington were sick. When I found a young mother with four children whose legs and feet were going tingly, that is when I got onto the Grain Board and ripped into them. He did not want to tell me what they had used, but I found a fellow who actually worked there and twisted his arm and got out of him that it was chlorpyrifos. That chlorpyrifos I took particular note of, because each evening, when the night air would come down, the chlorpyrifos smell would become even heavier.

Of course, Wellington is in a valley. I took particular note of how the winds changed. The wind one day changed three times in 15 minutes. Of course, that chlorpyrifos is getting moved around all the time, and it is just travelling. It could have gone as far as Dubbo the first night after the wind changed and brought it back from Bakers Swamp. It could have gone on to Dubbo and possibly the people of Dubbo would not even know that they were inhaling it, and then the wind changed and brought it back again.

The Hon. I. COHEN: Was there any scientific evidence or action by any government department on that matter?

Ms ELDERSHAW: I don't know about in this country.

The Hon. I. COHEN: I am sorry to interrupt you. Was there any evidence collected by any government department? Was there legal action on that?

Ms ELDERSHAW: The Environment Protection Authority was notified and so also was an officer in the Health Department.

The Hon. I. COHEN: But was there any action taken by any department?

Ms ELDERSHAW: Probably not. I think one of the Environment Protection Authority officers came out and talked to me. But, as to whether they did anything or not, I don't know.

The Hon. I. COHEN: Thank you.

CHAIRMAN: Thank you very much. There are three or four questions that we ask you to respond to on notice. We will send you a copy of the transcript and it will have those questions. So you might respond to those for us. They are:

1. What do you see as the major dangers to persons, property or the environment from pesticides use or misuse?
2. What legislative or policy measures do you believe are required to be instituted by Commonwealth, State or local government agencies in managing pesticide use?
3. What improvements can farm chemical manufacturers, distributors and applicators undertake to improve the management and use of pesticides?

(The witness withdrew)

(Luncheon adjournment)

ROBERT MEADLEY, Director of Environmental Services, Narromine Shire Council, of 41 Fifth Avenue, Narromine, and

JOHANNES HONNEF, Planning Officer, Narromine Shire Council, of 104 Fourth Avenue, Narromine, sworn and examined:

CHAIRMAN: Mr Meadley, in what capacity are you appearing before the Committee?

Mr MEADLEY: As Director of Environmental Services.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr MEADLEY: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr MEADLEY: Yes.

CHAIRMAN: Mr Honnef, in what capacity are you appearing before the Committee?

Mr HONNEF: As Planning Officer.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr HONNEF: Yes, I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr HONNEF: Yes.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that the Parliament may override our decision and that your evidence may be made public. Bob, would you like to make an opening statement before Committee members ask questions?

Mr MEADLEY: For the council and the Health Department, since 1991 I have carried out sampling of rainwater tanks and water supplies in rural areas on four or five different occasions. In 1991 to 1992 I assisted the Health Department. In 1993-94 they requested further information on how far pesticides drifted. And I did it again in 1996 and also last year, 1998, to try to confirm how far endosulfan chemicals drifted in the

environment. My calculations reveal that it drifts at least 11 kilometres at very low levels, well below NH&MRC levels.

The Hon. J. R. JOHNSON: Was that on the periphery or in close?

Mr MEADLEY: That is fairly well on the periphery and well away from the crop that is being grown.

The Hon. J. R. JOHNSON: Is it stronger in close?

Mr MEADLEY: Yes, at higher levels, but still again well below NH&MRC levels. The highest level, in all my samplings since 1991, was 1.7 micrograms/litre. That is a very low level.

CHAIRMAN: What are acceptable levels, in your view?

Mr MEADLEY: The acceptable levels under the NH&MRC are much higher than that. It is outside my expertise to say whether those levels are in any way harmful. I just don't know the answer to that. The principal reason that I carried out the testing was so that the Health Department would know how far the chemicals drifted.

CHAIRMAN: You have given us a document. Would you like to table that?

Mr MEADLEY: I understood from Steve that that was the procedure. I also understand that you need four copies. I am sorry, but I prepared it all on Friday, and that was as far as I could go. But you have got one copy of everything that I wish to submit.

Documents tabled.

CHAIRMAN: Do you want to make any further statement, or will we go straight into questions?

Mr MEADLEY: That is all I have to say.

CHAIRMAN: We have a series of questions which, if we do not get round to asking them, we will ask you to respond to on notice. Who is on the Narromine Chemical Liaison Committee?

Mr MEADLEY: Two growers of cotton, two non-growers of cotton, myself, the Environment Protection Authority sitting as an observer, an agronomist, two spray applicators and two concerned citizens. The independent chairman, just recently appointed, has been the mayor of Narromine, but the committee has had a reasonably successful year this year, and we have not had a meeting. We have been able to resolve the complaints that we have by using the executive, which is either myself or one of the cotton growers on the committee whose name is Trace Mayes.

CHAIRMAN: Th two non-cotton growers who are farmers, are they cattle growers?

Mr MEADLEY: Yes, they are. One of them is David Kinsey and the other is Stuart Crawford. Stuart is a mixed farmer now; I think he does grow some cotton out there now.

The Hon. J. R. JOHNSON: How were they elected or chosen?

Mr MEADLEY: There were two public meetings, and all that information is in there. They were eventually selected at one of the public meetings that were held.

CHAIRMAN: What problems do you encounter with the aviation chemical evaporation pond at the Narromine airport?

Mr MEADLEY: It does get odorous at times.

CHAIRMAN: Could you explain to the Committee what it is there for?

Mr MEADLEY: Chemicals are applied by plane and the residues are washed off onto a concrete slab, which is graded to what is called an evaporation pond, and those chemicals are washed off that and into this pond, which is fenced. At times it does smell, but it is not a major problem. But occasionally it does smell and it needs either more water added to it to dilute it or else it could be oxygenated.

The Hon. I. COHEN: When you are saying it is not a major problem, what analysis have you made of what is occurring in the surrounding area? You say it is not a major problem, but we have chemical cocktail there, presumably.

Mr MEADLEY: That is right.

The Hon. I. COHEN: How are you assessing that?

Mr MEADLEY: The Environment Protection Authority principally assessed it.

The Hon. I. COHEN: Has the Environment Protection Authority tested the water at various intervals? What is the testing regime?

Mr MEADLEY: I have not been privy to what the Environment Protection Authority has done. You would have to ask someone from the Authority.

The Hon. I. COHEN: Do they come out at a regular interval and notify council that they are going to test?

Mr MEADLEY: No.

The Hon. I. COHEN: So you have no idea what the regime is?

Mr MEADLEY: No. But I wouldn't think it would be very often. I think it would be more on a complaint than anything else.

CHAIRMAN: There were some telephone calls made in school time, so it must have been at the end of November or early December last year, when a school bus was sprayed with a chemical.

Mr MEADLEY: That was the unfortunate incident this year.

CHAIRMAN: Can you tell me where that is up to?

Mr MEADLEY: What happened was that the school bus driver pulled up in front of my home with the school students on board, very upset that he had been sprayed by a chemical on the backwater road. I asked the students if they were okay. Most of them said that they were okay. I think they thought that they were going to score a day off school, but they weren't that lucky; they had to go to school. And, as soon as the bus went back to the depot, which is the chap's home, I went round and swabbed the bus, put all the swabs in a container, put them in the council fridge and contacted the Environment Protection Authority on their hotline.

Late that day the Pesticides Inspector came out and took the swabs from me and took them away for analysis. I have not received anything back in writing on the swabbing, but I understand that it was negative. There was no tracing. But, if you know something more than I know, I would appreciate knowing it. But I have not heard anything more on that. I did inquire, and that is what I was told.

The Hon. J. R. JOHNSON: You did not hear that it had any detrimental effect on the children's health?

Mr MEADLEY: No, I didn't, Mr Johnson. But it was a fairly bad one, and it occurred in an area where there were lots of trees. I put it down to the fact that there was no signage or a farmer on the road letting the bus people know what was going on. That is where the system will always fall down. If they don't put their signs out and take them away when the spraying is finished, or unless there is a physical presence on the road. If there had been a physical presence, everything would have been okay.

CHAIRMAN: The bus drivers have a two-way radio on the bus, don't they?

Mr MEADLEY: Yes, they have. We have all the bus timetables, but it didn't work too well on that last occasion, did it?

CHAIRMAN: I understand the excuse was that the bus driver came three minutes early.

Mr MEADLEY: That may be. We went and had a look at the site. It was fairly well wooded there, and perhaps there was some room for the pilot to say he did not see it. But it was very unfortunate.

CHAIRMAN: Do you have guidelines that they should put out road signs when they are undertaking spraying?

Mr MEADLEY: Yes.

CHAIRMAN: It just did not happen that day?

Mr MEADLEY: That is right.

The Hon. I. COHEN: On that issue: you are saying there was a complaint. When the bus arrived at the school did you question the children? You swabbed the bus on the outside, I presume. Was there evidence of any spray or any contaminant on there?

Mr MEADLEY: No, there was not. I took about 15 or 16 swabs, and that afternoon when the inspector from the Environment Protection Authority came out he swabbed the bus internally as well. I would have thought he would not have got a good a result as I would have got because I did it within 15 minutes of the bus pulling up at my place, or thereabouts anyway. It was not a long period of time after. He did not come out until seven or eight hours later, or something like that.

CHAIRMAN: Is that the Environment Protection Authority in Dubbo or in Bathurst?

Mr MEADLEY: In Dubbo, Angus McDonald.

The Hon. J. R. JOHNSON: Do you get many complaints as a result of aerial spraying?

Mr MEADLEY: The Narromine Chemical Liaison Committee has been able to assist the Environment Protection Authority in reducing the number of complaints. There is no doubt about it: Cotton Australia don't want complaints, and the best way to resolve the problem is to have a committee, especially with a couple of very prominent cotton growers on it, to ensure that these problems don't occur. What happened in the 1998-99 season has been that we have been able to resolve them in-house by using either myself or Mr Mayes to go out and research these problems and solve them. A couple of them were ones that could have been fairly major.

The Hon. J. R. JOHNSON: Have you heard of any effects on the citizens that have caused the Health Department any concerns – where doctors or local hospitals have reported maybe birth defects in not only humans but in cattle, et cetera, and where the Health Department has either, on an area basis or a State basis, put out any reports?

Mr MEADLEY: I think that the draft report put out by Victor Paskovich as a result of the 1991-92 sampling, which was the first one I became involved in, was a fairly useful report on those issues. As far as personally, I do not know of any, but I do know that at one particular time I visited a property not long after a spray event, and I

noticed that I was affected as well, very slightly, in the throat, the same as the lady concerned who had run up and complained.

The Hon. J. R. JOHNSON: You went out how much later?

Mr MEADLEY: Ten minutes, I suppose, or 15 minutes – somewhere about that. And that is the only time. I do know that the concerned citizens of Narromine are all in the Operation Baseline program, and I am quite sure that other witnesses would have mentioned that to you. They are all having their blood sampled before, during and after the season, and they are having those samples analysed. You should speak to them more about the results that they are finding.

The Hon. J. R. JOHNSON: Is the council concerned about collating evidence?

Mr MEADLEY: Well, in hard form. All those complaints are kept on council records, and have been for the past three years since the Narromine Chemical Liaison Committee started, and even some before that.

The Hon. J. R. JOHNSON: What are they showing up?

Mr MEADLEY: They are showing up, thankfully, a decline in the number of complaints. In recent months, Mr Honnef and council have worked out a system to minimise spraying events close to the urban areas by requiring new growers to adopt certain other standards. Mr Honnef could fill you in more on that, if you wish him to.

CHAIRMAN: Perhaps at this stage Mr Honnef might like to make a statement.

Mr HONNEF: I will read a statement. The first part is to do with “Land Use Implications of Pesticide Use in Intensive Agriculture”. Agricultural land uses within the “General Rural” 1(a) zone of Narromine Shire Council’s local environmental plan are currently permitted without development consent, provided they are not intensive livestock holdings or any other use which comes under Designated Development in the Environmental Planning and Assessment Act.

The reason for requiring development consent for any land use is to assess its impacts and to minimise conflicts that a particular use may cause to surrounding land uses. The use and management of pesticides in intensive horticultural developments can impact onto surrounding land uses, be they residential or other agricultural uses, if they are not carried out in a suitable manner.

For this reason, some councils have attempted to require development consent applications for intensive agriculture, such as cotton. To overcome this problem, Narromine Shire Council is looking at another option for minimising the impacts of conflicting land uses. Our concerns are not what type of agricultural land use people have or where they have it; our main concern is how they are carrying it out and what impacts they are having on the surrounding land uses.

So the direction that council is taking is to have a suitable policy in place to ensure that the operations of intensive horticulture, such as cotton, is carried out using best management practices where they are available. Council currently has an intermediate policy in place for any new cotton developments. This policy was discussed with Cotton Australia prior to it being introduced. I will read out what our current policy says:

The development of new Cotton farms within 5km from the edge of the 2(v) zones [which is the urban zone] within Narromine Shire is permissible subject to an internal audit of Best Management Practices to be completed prior to the first sowing (of cotton). Growers will need to attempt to achieve an external audit within the first 3 months of the first sowing.

Certification of external approval is to be obtained before the second crop is planted.

The development of Cotton beyond 5km from the edge of the 2(v) zone is to be carried out in accordance with the Cotton Industries Best Management Practices Manual (December 1997) or any standard that supersedes it, in accordance with the Industry Implementation Programme.

Our next step will be to include all intensive horticultural land uses in our new development control plans covering “complying development” and “exempt development”. This will enable council to allow such developments provided they are carried out using best management practices and any other guidelines in place. I think our approach of focusing on the practices used by the agricultural industry, rather than limiting where such industries are to be located, will ensure that these industries can operate successfully next to other land uses without adverse impacts. However, to achieve this we will obviously need appropriate guidelines for industry and other departments.

The Hon. J. R. JOHNSON: In the first part of your statement you said something to the effect of “approved use”. Have you got that there?

Mr HONNEF: Approved use or consent, yes.

The Hon. J. R. JOHNSON: Is that before you can actually plant cotton?

Mr HONNEF: Of the actual policy, sorry?

The Hon. J. R. JOHNSON: No. It was one of your statements in your opening address. It was to the effect of approved use.

Mr HONNEF: Do you know what the context of it was?

The Hon. J. R. JOHNSON: I have just told you. However, I will have a look at your statement later. Further down, you made a statement that other councils

required approval before cotton could be planted, that the person wishing to undertake that enterprise has to have development approval.

Mr HONNEF: What I said is that, currently, under our local environmental plan --

The Hon. J. R. JOHNSON: No, not yours, but others.

Mr HONNEF: Yes. They require development consent.

The Hon. J. R. JOHNSON: What others?

Mr HONNEF: Dubbo City Council, for instance, requires a development application.

The Hon. J. R. JOHNSON: But "others" is more than one. Do you know of any others, other than Dubbo?

Mr HONNEF: I do not personally, but I could get that information for you.

CHAIRMAN: You talked about the next stage of going on to include horticultural uses in your new development control plans.

Mr HONNEF: Yes. That is not to just focus on the cotton industry, but also other intensive horticultural industries or agriculture industries which use aerial spraying or other spraying.

CHAIRMAN: Have you got some examples of that?

Mr HONNEF: We have got lettuce growers and other horticultural uses within the shire.

CHAIRMAN: But they do not use aerial spraying. You would need undertake aerial spraying for 25 acres of lettuce.

Mr HONNEF: That is only with aerial spraying, but also ground rig spraying, that we require best management.

CHAIRMAN: What conditions do you have on boundary spraying?

Mr HONNEF: Off the boundaries? How far, do you mean?

CHAIRMAN: Yes.

Mr HONNEF: So far, we have a consultant coming in. He is looking at the cotton industry's best management practices and guidelines. So we are still in the process of coming up with some dead-set guidelines.

The Hon. I. COHEN: So, at the present time, it is unregulated – you have not got any regulations in place?

Mr HONNEF: No.

The Hon. I. COHEN: I know you are saying that you will, but at the moment it is pretty much open slather.

Mr HONNEF: What we require at the moment is that they show us the audit that they have done. So that, over the next few months, we will be trying to iron it out. At the moment, we are discussing it with industry.

The Hon. I. COHEN: Mr Meadley, you mentioned a consultative body that was set up.

Mr MEADLEY: The Narromine Chemical Liaison Committee.

The Hon. I. COHEN: On that committee you have got two growers and two non-growers. How were they selected? You said that was done at a public meeting. What was the process? Was it a public meeting called by council?

Mr MEADLEY: Both meetings were called by council.

The Hon. I. COHEN: And these people were elected?

Mr MEADLEY: Yes, that is right.

The Hon. I. COHEN: How many people were at the meetings?

Mr MEADLEY: I think there were about 30 or 40 in the first one. The minutes of those meetings are with you.

The Hon. I. COHEN: Are they a cross-section of the community? How was it advertised?

Mr MEADLEY: It was advertised in the normal manner, in the media. It was not a major publicity event though.

The Hon. I. COHEN: The two non-growers of cotton were cattle growers, is that correct?

Mr MEADLEY: Yes.

The Hon. I. COHEN: And they are people who have been active in this area, are they?

Mr MEADLEY: Yes. David Kinsey, especially, has been active on the committee. That is correct.

The Hon. I. COHEN: What would you say if I put it to you, Mr Meadley, that there has been a fair degree of intimidation of people in the community who have been speaking up against the cotton industry? Is there any validity in that at all?

Mr MEADLEY: No-one wants to see intimidation of any sort.

The Hon. I. COHEN: We would all agree with that. But has there been intimidation? Is that a reasonable statement to make? Does the committee reflect a broad cross-section of the community?

Mr MEADLEY: In my opinion, the committee has been viewed as acting reasonably favourably by the concerned citizens, yes. The interesting part about last season was the concern expressed by cattle growers with the cotton industry. That in itself has been very useful in resolving further problems with regard to cotton sprayers. There is no doubt about that – absolutely no doubt.

The Hon. I. COHEN: You mentioned the taking of the swabs from the bus involved in the school bus incident and you said that the result of the analysis of those swabs was negative. Could you comment on whether your council has the expertise and resources to effectively manage, for example, the issue of penalty notices and undertake all the processes of policing inappropriate practices?

Mr MEADLEY: Well, to get the resources to do all those things would be a bit difficult. The Environment Protection Authority itself has only one Pesticide Inspector to look after a substantial portion of New South Wales. I think we are able to react to problems when they arise. The new protection of the environment legislation is helpful to us. We certainly have not issued any penalty notices under that section yet, but, gradually, everyone is becoming more aware of these things, and penalty notices are a matter of course for council – mostly in dog infringement and litter infringement notices today, much more than they were five or six years ago. It think it is a gradual tightening of the screws, as perhaps a way of putting it.

The Hon. I. COHEN: Has your council received any complaints or expressions of concerns by workers within the council who use chemicals?

Mr MEADLEY: There was another complaint received this year from the actual workers of the council who had been sprayed on a road.

The Hon. I. COHEN: They were sprayed whilst working on a road?

Mr MEADLEY: That is right.

The Hon. I. COHEN: Were they sprayed by a ground rig?

Mr MEADLEY: No, by an aerial spray.

The Hon. I. COHEN: What action occurred in that?

Mr MEADLEY: They filled in a complaint form. I got a response form from the actual aerial applicator. The matter was then referred to the growers, the people who should have had signs out or should have had a physical presence on the road.

The Hon. I. COHEN: Was there any action undertaken?

Mr MEADLEY: No.

The Hon. I. COHEN: Was there any action on behalf of the workers?

Mr MEADLEY: No.

The Hon. I. COHEN: Has there been any medical testing of them to see if there will be any long-term implications of that spraying?

Mr MEADLEY: Not that I am aware of.

The Hon. I. COHEN: How does that comply with occupational health and safety measures in terms of looking after your council employees?

Mr MEADLEY: I would say it is probably fairly marginal. But what you must remember is that the guidelines are only voluntary, the chemical application guidelines.

The Hon. I. COHEN: Nevertheless, you had workers who made complaints. Where have those complaints gone, and where should they have gone?

Mr MEADLEY: I don't know. I referred the response, and I sent a copy of the response back to the principal complainant, a chap whom I know quite well on council, and I suggested to him that it might be a matter for him to raise through the occupational health and safety committee of council.

The Hon. I. COHEN: He was the property owner?

Mr MEADLEY: No.

The Hon. I. COHEN: A staff member?

Mr MEADLEY: Yes.

The Hon. I. COHEN: He has not taken that matter further?

Mr MEADLEY: I don't know. I only get called into the occupational health and safety meetings occasionally. I don't go to a lot of those meetings. He could have, but I am not aware of it.

The Hon. I. COHEN: Have there been any complaints over the release of contaminated tail waters into the environment? You mentioned before the risk of release of contaminant in the environment, is that correct?

Mr MEADLEY: I think there is.

The Hon. I. COHEN: When you say you think there is, are you basing that on any facts? It is all very well to think there is, but does your council undertake monitoring, or regular assessment? You have major chemical industries here, and you know where the water is running out. Do you test on a regular basis?

Mr MEADLEY: As far as I am aware, there is no tail water that is not recycled on the properties. As far as I am aware, there are none.

The Hon. I. COHEN: So nothing escapes?

Mr MEADLEY: That is right.

The Hon. I. COHEN: Not even in times of flood?

Mr MEADLEY: Well, that is right.

The Hon. I. COHEN: A witness told this inquiry today that fish were actually found in the dam, and they had got there through flooding conditions. So, although fish can get into the dams, you say there is no escape of water from the dams?

Mr MEADLEY: Oh, well, 1990 was a tremendous year, and you could well be right about 1990. Those were flood conditions, weren't they?

The Hon. I. COHEN: That is certainly a time when there is an escape.

Mr MEADLEY: One would hope that there would be substantial dilution of any concerns.

The Hon. I. COHEN: I have got a media release from the Minister Land and Water Conservation dated 17 July 1996. In it, the Minister says:

The Central and North-west water quality program technical papers released today show:

- *a general increase in pesticide concentrations during the past three seasons in the Namoi and Border Rivers basins. Levels in the Gwydir and Macquarie Valleys have remained the same.*

Do you have any comments on that?

Mr MEADLEY: I am fully aware of those reports, and I was pleased to hear the principal phrase that the Macquarie Valley has remained the same.

The Hon. I. COHEN: That has remained the same in terms of an unregulated industry. You have just said that you are going to regulate. Is that acceptable?

Mr MEADLEY: The Macquarie Valley has a very good record, going back many, many years, and I am very pleased that it has that record.

The Hon. I. COHEN: Do you have records of testing of the rivers?

Mr MEADLEY: Testing of the rivers?

The Hon. I. COHEN: Yes.

Mr MEADLEY: Yes. That is carried out at least twice a year.

The Hon. I. COHEN: Do you have those figures? Are they accessible? Could this inquiry perhaps get access to those?

Mr MEADLEY: Yes. I did not bring them with me, but you certainly could.

The Hon. I. COHEN: Could you take that on notice? These are historical figures which might be of value.

Mr MEADLEY: Sure.

The Hon. I. COHEN: Do you have in your council area any reports of damage to other crops from spray drift?

Mr MEADLEY: There have been concerns with the use of herbicides. I am not aware of any that have come through council though. There have been a couple that have come to the Narromine Chemical Liaison Committee, and we have referred them on.

The Hon. I. COHEN: To where?

Mr MEADLEY: To the farmers concerned.

The Hon. I. COHEN: Is there any punitive action at all, or was it just in an advisory capacity?

Mr MEADLEY: There is no punitive action as far as the committee is concerned, but the farmers concerned may have taken their own private action. But I don't know.

The Hon. I. COHEN: What, and fined themselves?

Mr MEADLEY: Well, take legal action against the adjoining farmer.

The Hon. I. COHEN: Does it seem a little lax, perhaps, that in such a topical area we have no real controls as yet? You are saying they are on the way, but we have a committee that just advises the perpetrator of the chemical misuse and nothing comes of it. Do you think that that would be a reason for cause in the community, that there are very loose guidelines on what are major chemical usages in this area, an area covered by your council? Does that concern you?

Mr MEADLEY: It would concern me if any of the health indicators were of a serious nature. So far, all health indicators that we appear to have in our area do not indicate any problems.

The Hon. I. COHEN: So there is no evidence, through your medical records in the local area, of chemically-induced health problems?

Mr MEADLEY: I would not have access to any of those local ones, but there are certainly none on a State basis. The recently-released Cancer Council figures put out by the New South Wales Health Department showed that the major cotton producing areas of New South Wales all appear to be at or below the State average as far as cancers are concerned. I live in the area too, and I am as much concerned as you are about those sorts of things, because I have spent 35 years of my life in the western area of New South Wales. I take this matter very seriously because I certainly do not want to die of cancer – not from that area anyway.

The Hon. I. COHEN: Other than chronic fatigue syndrome, there was nothing like children having rashes and respiratory problems? Do you have any evidence of that, anecdotal or official? Did the council undertake to communicate with the department about those types of figures?

Mr MEADLEY: No, there has been no real research in that area undertaken by me. You would have to speak to the local doctors about that; I couldn't really help you there.

CHAIRMAN: The Environment Protection Authority draft paper raised the question: Should there be contributory liability by the farmers? In other words, at the moment, the Environment Protection Authority cannot proceed very successfully in court anyway with litigation against a sprayer under the Act. But, at the moment, there is no contributory liability in the farmer. In a situation where you have local guidelines, and those guidelines say that the farmer should put out signs to warn that spraying is being undertaken, in case a bus should come along, is that then an example where you consider the farmer should have been liable, or at least shared some of the responsibility?

Mr MEADLEY: Well, certainly, it is poor form if they do not carry out those guidelines. I believe that in the eight years that I have been sampling, it is very pleasing to see that the restrictions on the use of chemicals on crops for the next season. But I think, personally, that endosulfan should be banned. That would resolve the majority of problems as far as my testing is concerned, and it would probably resolve a lot of the concerned citizens' worries as well. That appears to be the chemical that you

pick up all the time. That seems to be the one that has some residual life in it. The others appear to break down fairly rapidly.

CHAIRMAN: Is there any other choice with regard to heliothis?

Mr MEADLEY: There are a lot of choices. There are a lot of chemicals that they could use instead of endosulfan. Endosulfan is a cheap chemical, and it is a very interesting chemical, and it does not appear to have been able to produce resistance; the insects have not been able to produce resistance to it in the 40 years that it has been on the market. It is an amazing chemical, there's no doubt about that.

CHAIRMAN: It is a question we will ask some of our later witnesses, particularly from Nufarm. There was some discussion about the Environment Protection Authority chasing these people up. Do you think the Environment Protection Authority has enough resources? Do you think, if there were enough teeth put in the Act, the Environment Protection Authority would have enough resources?

Mr MEADLEY: They have got nowhere near enough resources; they couldn't possibly have. I mean, Angus is a very dedicated officer, but there is only one of him. If he gets a complaint at Condobolin, where they are going to be growing cotton this year, and then he gets another complaint at Trangie, he would want to be good! That is why you need these committees forming, and they are forming in most of the shires today. They seem to be performing a useful service.

The balance of the committees is an interesting one. The argument has been raised that our committee is industry-oriented. I would agree with that; it is. By the same token, problems appear to be reducing, and that is what we want.

The Hon. I. COHEN: In terms of the selection of that committee, were you there at that selection process?

Mr MEADLEY: Yes. I am still the foundation secretary.

The Hon. I. COHEN: Of the people from the community that were there, was anyone refused representation on the committee?

Mr MEADLEY: Yes.

The Hon. I. COHEN: Who was that?

Mr MEADLEY: The committee did not wish to work with Mrs Shirley Jeffery.

The Hon. I. COHEN: Why was that? Did she not constitute a valid representative?

Mr MEADLEY: I think that they felt that the committee would not be able to do constructive work, and that it would be too disruptive. They were all giving of their time for free.

The Hon. I. COHEN: So was she, surely?

Mr MEADLEY: Obviously. But there were no payments or anything towards this committee. I think at a later stage that view changed a bit, but certainly at the formation of the committee that was the view.

The Hon. I. COHEN: So the committee was simply selected, or partially selected, but there were people from the community with a valid interest in the issue, and they were blocked from being on the committee?

Mr MEADLEY: Well, there were two to be put on it, and the two that went on it had valid reasons to be on the committee as well.

The Hon. I. COHEN: What do you mean by valid reasons?

Mr MEADLEY: They were concerned citizens as well.

The Hon. I. COHEN: And the concerned citizens were blocked by whom? Was it by the majority of the committee, as one would presume?

Mr MEADLEY: Yes.

CHAIRMAN: So you are saying that there were two slots available?

Mr MEADLEY: Yes, two slots.

CHAIRMAN: And there were more than two people who wanted to go on the committee?

Mr MEADLEY: That is right.

CHAIRMAN: How was it worked out who went on the committee?

Mr MEADLEY: The committee in general – the public committee in the first place.

The Hon. I. COHEN: So it was not exactly an open election of members of the committee?

Mr MEADLEY: No. Sometimes it is hard to get people to serve on the committee, and you really do need cotton growers on it to solve these problems.

The Hon. I. COHEN: I appreciate that. You have got cotton growers on it. But perhaps you also really need to have environmentalists or concerned community

members on it with a contra position, so that you will have a committee that functions in a balanced way. Would you not agree with that?

Mr MEADLEY: I do believe it does function in a balanced way.

The Hon. I. COHEN: I did not actually ask you that question.

Mr MEADLEY: I know. I agree with what you are saying. There are two very dedicated concerned citizens on the committee who keep the committee on its mettle. They do.

CHAIRMAN: There are some questions that I would ask you to take on notice. Those questions will be in the transcript that you will receive. If you might send in some supplementary answers to those. Those questions are:

1. Can Narromine Shire Council outline the types of activities the Council or its contractors conduct that involve the use of pesticides (including fungicides and herbicides)?
2. Can Narromine Shire Council provide an estimate of the volume of pesticides applied by the Council and its contractors in any given year?
3. What local environmental plan or policy initiatives, such as buffer zones, have Narromine Shire Council employed to address incompatible land use regimes?

(The witnesses withdrew)

AMANDA JO-ANNE PAHL, Secretary, Mudgee District Environment Foundation, of Unit 2, 6 Market Street, Mudgee, and

BEVERLEY SMILES, Secretary, Central West Environment Council, of Inana, Wollar, affirmed and examined:

CHAIRMAN: Amanda, what is your occupation?

Ms PAHL: I am a single mother.

CHAIRMAN: In what capacity are you appearing before the Committee?

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms PAHL: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Ms PAHL: Yes.

CHAIRMAN: What is your occupation?

Ms SMILES: I am a small farmer who grows both organic vegetables and sheep. I am also the representative of the Nature Conservation on the Macquarie River Management Committee, and I appear as the Secretary of the Central West Environment Council.

CHAIRMAN: in what capacity are you appearing before the Committee?

Ms SMILES: Secretary of the Central West Environment Council.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms SMILES: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Ms SMILES: Yes.

CHAIRMAN: If either of you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. But I should

warn you that the Parliament may override that decision at any time and make your evidence public. Who would like to make a statement?

Ms PAHL: Today I am representing the Mudgee District Environment Foundation, but I am also a member of the Mudgee Health Council and a member of the Living With Agriculture Committee, another name for the Chemical Liaison Committee in Mudgee. I am also a voluntary member of the New South Wales Health Reference Group – unpaid in all positions.

I would like to begin today by saying that problems with chemical application are not universal. They are usually very site specific and caused by a combination of crops being grown, chemical application practices and features of the environment. In the Mudgee region I believe four local factors contribute to problematic chemical drift. The first is that Mudgee itself is a site specific problem. We have a rapidly expanding local wine industry. There is a lack of industry training, and there is certainly a lack of enforcement agencies. Those who are risk are vineyard workers, rural residents, Mudgee residents, our natural resources, and other industries in our area.

Mudgee itself is situated 260 kilometres north-west from Sydney on the Central Tablelands at about 425 metres above sea level. The surrounding mountains and hills can elevate to 1,000 metres. The township itself is placed at the bottom of this large fertile valley, and its aboriginal name means “nest in the hills”. Our distinctive geographic and climatic conditions create unique temperature, wind and atmospheric patterns, and in particular air inversions, that assist off-target agricultural chemical drift and may unknowingly impact on the health of the community and surrounding industries.

Mudgee is renowned for quality wheat, sheep, cattle, lucerne, honey and wine production. Coal, fine wool and red meat also play a significant role. A dramatic increase in the planting of grapevines has seen a 400 per cent increase in three years, and the local industry plans to double again in as little as 12 to 24 months.

Evidence already suggest that inter-industry conflicts are currently arising regarding chemical use, seasonal timing and conditions. We do not know the amount of chemicals being used locally, the types of chemicals being used across the industries or the subsequent interactive effects. However, we do know that the 1993 Hunter Valley Vineyard Workers Health Surveillance Program suggests that the amount of chemicals applied to the same amount of land under vine – which at the moment is only about 4,000 hectares – was approximately 50,000 litres of wet chemicals and 45,000 kilograms of dry chemicals for one valley, for one industry, and for one year.

Young, inexperienced or needy workers are often used in these rural areas, with little or no training, no protective clothing, or no washing facilities. The importation of non-English speaking casual workers doing night spraying work creates further risks if they are unable to read or understand basic requirements. In such a small community such as ours, and with so little work available, people feel cautions about criticising.

As farming activities become more intensive, so does the need for local monitoring and regulation. There has been a significant increase in the number of complaints of spray drift in the Mudgee shire from both community and industry. In February 1999 the Mudgee Health Council addressed the Mudgee Shire Council and requested a pesticide liaison committee. Council resolved to form a Living With Agriculture Committee, the first objective of which was “to develop a strategy to minimise land use conflict between rural dwellers and legitimate farming practices”.

Results of health surveillance tests of vineyard workers and spray operators in the Hunter Valley have flagged a warning to pesticide users to minimise risk. There is evidence to suggest that direct contact operators, such as vine handlers, may be at greater risk than trained spray operators, but that they may not in turn be protected by equipment, training or existing legislation.

In the early 1970s Mudgee shire encouraged diversity and community in outlying areas of the shire through the establishment of 4,000 10-hectare land divisions. Twenty-five years later, in December 1998, council adopted an “Intensive Agriculture for Rural Lands” note which supports large and intensive agricultural activities. These two policies’ aims conflict with one another. There is no development control plan. There has been no allowance for buffer zones et cetera in our local environmental plan.

Mudgee has a resident population of approximately 8,000, with another 8,000 in the outlying villages. The nearby town of Gulgong consists of another 2,000 residents, and the region can accommodate another 1,100 overnight visitors. Mudgee town residents may be unknowingly placed in the high risk exposure group, as they exist unaware of surrounding agricultural activities and risks.

Mudgee itself lies on the banks of the Cudgegong River in the upper catchment area of two major river systems – the Macquarie and the Goulburn. The Cudgegong Valley alluvial aquifer water is placed in the highest beneficial use category, that is, the town water supply. The Department of Land and Water Conservation recently identified this aquifer as “at high risk”, as the overlying soils are relatively permeable and the water table is shallow, allowing a good hydraulic connection to assist the short passage of pollutants from overlying land use activities. Future decisions about land use and management practices will need to take into account the overall implications on regional water quality.

The great demand for international markets is for residue-free or organic produce. In April 1998 the Australian wool industry lost millions of dollars of overseas orders as manufacturers switched to competing countries rather than face the increased risk of contaminated, unregulated Australian wool – possibly the best wool in the world.

In February 1999 the Australian beef industry was devastated at the results of endosulfan chemical residues in beef rejected from South Korea. The entire meat export market of \$3.4 billion has been hanging in the balance as industry tries to come to terms with the need for regulated and safe practices. Once again the product may be the best in the world, but unregulated industry standards are not.

Chemical residues are a potential health risk to products other than meat. Endosulfan is officially approved for use on 142 crops, and it is popular in the fruit and vegetable industries, despite the fact that it is listed as a potential disrupter of the human endocrine system.

This leads me to a page of conclusions. The conclusions I have come to are that there is no knowledge of the amount of chemicals being used regionally. There is no knowledge of the cross-section of chemicals being used regionally, that is, in local vineyards, cattle, sheep, pastures and so on. There is change in chemical reactions under varying climatic conditions. Off-target agricultural chemical drift does occur, with impacts on the health of the surrounding communities and industries.

Industry self-regulation of safe, legal chemical use does not work and is failing rural communities and threatening export industries. Industry standards must ensure fair and reasonable attempts to manage chemical safety. Industry standards must not require local communities to protect, monitor, regulate and enforce appropriate behaviour.

Public concern about the risks associated with chemical use does translate into loss of confidence in the quality of Australian agricultural produce and restricts access to domestic and export markets. Industry standards for agricultural production practices must ensure we can meet these future export market standards. Industry standards must ensure greater domestic consumer protection from these chemical residue levels. Industry practices need to consider the implications of overlying land use activities on natural resources such as regional water quality. The indirect costs of chemical misuse will ultimately be borne by other industries, that is, the health treatment industry.

As I said, the results of the health surveillance tests of vineyard workers in the Hunter Valley flag a warning to pesticide users to minimise risk. They also suggest that certain workers are at higher risk but are not in turn protected by existing legislation. There is evidence to suggest that with improved practices there are significant decreases in exposure rates for spray operators. Evidence suggests also that with improved knowledge of chemical use we can minimise the risks to local communities, industries and natural resources.

I have a series of recommendations for change as well. But, seeing that the overhead slide projector is not working too well, I will read them out. The recommendations that I would like to make for change are: regional chemical application codes of practice, as each different region has different requirements. I would like to see more appropriate weather stations and forecasts; mandatory chemical user training; chemical user licences; pesticide risk reduction programs; industry best management practices; buffer zones for waterways, towns, neighbours, et cetera; a neighbour notification system; an integrated pest management system; and regional produce maximum residue level checks.

Further recommendations are: industry and high risk residents health surveillance programs; regional air and water quality monitoring programs; the establishment of regional chemical waste sites; carrier vehicle signage and licences; road signage for spray vehicles near major roads; and restriction of carrier vehicles from public centres. I would like to see a regional pesticide register; a regional pesticide cap; the introduction of pollution licences; and incentives for pro-environment activity.

CHAIRMAN: Thank you very much for that. Beverley, would you like to make an opening statement?

Ms SMILES: Yes. I would like to give you an overview of the region. I have got a map here.

CHAIRMAN: We have got that map.

Ms SMILES: The Central West Environment Council covers a region from Mudgee, to Bathurst, Parkes, Forbes, Wellington, Dubbo and out to the Macquarie Marshes region. We have members who serve on committees in the Lachlan and Macquarie valleys and vegetation committees are starting to be formed.

Ms PAHL: I would like to add that the amount of chemical use that I gave you was related to an area of around 4,000 hectares, whereas in the upper catchment area of the Macquarie, which then flows on through to this area on the map, there are about 2,000 hectares of cotton. So it compounds as it comes downstream, and obviously would have a load effect on the waterways. This then goes on to become part of the Murray Darling Basin, which supplies almost 50 per cent of Australian agriculture. So you can imagine the enormity of the quantity of chemicals being used, the cross-section of chemicals being used, and the load effect as it goes downstream.

Ms SMILES: This region has a wide variety of agricultural activities, producing fruit, vegetables, grains, meat, wool, cotton and wine. Over the past 50 years these activities have become more and more dependent on the use of agricultural and veterinary chemicals.

There seems to be no way for the community to determine the annual quantity of chemicals used in this region, or the synergistic effects created by that chemical use. Chemical use seems to become an important issue only when export products are boycotted overseas, or when fish kills are too large to ignore. Yet the effects on human health and ecosystem viability of long-term, systematic chemical applications is not considered.

The Central West Environment Council requests that the Standing Committee on State Development recommend that the New South Wales Pesticides Act be amended to include: rights of notification; local planning controls; to require that intensive agriculture in sensitive areas be designated developments; and provide that there be no reliance on self-regulation.

The Hon. I. COHEN: There has been some discussion about elected groups to oversee the industry. You might have heard the previous witness in that regard. Could you expand on the setting up of the Living With Agriculture Committee? How was it actually set up, and is it reflective of community concerns in the area in an open way, or is there an imbalance through the greater representation of industry?

Ms PAHL: Since around September 1997 we have seen around 19 publicly recorded calls for drift management. The council was waiting until there was ultimately significant pressure that led to the forming of this committee. There were numerous discussions, and eventually the Mudgee Health Council addressed Mudgee Shire at an open day to publicly request the formation of the committee.

They would not permit the pesticide liaison committee to be established as such; they wanted to call it Living With Agriculture. So we accepted that. There have been four meetings since we were formed in February. I do not believe that the committee will go on to be any great success. The chairman of the committee was appointed by the mayor. He is also the chairman of the Chamber of Commerce and Industry as well as the chairman of the Wine Festival Committee. I do not believe he is acting in a fair manner at the moment.

We have managed to set up an incident reporting system, but I am told that at the moment that the spray season is benign, so that we have to wait for the malignant season to start before we actually get any reports. We may not see that for several months. I don't feel that the committee will get very far in the way of preventative action. To date I have raised half a dozen issues and I have been told that it is outside the scope of the committee; that we are just not there to worry about health and safety concerns; we are actually just there to wait and see what types of incidents occur.

The Hon. I. COHEN: You mentioned some 19 calls for drift management. Do you have specific examples of spray drift in the area and problems that have arisen from that?

Ms PAHL: For instance, if you look at the overhead, we have the wine growers warning farmers to take care. Every September there is an article in the local newspaper about 2,4-D drift – and 2,4-D is very volatile on its own, but, under our unique valley situation, it is even more prone to volatile conditions and is more susceptible to drift.

CHAIRMAN: There are two different sorts of 2,4-D.

Ms PAHL: Yes, there are.

CHAIRMAN: One is volatile and one is not.

Ms PAHL: Yes.

CHAIRMAN: We have got copies of that in our papers that you sent to us.

Ms PAHL: There are other incidents of drift occurring. One of the largest building companies in the area is preparing a case against our largest wine grower. The building company bought their land about 10 years ago, and the wife is actually multiply chemical sensitive, and as such she has had to go to a lot of trouble to build a case. That will result in litigation probably next year. We have letters from the Wine and Grape Growers Association noting our legitimate spray drift concerns, and we have other letters that have been in the community paper, calling for the same sort of management and confirming the identification of 2,4-D drift.

CHAIRMAN: Do you still have the organic wine grower Bill Walchrist at Wollar?

Ms PAHL: He has left. The vineyard is still organic. We have about four organic vineyards in the valley.

The Hon. I. COHEN: We heard today of persons not using chemicals on their own property but of there being chemical trespass of cotton growers nearby. With an organic producer like that, what sort of distance would they need to maintain their organic certification?

Ms PAHL: I am not sure, but under conditions that were actually recorded, the Mudgee Shire Council and I believe the Environment Protection Authority were involved in an incident where sulphur drifted 11 kilometres into town. I am not sure we would have to have, but one of our local shire councillors is also an organic wine grower, and he has about 200 hectares of inorganic grapes being planted at the moment, so we will know the results soon.

Ms SMILES: He has a very close neighbour that has some major development happening on the outskirts of Mudgee. Even with the land management practices implemented in setting it up, there was a lot of difficulty even getting the Department of Land and Water Conservation to have a look at what they were doing and being forced to re-vegetate their drainage lines.

The Hon. I. COHEN: This is the organic grower?

Ms SMILES: This is the inorganic grower. He is across the road from the local shire councillor. So the expectation of the organic grower is that he is going to have to put up indicators on his fence line when the spraying season starts up so that he will be able to measure the level of drift on his property to be able to maintain certification.

The Hon. I. COHEN: Would there be any recourse at the present time if that particular person lost his certification due to chemical trespass?

Ms SMILES: I am not sure if there has been any precedent of that. For me, the notification issue is very important for people that are certified as organic growers. When you have neighbours who use broadleaf sprays and that type of thing, it is always up to yourself to be the person who will ask them, "What is going on? What

are you using? Are you taking into consideration wind directions?" Legally, at the moment, there is nothing to protect organic producers.

The Hon. I. COHEN: Ms Pahl, you gave a number of examples of the international marketplace stopping the inorganic producers in their tracks. Could you give any other examples. You mentioned the wool industry. Is the wine industry being affected?

Ms PAHL: I am not sure. I think, locally, the honey production industry is being moved from cotton areas and resettled into other areas. We have a long association in the valley with honey production. It may not be a huge economic factor to us, but I would say that it is certainly having its impact there, for instance. There is conflict occurring in the community between cattle growers and the wine industry itself. I do not have any other types of industries that I can confirm it is impacting on.

Ms SMILES: It is mainly the beef industry and the wool industry that have had that international repercussion.

The Hon. I. COHEN: Could either of you answer this question. Have you considered the economic and social outcomes for the community of supporting organic and GE-free industry? We do hear significant arguments that, economically, things could go through the floor if there were much tighter controls and farmers were moving across to organic production. Would either of you like to comment on that?

Ms SMILES: I think there have already been statements made today about the track we are going down regarding chemical dependence and the possibility of whole food sources crashing through insect resistance. I think the agriculture system has changed over a period of time. I know in the Mudgee area, over say a 25-year period, there are mainly mixed farms, so that people are getting their incomes from a range of enterprises, not just concentrating on a monoculture system.

We have seen the Cudgegong Valley turning towards a very strong monoculture system which sets up all of those problems with increased insect attack and the need for the increased use of chemicals. So it is not something that is going to happen overnight, but we really are talking about the restructure of the agricultural industry away from that increasing corporatisation which downsized the amount of people moving on the ground.

I think an organic agricultural system actually needs more people to be effective. We are probably talking about higher-priced food, but I think that is going to come in the long term anyway, because at the moment the impact on our natural resources and the impact on our soils and those other types of adverse effects are not priced into our agricultural produce.

CHAIRMAN: You said that the proposal is to double the wine production in Mudgee vineyards in the next five to 10 years.

Ms PAHL: One to two years.

Ms SMILES: We have had 3,000 hectares planted in the last two years, and they are big companies. Prior to this time, Mudgee was a producer of small-volume, family boutique wines. Now we have got really big international companies moving into the area, and they are planting 500 hectares in a very short period of time.

CHAIRMAN: Do you think they are going to have the water to do that?

Ms SMILES: Sitting on the River Management Committee, that is one of the issues that we are having to deal with. The grape industry is a lot more efficient in its use of water because of its use of drip irrigation. It is much more expensive for them to set up. There is already a feeling that the grape industry has outgrown its economic effectiveness. In fact, the industry itself is calling for a halt on new plantings. I know that there are quite a few people in the Mudgee area that have gone ahead and put in acreages with no contracts at all, so they will be dependent on whatever the spot market is.

The jobs that are being created are jobs that are involved in the setting up of the industry – like, putting the posts in, putting the drip watering system in, and putting the plants in. Once the set-up period is over, those jobs disappear. Even though you have got very large areas of land planted now, in the pruning season the employment now is actually smaller than what it was when the wineries were just the small family concerns. Now, there is very tight use of labour.

CHAIRMAN: My question to you is that, you being on that Water Management Committee, you would know that there are no new licences being issued, and the reliability is 50 per cent, so that in any given year they could not expect to have more than 50 per cent surety that they will get the water that their licence says they can get. If it says they will get 100 megalitres a year, they can really only expect to get 50 megalitres a year. How are they going to get the water unless they get it from other existing practices?

Ms SMILES: The Department of Land and Water Conservation pushed into looking at buying up more licences. Because Windamere Dam is at the top of the system, they are trying to put together a policy to give them that water security. That is one of the jobs that the River Management Committee is balancing: the expectations of water demand in the lower Macquarie Valley, which at the moment is the largest user of water ---

CHAIRMAN: The dam was not built for Mudgee vineyards.

Ms SMILES: That is not what the community believes.

CHAIRMAN: There were not many vineyards there when it was built.

Ms SMILES: But they have bought a lot of water from downstream and moved it upstream. The unfortunate position with Windamere Dam is that it is not a

very good catchment for the size of the dam. With the last wet season we have had, the dam has hardly moved. So there has to be a real re-think of that resource issue.

Ms PAHL: It is my opinion that the way they have got around it – because I felt sure they had restricted the industry as well – but what they have done recently is that, the town water supply used to come off the ground water, instead of the surface water from the river, and now, after many many years they have decided that if they make the ground water available for other uses, they can take a small percentage of the surface water allocation available to the town itself. So, in the next year, we are about to start drinking river water for the first time in our history, and that will make the ground water available. In my eyes, that would enable another 5,000 to 10,000 hectares potentially available to the wine industry to open up – through the transfer of water that way.

Ms SMILES: There are conjunctive licences in the area.

Ms PAHL: So the Mudgee townspeople are going to take second-class river water and start drinking it, as opposed to the current system of drinking underground water.

Ms SMILES: There has been an embargo placed on two of the ground water zones at the moment, so there are no licences there now. So, all of that is sort of up in the air.

CHAIRMAN: The bigger groups interested in going into the Mudgee area have decided – now that they have been told that they will get 50 per cent reliability – have decided to go elsewhere. I really do not think you will find the wine industry doubling in Mudgee in the next five to ten years, except for that fellow who has 4,000 megalitres.

Ms SMILES: Yes, the people who are already sitting on the water.

The Hon. J. R. JOHNSON: Ms Pahl, you come to us from the Mudgee District Environment Foundation. How many financial members would you have?

Ms PAHL: I am not sure how many. I think around 30 or 40.

The Hon. J. R. JOHNSON: Beverley Smiles, how many financial members or affiliates do you have in the Central West Environment Council?

Ms SMILES: There are a dozen groups in the region.

The Hon. J. R. JOHNSON: You held up a map and talked about the devastation that would be wrought on the river and water systems as far as the Murray Darling Basin. Have you got any scientific evidence for that statement?

Ms PAHL: No, I don't. It is always the first question asked.

Ms SMILES: Actually, the monitoring reports that are coming out of the Department of Land and Water Conservation are showing especially high levels of endosulfan coming out of the northern rivers of New South Wales.

The Hon. J. R. JOHNSON: I am asking specifically about the statement that you have made about the Murray Darling.

Ms PAHL: I don't have any figures on the Murray Darling, but there are Department of Land and Water Conservation statistics available on the Cudgegong River, which is the area that we belong to.

The Hon. J. R. JOHNSON: Thank you.

CHAIRMAN: We have a number of questions that we will put on notice. We will incorporate those in the transcript that we will forward to you. Would you answer any of those that you feel we have not picked up on as we have gone through.

Ms SMILES: Could I mention something else about organic agriculture. The new policy coming from the State Government on sustainable agriculture covers what we are talking about today and needs reinforcing. Today's process will be helping with this sustainable agriculture policy: that is, to have better informed rural communities and reduced reliance of industry on pesticides. I think the Government is going down the right track with that policy.

Ms PAHL: Could I add one thing on a statement that I heard today?

CHAIRMAN: Yes.

Ms PAHL: You keep asking about information available from general practitioners and Area Health departments. A lot of the information that you give to your local general practitioner is suppressed at the office of the general practitioner due to a degree of confidentiality, so a lot of this information does not get recorded as a statistic as such, unless you go down to the hospital and it is recorded in that way. So we have these huge gaps of information because of the other systems that are in place. I think New South Wales Health needs to address some of the criteria gaps as well.

The Hon. J. R. JOHNSON: There are very important reasons for those protocols.

CHAIRMAN: We will be talking to the Rural Health Unit in Gunnedah tomorrow, and that unit should have a specific interest in this. So we will ask them about that. I thank you very much for your evidence and for coming along today. The questions on notice are:

1. Could you outline any concerns you have with the "right to farm" style notices that Mudgee Council is distributing to potential purchasers of land in areas zoned rural?

2. Can you outline the reasons behind your submission advocating the introduction of appropriate weather stations and compulsory chemical user licences as possible solutions to pesticide management problems?

(The witnesses withdrew)

PETER DUNLOP HOWAT, Manager, Research and Development, Nufarm Australia Ltd, 103-105 Pipe Road, Laverton North, Victoria, sworn and examined:

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr HOWAT: In the capacity of Research Officer for Nufarm and representing Nufarm Agricultural Chemicals.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr HOWAT: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr HOWAT: Yes, I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session.

Mr HOWAT: I have read that, and I do not believe that should be the case.

CHAIRMAN: Do you want to make a short statement before we ask questions.

Mr HOWAT: I have a presentation that I would like to make, if you do not mind.

CHAIRMAN: By all means.

Mr HOWAT: I will concentrate in that presentation on the perspective of Nufarm as the largest chemical company in Australia, and put forward some of the things that the company sees in terms of initiation or innovation and diversification of the industry – things that we have done that we believe have helped in the sustainability and changes in the agricultural chemical industry per se that have helped in terms of the management and use of pesticides here in New South Wales but obviously also in Australia.

I have some overheads. You will have received – and I have a copy of – the Avcare submission. That is the industry body. It is to be presented at the Committee's meeting in Sydney in a couple of weeks. I will be referring to a couple of items from that submission. That is not the main part of my evidence. My evidence will really be on what Nufarm has done as a company.

Industry Initiatives – Avcare

These are taken from the Avcare submission, but I want to put them up because they are industry initiatives, but they are also initiatives that Nufarm has become very much involved with in the agriculture chemical industry. You may be familiar with a number of those stewardship initiatives. Operation Clean Rinse was the rinsing of containers before they were disposed of. There was the industry waste reduction program, a very important one being Drum Muster, which was a levy being put on non-returnable containers.

There is a national collection and storage and disposal scheme. And Chemclear was a scheme to take a lot of agriculture chemicals from users and dispose of those appropriately.

Avcare is very much involved in accreditation, both for industry personnel and for premises. Again, for a company like Nufarm, all the staff within Nufarm have to go through Avcare accreditation. Many of the staff are at stage 2 or stage 3 of that accreditation.

There is also another stewardship program put in place called Love and Care. There are some posters around. I am sure that Avcare will show those to you at your meeting in Sydney. That is to show people the hazards of carrying agriculture chemicals in the cabins of standard cars rather than carry them in appropriate cars or vehicles. Those are the strategies that Avcare have put in place, and, as I say, Nufarm, the largest agriculture chemical company in Australia has been involved in that.

Avcare Accreditation

Avcare and Nufarm support other industry initiatives, whether from the National Farmers Federation, which has a farm care accreditation scheme which is based very much on the Avcare one. Aerial operators have a spraysafe scheme that they have in place. Again, the agriculture chemical industry is involved in that.

The cotton industry has a code of best management practice that was put together with the input of the agriculture chemical industry. Avcare and Nufarm are also involved very much in sustainable agriculture. Integrated pest management. All the agriculture chemicals that are now put on the market, and have been for the last few years, one of the questions that we ask ourselves as a researcher is: Where does this fit into the scheme in terms of integrated pest management? What effect will it have on beneficial insects?

We have also seen over the last few years in Australian agriculture the adoption of minimum tillage. It has been a very important thing, with farmers changing farm systems for the benefits of reduced erosion and a whole range of things. The chemical industry, of course, is very much involved with that.

Another area in which Avcare and Nufarm have been involved is resistance management. There are a number of Avcare industry bodies that look at resistance

management, whether it is from insecticides, fungicides or herbicides. Nufarm sits on many of these committees that are held under the auspices of Avcare. So those are two quick overheads to show you some of the things that Avcare, the industry body, has been doing. And Nufarm, as a company, has been involved in those.

Nufarm management initiatives

Nufarm, in their own right, have conducted a number of changes over the last few years, and has embraced a number of initiatives that we see that have helped in terms of management and use of pesticides in New South Wales and in Australia. Nufarm was the first company to be involved in the use of returnable 110-litre drums, or 1,000-litre tanks. The Nufarm names for these are Envirodrum and Envirotank. I have a leaflet here that I will hand on to the Committee. I will talk a little bit more about this later, but that is one of the initiatives of Nufarm.

We have also gone out of our way, particularly in our research and development, to see where we could change products that might have been liquid in form, to dry products. There are many benefits of that, and I will point to some of those as well. We have looked to make higher concentration formulations, increasing the use of higher level active.

I would like to point out also some of the information that Nufarm as a company has supplied to farmers. One of the things that we have seen over the last five to ten years is an increase in the information that farmers are trying to get. Nufarm has responded to that, and I will show you some of the types of leaflets and information that we have provided. I will go through those four points.

The first one really has been, I believe, quite a significant change in terms of farmers' usage or handling of chemicals. That brings me to the use of these Envirodrums or Envirotanks. The Envirodrum itself is a 110-litre tank that is a returnable container. It is fully sealed. It has a lot of benefits. One of the first is that it has reduced operator exposure. He does not actually take the top off the container to tip it out; he actually affixes a hose to that and he can fill his tank straight away. So it has reduced operator exposure. There is no drum disposal; they can return these 110-litre drums or 1,000-litre tanks.

They don't have to triple-rinse them because they don't actually open the container at all. These are very handy for storage or transport, again because they have not been opened. Nufarm as a company has quite a large product range. I will show some of those in a minute.

We actually colour-code these drums to reduce confusion. One product is in a certain colour, and another product is in another colour. We also have some herbicides and insecticides in these special 100-litre drums. To stop contamination with that, the affixing point for the hose from a drum that has herbicides in it has three prongs; and, for an insecticide, it has a four-prong fitting – so that you cannot take insecticides out when you should be looking for a herbicide.

These returnable drums are exempt from this Drum Muster levy, which is 4c a litre on all drums that are not returnable. That came into place from 1 February this year. So this Envirodrum system was introduced by Nufarm, but it is now starting to become a standard for a lot of other agriculture chemical companies.

Liquid herbicides available in refillable containers

Here are a range of products that we as a company would actually provide in these 100-litre drums or the 1,000-litre Envirotank – all refillable containers that the farmers take, pay a deposit on, and then send the drums back to us. We have all the advantages that I showed you in the previous overhead.

Percent sales in returnable containers

I just take some of the products on that list – Trifluralin 480 and Diuron FL. This is the percentage of our sales that are actually in these returnable containers. As you can see, over the last three-year period, there has been quite an increase in the use of these products. We have had some of these products on the market for only four or five years. I was out looking at some of the trials that we had in a farmer's paddock last week, and I was talking to a farmer about these Envirodrums and these containers. His words to me were, "They are the best thing that the agriculture chemical industry has done. He was just rapt in using them.

Nufarm management initiatives

Another initiative that Nufarm has taken and which I believe has helped in the management and use of pesticides in New South Wales is this move into dry products. Some of the benefits of this are listed. Obviously, there is a reduction in the use of solvents; a change in packaging form, going to a form of packaging that can be disposed of; increased safety in handling; ease of measurement; and a whole range of other things that are listed here. That is an initiative that the company has taken to help with the management and use of pesticides.

New slide (??)

First of all, there is a list of products that we as a company have converted from a liquid product to a dry product. We sell them in both forms, but many farmers find them very easy to handle in the liquid form.

Dry product adoption

For interest, there are three products, and the movement from 1994 to 1998. That is information on the adoption of these products in dry form. A couple of them are reasonably slow, but with some of them over 60 per cent of that product is actually sold in a dry form.

The Hon. J. R. JOHNSON: What happened between 1994, when it went sky-high, and then down in 1996?

Mr HOWAT: In that year there was a shortage of liquid material, and the whole market went down in terms of liquid. It just shows the percentage that was sold in that as a percentage of the total market. So, the whole market was down in that one year, and we had more dry product that we sold on the market. I don't think it was an adoption thing; it did not go backwards in terms of farmer usage. In terms of area used, it did not go backwards.

Reduced number of 20-litre drums

If we take the liquid products that we have put into our returnable drums, and the liquid products that we have actually made into dry products: I have put those together over the last five years, and this is the reduced number of 20-litre metal drums – which has been the normal standard for pesticides – that we as a company have replaced over that five-year period. In 1998 we had 341,000 less 20-litre containers out there, by replacing them with either refillable Envirodrums or dry products.

Reduced number of 20-litre drums due to dry products and refillables

There is a significant saving to farmers as well. As I mentioned, from 1 February this year there has been this Drum Muster levy, which for farmers is 4c a litre or kilo of material that is not in a returnable drum. That means that for every 20-litre drum the farmer will have to pay as a levy. Obviously, for these containers, if they are dry products, or if they are in refillable containers, they do not have to pay that levy.

The Hon. J. R. JOHNSON: Where does the levy go to?

Mr HOWAT: The levy will actually go to a whole range of people. At the moment, a company has been set up through Avcare and through the participating people involved, like the National Farmers Federation. That money will be allocated to people like shire councils or individuals who set up and use that money, or can use that money, for disposable systems. They may be setting up things like drum crushers; or, if they are plastic containers, they might be setting up something that actually breaks up those drums. So the money from the levy is actually being allocated – or will be allocated, because it has not at the moment, because it has just started – to those people who apply for it, to be able to help dispose of the drums.

Information to farmers in NSW

I have just two more overheads. These are some of the things that Nufarm as a company has done in terms of management and use of pesticides in New South Wales in this case, but also across Australia. This is the use of information and publications that we would put forward to farmers.

I have listed a number of publications. I have brought along a folder, which I am happy to provide to you. We have a thing here called “New Farmer”, which is a magazine which, in this case, has on the front of it, information about our Envirodrum

system. We also have a leaflet that tells them about transfer equipment that you can use. We have a spray diary, and we have a whole range of other things.

The important point that I want to make about this is that this is the sort of information now that farmers are asking companies or us to do. In the past they would have sought this information from government or semi-government groups. A lot of this information is now being provided by people such as our company.

Information to farmers in New South Wales

On that list is "Volatility of herbicides". We have put out a publication on volatility of herbicides. We have put out a publication on "Dry formulations" and "Transfer equipment". I will provide that in this folder of information that I have here for presentation to the Committee. That is what we have done as a company in terms of management and use of pesticides. I will leave the presentation there and take questions.

CHAIRMAN: Did you want that documentation?

The Hon. I. COHEN: I would move that the Committee have tabled the Health Surveillance Program for Vineyard Workers 1994-95, a report from Wine Care, and also a report "Wine Care Health Surveillance Program for Vineyard Workers", funded by the New South Wales WorkCover Authority.

Documents tabled.

CHAIRMAN: We will take a copy of those and return those to you. Going backwards: In the second-last overhead you referred to about 5,000 leaflets being mailed out. Who got those? How many farmers are there?

Mr HOWAT: In New South Wales we have, like everyone else, a farmer data base. We use the existing farmer data base for that. In the areas that we would look to put a lot of our products – which are mainly broken into two areas – we would have a cotton selective area of names, and the other would be cereal and sheep farming areas. We would target a total of something like 23,000 farmers in that area. We only put those out on request from farmers; they are not sent out to every farmer.

The Hon. J. R. JOHNSON: Why hide your light behind a bushel? It is not only farmers who are interested in your products; it is farmers' neighbours, and it is members of Parliament. If I could make a suggestion to you: What about inclusion in magazines like "The Farmer" or in rural press such as "The Land"?

Mr HOWAT: I would make two points about that. One is the list of things that we actually send out to farmers. The others are actually sent out to our sales staff. That information is then provided, on request, by them. That is one. I have brought along a copy of "Australian Grain" and we are very much involved in some of the articles. I have an article here about "Keeping sprays where they belong", which is very topical. When the people were writing that – Peter Hughes from the Queensland –

were actually involved in that. We provided information such as the volatility information that was there. Where possible, we try to get that sort of information in things like "Australian Grain" or that type of magazine.

CHAIRMAN: Is the Envirodrum only a Nufarm product?

Mr HOWAT: No, it is not.

CHAIRMAN: So others are using them as well?

Mr HOWAT: Yes. Nufarm was the first company to introduce their use. The Envirodrum is our name for it. We were the first company to use it, but it is nearly a generic drum. Certainly, the fittings on them are a generic fitting. It is called a micromatic fitting, made in the States. All people using those drums here in Australia, all the agriculture people, except for one company, as you would expect, are virtually all using the same fitting. So it is not like we are trying to get everyone trapped into our system. They can change it and use other people's drums as well.

CHAIRMAN: Is there any cost detriment to buying the chemical that way?

Mr HOWAT: There is no price difference. We actually have an \$80 deposit on that drum. Obviously, when we get the drum back, the farmer gets his \$80 back. Basically, the price of the chemical is the same whether they buy it in 20-litre drums or in the refillable drums. The advantage to the farmer at the moment is a slight financial one because of the exemption from the drum levy. But the real bonus to the farmer has been in the handling of the chemicals. Most of the surveys that have been conducted, where pesticides contamination has been a concern of farmers, has been the emptying of the drums into the spray tank, which is not an easy task to do. With this, they can actually do it from the ground. You just click the fitting in, and it pumps the chemical straight into the tank.

CHAIRMAN: What is the cost of the pump?

Mr HOWAT: The pump price can vary. We do not actually sell the pumps. We give advice on the pumps. The pumps range in price from anything from hand pumps that can be used, at basically \$250, up to a full diaphragm pump and motor of about \$1,800. In the initial stages of the introduction of the Envirodrums, Nufarm actually subsidises some people for the purchase of the pumps. But that has now stopped.

CHAIRMAN: Certainly, for the big users, it is a big jump forward. Obviously the small farmer would not be inclined to buy the 110-litre drums.

Mr HOWAT: Some smaller farmers would still take that much, but the dry products seems to be the area where the smaller farmers have taken them on. It is quite often easier to store, it is easier to manage, and quite often it is easier for them to manage where they do not have a liquid filling system, and they can use a hopper dry-

filling system. So we seem to see many of the smaller farmers actually going to the dry products.

CHAIRMAN: This morning we heard about the Drum Muster, and the group of about 30 councils in this area deciding not to participate in that because some of the people who sent the drums in did not triple-rinse them first. So the whole bunch were contaminated when they were treated together, and they were rejected. So those councils have pulled out of that program.

Mr HOWAT: That has been a major problem. You would remember that one of my slides was on the early campaigns of Avcare was do with this triple-rinse. It has been a major problem, where they have actually had to return drums to council tips and things, to get them fully clean. That is one of the difficulties, and it is an education matter. Now, it is going to start to become more of a financial burden to them. As it is now, farmers have been able to put them in places round their farms, in dams, and have been able to bury them or whatever. As that becomes more and more difficult for them, they are either going to go the way of either liquid or dry products, or they are going to have to start triple-rinsing them.

The other advantage that they have had is that most of the spray booms that farmers have now actually have attachments on them to allow them to do the triple-rinse. They actually put a spike in the drum and it pushes the chemical out and rinses the drum at the same time. They are now available and are sold when people buy a spray rig. That will make a significant difference. But it has been a major problem.

The Hon. J. R. JOHNSON: Mr Howat, is Nufarm an old company? If not, what are its antecedents?

Mr HOWAT: Nufarm was actually started in the mid-50s. It is a generic chemical company. It is an Australian company. We do not do research into new active molecules, or the synthesis of new molecules. We take products that are out of patent and we then sell them in Australia, and our development work is done on those products. Nufarm is now quite a large company. We had total sales last year of about \$1.1 billion.

The Hon. J. R. JOHNSON: You said that Nufarm is an Australian company. Is it Australian-owned?

Mr HOWAT: Australasian, could I say. At the moment, it is headquartered in Auckland New Zealand, but it is in the process of being transferred to Australia. I would suggest, without looking totally at the share portfolio, that 98 per cent of the shares would be owned by Australians.

The Hon. J. R. JOHNSON: Transferred to New South Wales, I hope.

Mr HOWAT: No, Melbourne.

The Hon. J. R. JOHNSON: Who is responsible for the freight to get your drums back to you – say, from the farm gate in to the agent, and from the agent to you – or do they go direct to you from the farmer?

Mr HOWAT: At the moment, what happens is that the farmer returns them to the agent, at which time he is credited back his \$80 deposit. It is Nufarm's cost; we have taken the cost to take from the agents back to our refilling sites. Initially, all the drums were filled either at our manufacturing site in Melbourne or in our manufacturing site in Kwinana in Western Australia. We have actually put in over the last two years a number of refilling stations. We have one in Moree and we have here in Dubbo, and we are about to open one in Wagga Wagga. You can imagine that one of the significant costs to us is the cost of returning the drum, if we had to bring it back to Melbourne each time. Now we only bring it back to Melbourne if it needs to be refurbished, in terms of fittings, or if it has been damaged and needs repair, or requires to be cleaned.

The Hon. J. R. JOHNSON: What is the percentage of returns where there is a deposit payable?

Mr HOWAT: It is basically 100 per cent.

The Hon. J. R. JOHNSON: You said that the drums are colour-coded.

Mr HOWAT: Correct.

The Hon. J. R. JOHNSON: I have read an article within the last few months about the colour-coding of certain drums. A person had written in, suggesting that the name also be on the drum – I think their suggestion was in white, irrespective of the colour of the drum, because of colour blindness. A person who sees red may be seeing it as brown.

Mr HOWAT: We have colour-coded the drums, but we have not changed the colour of the label because the label, as you know, is a registered legal document and we cannot change that. And we cannot change the colour of the writing on the labels, because that again is set, and you will find it either has to be white or black.

The Hon. J. R. JOHNSON: The label on the drum itself?

Mr HOWAT: Well, the label is wrapped around the drum, and it has to be either black or white. It cannot be coloured because of potential colour-blindness. But they are a fixed label on the drum.

The Hon. J. R. JOHNSON: What product do you get most complaints about?

Mr HOWAT: In terms of?

The Hon. J. R. JOHNSON: The people who live nextdoor to farmers who spray such and such.

Mr HOWAT: From that, we are the major supplier in Australia of phenoxy products, which are 2,4-D, MCPA, and those products. They would be the ones that, in terms of potential spray drift or damage, we would hear about most. In particular, there is a lot of concern about the use of those products anyway, and obviously there is legislation prohibiting the use of some of those products in particular areas at particular times. They also have an associated smell, and people are aware of that, and that is another complaint that we get. So, from our point of view, that would be the number one complaint.

CHAIRMAN: 240 ester.

Mr HOWAT: 240 ester is the best known, but that possibly works to its advantage a little bit: because it is well-known, and people know it is volatile; and people also know that it can be moved from spray drift. It seems to us, from what we see from farmer usage and from recommendations, that people are aware of that and are very conscious of it. Possibly, we would have more – I was going to say complaints – but probably like more inquiries on glyphosate, rather than 2,4-D, because people are not as aware of that.

In a sense it is a catch-22: people look at products such as 2,4-D ester and know it is volatile. Volatile movement means that if a pesticide lands somewhere, the product is naturally volatile and can move off and go somewhere else. They are conscious of using such a product. If you contrast that to where we actually have physical spray drift, which is somebody spraying and the droplets created during the spraying being moved by the wind, that can happen with every product. There is no distinction between products in terms of spray drift. But, if you are about to spray estercide, you are going to be very conscious of spray drift. If you are going to be spraying something like glyphosate, which you do not believe is as dangerous, you are maybe not as conscious of some of these environment effects. And it can drift. There is no difference in the spray drift between estercide as there is with glyphosate. So we quite often have concerns about glyphosate.

The Hon. J. R. JOHNSON: You made reference to the stench of something.

Mr HOWAT: There is a smell associated with estercide. There is virtually no smell associated with glyphosate.

The Hon. J. R. JOHNSON: If you take as a story Lever & Kitchen. Lever was working in a grocery shop and a woman came into him and said, "I'd better have a bar of that stinking soap." He started to put perfume with it, and that's how he made his millions.

Mr HOWAT: It works in two ways. I worked with a company before I started work with Nufarm, and we had an insecticide that had quite an offensive smell. No-one liked the smell, so we put a perfume in that. You don't think we got a lot of complaints from the farmers telling us how poorly it worked after that!

The Hon. J. R. JOHNSON: Do you keep statistics or look at health reports, if there are any, of people complaining or informing you of ill effects of any of your chemicals?

Mr HOWAT: I don't actually keep them. I am not an expert in that area.

The Hon. J. R. JOHNSON: Does the company keep them?

Mr HOWAT: The company has an expert in occupational health and safety in our company, and he keeps all the data on any information that we get, a telephone call or anything from our sales representatives on potential health problems. They are sent directly to him as the expert in that area. I do not have those figures.

The Hon. J. R. JOHNSON: Could you make that information available?

Mr HOWAT: I am sorry that I don't have them, but I am sure we could make those available, if you wish – how many incidents were reported to him. But they go directly to our occupational health and safety chap.

The Hon. J. R. JOHNSON: If we could have that on a confidential basis, that would help.

Mr HOWAT: Certainly. I will provide that.

The Hon. J. R. JOHNSON: It is up to you whether it is to be confidential.

Mr HOWAT: Thank you.

The Hon. I. COHEN: Mr Howat, has your company been involved in any studies to determine the cost and potential for application of pesticides without aerial spraying?

Mr HOWAT: Not directly, no. We have looked at a number of instances where aerial application has been a concern. One of those is the application to rice in southern New South Wales. We have spent a reasonable amount of time trying to look at some substitutes, product-wise, for the existing products. One of the main ones that concerns is a product called sodium MCPA, which we sell and is applied to rice. We looked at what we could in terms of making that product into a dry product, into a granule, and then broadcasting that; or putting it on by ground application. But I don't believe we have been directly involved in such studies, no.

The Hon. I. COHEN: What is your or your company's view on the reported medical condition of multiple chemical sensitivity?

Mr HOWAT: I would have to give a personal view because, as I said, I am here on behalf of the company. I am sure there are cases of that. We certainly know that there are different sensitivities to many of the pesticides that we use. We see that both in our own staff and also in people at our manufacturing site. It is difficult to

extrapolate from that and know whether the multiple sensitivities are as prevalent or as present in the community. But I certainly have no problem with accepting that there are differences in people's sensitivities to a lot of these products, as there is for just about everything else.

The Hon. I. COHEN: Do you have occupational health and safety records of that sort of thing that you could make available?

Mr HOWAT: We certainly do in the plant. We have a manufacturing site, as I mentioned before, in Melbourne and in Kwinana. All employees within Nufarm have annual medical tests and undergo blood sampling every year. Our staff at our manufacturing sites have three-monthly medical and blood samplings, at their own request, if they wish, and there is information kept on their sensitivity to these products, yes. Again, I could see if that information is available. I should be able to find that.

The Hon. I. COHEN: Multiple chemical sensitivity, and any impacts such as chronic syndrome, is of relevance in relation to your workers. If you have any information on that, that would be very valuable to the Committee.

The Hon. J. R. JOHNSON: Would that have been made available to the unions covering your workers on the site?

Mr HOWAT: It is made available to the individual personnel at the Melbourne site.

The Hon. J. R. JOHNSON: My question was about making it available to the union.

Mr HOWAT: I do not believe there are any union members on our site.

The Hon. J. R. JOHNSON: How many people work there?

Mr HOWAT: The information is made available to the individual workers.

The Hon. J. R. JOHNSON: How many people work there?

Mr HOWAT: There are about 400.

The Hon. J. R. JOHNSON: And no unions?

Mr HOWAT: No. The plant works 365 days a year. I don't think there has been a day missed through a strike there.

The Hon. J. R. JOHNSON: There are numerous places like that that are fully unionised where there are no strikes. There are about four million workers went to work today, and there may be 200 on strike. Unionism does not imply strike.

Mr HOWAT: No, that is right.

The Hon. I. COHEN: Does your company manufacture, import or have anything to do with any alternative pesticides, such as pyrethrum and niem?

Mr HOWAT: We have sold BT products. We have looked at niem a number of times. The major ones that I have been involved with have been used in trials in cotton and in tea tree, and we have had some trials in some vegetables. We have never been able, in those trials, to get sufficient control from the product such that we would want to continue development.

The Hon. I. COHEN: For the purpose of licensing all users of pesticides, what is your view on the registering of chemical users at the point of sale?

Mr HOWAT: Certainly, for schedule 7 poisons, I believe it is something that we should do, and we do do now. For the remainder of the products, I don't believe so. I think, with the courses that we have, both in the accreditation for resellers and for the farm care course, I don't believe we need to go further than that in terms of registration for every usage.

The Hon. I. COHEN: You do not believe there is any other area of licensing and training and education that should be introduced?

Mr HOWAT: It is going to be a continual process in terms of training, in terms of a new situation that comes along, and in terms of application of the product, as well as new uses. Where we have specialised uses, I have no problem with adequate and specialist training in those areas.

The Hon. I. COHEN: Would the proposal outlined in the Environment Protection Authority's discussion paper have a financial impact on the viability of your organisation?

Mr HOWAT: Very minor actually.

The Hon. I. COHEN: Very minor?

Mr HOWAT: Yes.

The Hon. I. COHEN: Given your views on education on the product and associated advertising within the industry, do you see that your company would have any responsibility in terms of misuse of pesticides in the community, and chemical trespass, in terms of the application of your products?

Mr HOWAT: I think we have recognised that application of our products is one area where---

The Hon. I. COHEN: It is a bit like being a gun salesman, isn't it?

Mr HOWAT: I think you need to make people very much aware of application. Application is one area where there has not been a lot of direct information supplied to the users of the product. We would like to see that change a little bit. It is an area in which there has not been a lot of development of expertise in application. A lot of farmers who have grown up with application, but who have not, in a sense, been adequately trained in it, may not be as familiar as we would like with the total theory of what is actually occurring when they are applying a pesticide. I think there is a lot of training that should go on, and I would certainly like to see that.

The Hon. I. COHEN: There is a bit of a contradiction, I suppose, in that you are trying to sell as much pesticide as you can, in terms of promoting your business. How does that sit with appropriate education on the dangers of pesticides?

Mr HOWAT: I think it sits very well, actually. I think the better that people apply our pesticides, the better they will get those pesticides to work, and the more likely they are to come back and use them again. The difficulty is in someone using them inappropriately and they don't do the job properly. That seems to be where we get into trouble. I would think that the more they understand about the application of our products, the better they would use them and, I would hope, decide to use them again.

The Hon. I. COHEN: From your company's point of view, do you see any changes in the Pesticides Act that would make things more fair and equitable, particularly for people who are victims of pesticide trespass, to clean up the industry so that your selling should perhaps be conscience-free?

Mr HOWAT: We would like to think that everybody uses our pesticides, and everybody else's pesticides, uses them appropriately, and uses them as per the label in every way.

The Hon. I. COHEN: Do you really believe that?

Mr HOWAT: I said we would like to think. We would like the people who, in some cases, use them inappropriately to be seen as the pariahs and as the people we do not want to supply our chemical to. We already do that in terms of our supply of chemical to resellers who are not accredited. Maybe that can be a case where we as an industry will have the teeth to say, "We don't supply to this or that person if they are people who are not going to use them appropriately."

The Hon. I. COHEN: Is there any mechanism available to you to do that?

Mr HOWAT: There is no mechanism not to supply to those people. There is a mechanism not to supply them to resellers who are not accredited. That mechanism is already available to us, and it can be used. Very often, those two things go together. If a reseller has not got the accreditation and has not got the staff, that is where you will usually have a problem. I am fully aware of this, because one of my tasks at Nufarm is to look after where we do have complaints about the efficacy of our products or

inappropriate use. It is more likely to come through one of those sources than from a more reputable source.

The Hon. I. COHEN: What sorts of complaints do you get?

Mr HOWAT: Mostly, the complaints we get are ----

The Hon. I. COHEN: And from whom?

Mr HOWAT: They would come through from farmers, who would either go through our sales representative, or back through where they actually purchased the product. It would be a concern about the efficacy of the product. They would be 90/10 on the complaint side: they would be 90 efficacy and 10 per cent that there was some damage to their crop.

The Hon. I. COHEN: As well as damage to crop, do you get complaints about damage to persons?

Mr HOWAT: I cannot recollect that I have had one dealing with a person. As I mentioned before, if it is a health and safety matter, it is directed to another person in our company. My responsibility is to look at the performance of the product, and I respond to those complaints.

CHAIRMAN: You would mainly get a complaint from somebody if they sprayed a crop – whether they had read the label or not – and it killed something that they did not intend to kill, would you not?

Mr HOWAT: No. As I said, the most likely cases are where it did not control the pest, or it did not work as well as they had wished or had expected.

CHAIRMAN: So you are not getting the sort of complaint that the Hon. Ian Cohen is talking about; where it had something to do with a neighbour? They would not come near you, would they?

Mr HOWAT: No, not normally. The only time that I have become involved – and it is more as a third party – is where one of our products was used inappropriately, and they might contact us to say, “What is your expertise? How much damage will occur? What will be the effect of this damage?” That relates to an understanding of the product. That is my expertise in the company.

The Hon. J. R. JOHNSON: Do you have protocols in place for people at say Walcha who have a lot of agriculture chemicals, and he goes on holidays, and where the fellow who takes over from him may not know that this is what he should do. Would the information be made available to him by a farmer?

Mr HOWAT: We certainly have in place a complaint procedure. We have product that we would divide into a couple of areas. One is a product performance inquiry, which would be something that may be directed to us from that person. In the

normal case, it would go to our regional sales representative. If he felt he did not have the knowledge there to try to explain what happened, it would then come to myself. So there is performance on product, and there is a separate area that looks at complaints – which may ultimately be that the product did not work as well as they wished, or that it may have damaged a crop in some way. There is a set procedure that we have in the company, yes.

The Hon. J. R. JOHNSON: As a result of complaints, have you ever withdrawn product from the market?

Mr HOWAT: We have had an instance where, through complaints, it was determined that there was some contamination within a batch of product, and we withdrew that product. But, in the normal case, no.

The Hon. J. R. JOHNSON: Was that a total withdrawal?

Mr HOWAT: Of that batch of that product that was put out, yes.

The Hon. I. COHEN: Have there been any cases of your chemicals having an effect beyond expectation, both to humans or the environment, where you have had to withdraw them?

Mr HOWAT: No.

The Hon. I. COHEN: What is your company's view on genetically-engineered products? Is this having an impact, or are you looking at a future market there for expansion?

Mr HOWAT: It has not had an impact on us per se at the moment, in terms of products in Australia, but I am sure you are fully aware that there is only one genetically-modified crop that is on the market here, and that is BT cotton. That has not had an effect on us as a company. That is an insecticide used in cotton, and it is not an area in which we sell a lot of products.

The Hon. I. COHEN: What is your relationship with Monsanto?

Mr HOWAT: We have a relationship with Monsanto in terms of the purchase of glyphosate material. We do not have any relationship ----

The Hon. I. COHEN: Are you an agent for Monsanto in Australia?

Mr HOWAT: No, we are not. We have instances where we ----. We sell glyphosate here in Australia. Monsanto's product is Roundup. It is off patents here in Australia, as you would be aware, and it has been for a number of years. Nufarm sells it here. We have actually manufactured some of the glyphosate itself; we have bought it from other sources from overseas; and we have occasionally bought glyphosate acid from Monsanto which we would then aminate and then sell. So we have a commercial relationship in that we buy some product from them.

The Hon. I. COHEN: Are you aware of the fair degree of controversy about surfactants in Roundup or glyphosate?

Mr HOWAT: Yes.

The Hon. I. COHEN: And the claim that there is a new edition of glyphosate in which the surfactant has been improved?

Mr HOWAT: Yes.

The Hon. I. COHEN: There is debate about that as well. Can you explain that? If I might add: I think there is a fair degree of concern about its environmentally safe usage. Has it been withdrawn from the American market?

Mr HOWAT: No. The glyphosate is a product that is water soluble. To work effectively, it has to be taken up in the plant. Because of that, when you actually buy glyphosate nearly 13 per cent of the product that you buy is actually surfactant, because the product, when it lands on the surface of the plant, has to spread out on the plant so that it can be physically taken up in through the plant leaf. So there is a high proportion of surfactant in glyphosate.

The basic surfactant used in glyphosate is a product called ethoxylated tallow amine. That is in there for the reason that it needs to be taken up by the plant. At certain concentrations, that glyphosate becomes toxic to fish and to tadpoles because the surfactant actually gets on the gills of those fish. At certain concentrations, when glyphosate is applied with very low levels of water, if you have tadpoles in there you will get a death of some of those tadpoles – through the physical presence of that component of the product.

That was identified a number of years ago by the Environment Protection Authority in Western Australia. It only really happens when you have a very low concentration of water: when you apply glyphosate to standing water which is at a low level, and therefore you have a high concentration of surfactant.

At that time Monsanto actually came out with another surfactant in its glyphosate which was less toxic to these aquatic organism, basically to frogs and to tadpoles. We as a company looked round and also came up with a surfactant that was less toxic to frogs at that time. We put that product on the market. Instead of our product being called glyphosate it is called Weedmaster 360, and it has registrations for use in aquatic areas, as does the Monsanto product.

Before that, glyphosate was registered for use in products that have aquatic uses. They were taken off that label. So now you have Roundup, or, as well sell it, glyphosate that does not have aquatic use registrations. You have specialist formulations of glyphosate. As I said, ours is called Weedmaster; Monsanto's is called Biactive. But they are different and have been registered by the National Registration Authority to be used in these aquatic situations.

The Hon. I. COHEN: Are you personally concerned with the higher resistance levels that develop as a natural usage of products of your company?

Mr HOWAT: Of our product, yes; and, of the industry, yes. As I mentioned in my introduction, Avcare has three committees that actually look at resistance to herbicides, insecticides and fungicides. I have been on that herbicide resistance committee since its inception in 1986, which was the first one in the world to do that. I was chairman of that committee for eight years. I have been involved for many years in resistance issues. I have been, and I am now, concerned about the evolution/development of resistance with all those products. That is one of the reasons that the chemical companies have put a lot of effort into integrated pest management, whether that be in weeds or in fungicides. One of those is to slow down or, if possible, stop completely its development of resistance to products.

The Hon. I. COHEN: How are you doing that?

Mr HOWAT: By the use of integrated pest management, where we could actually get away from farmers applying, year in and year out, one or more types of insecticides or fungicides. If you have a population of whatever it is – weed, insects or fungi – and you continually use the same product for the control of that pest, you eventually will select for resistance. That is well known. We have to make sure that does not happen. To do that, we must rotate chemicals; we rotate crops; we rotate everything that we can to take away that selection pressure, to lower that possibility of selecting for resistance.

The Hon. I. COHEN: Is that working?

Mr HOWAT: It certainly is. I don't think that we would have been able to continue our use of insecticide control in a number of areas – and cotton is one. We have had very good control of fungi in our top fruit because of our use of the integrated pest management system. Unless those measures were put in place, I think that would have been very difficult to near impossible.

CHAIRMAN: We have some questions that we will ask you to take on notice. What we will do is get you a copy of the transcript of today's hearing, and the questions will be in it. Would you take those on notice and furnish us with your response to them?

Mr HOWAT: Yes.

CHAIRMAN: That is, if you have not already covered those questions in your answers already. But there is one final question. I do not think your company produces endosulfan for cotton?

Mr HOWAT: We do sell endosulfan in the cotton industry, yes. We do not manufacture it, but we do sell it.

CHAIRMAN: One of our witnesses today suggested that one solution would be to ban the sale of endosulfan. Can you comment on that? In particular, are there other alternatives that are viable? Or is that too simplistic?

The Hon. J. R. JOHNSON: You can take it on notice.

Mr HOWAT: No, I think it is worth answering. I would not like to see endosulfan banned from use in cotton. I believe it is still a required product for use in cotton. You could make a case that we could substitute a number of products where endosulfan is being used in cotton sprays at the moment. The trouble with that is that it would put too much pressure on some of those chemicals that we would actually put in as replacements. So I certainly would not like to see endosulfan banned.

CHAIRMAN: Are they more expensive?

Mr HOWAT: Yes, more expensive. Then we would start to bring up some other problems in terms of the usage of those products in cotton – not just expense, no.

CHAIRMAN: In terms of resistance?

Mr HOWAT: Yes, in terms of resistance.

CHAIRMAN: In four years, there has been resistance.

Mr HOWAT: There are high levels of resistance to endosulfan already in cotton, and it has been there for many years. I was saying before that just about all the products that we have got in cotton at the moment, except for the ones that have been introduced in the last couple of years, we have quite high levels of resistance. Because of the strategy that we have in cotton, we have been able to continue the use of those products. Taking endosulfan out would just make it that much more difficult.

The Hon. I. COHEN: Do any or all of your products bioaccumulate? If no, what sort of testing have you been able to do in terms of bioaccumulation in the environment and in species?

Mr HOWAT: Bioaccumulation has not been a standard test in terms of products and products for registration here in Australia, but it is coming into place now.

The Hon. I. COHEN: At a Federal or State level?

Mr HOWAT: At a registration level. We have done a lot of work. With our major products that we manufacture, which I mentioned before – the phenoxy products 2,4-D and MCPA – we have actually looked into that and done work overseas to try and look at that. We have found that that is not the case. Those are the only products that we have done in our own right.

The Hon. I. COHEN: You are saying there is no bioaccumulation with those products?

Mr HOWAT: Of those products, correct.

The Hon. I. COHEN: What proof do you have of that?

Mr HOWAT: From the work that we have conducted in the United States. Those products actually came up for re-registration in the United States, and to do that we had to actually provide that sort of information.

CHAIRMAN: What about the overheads?

Mr HOWAT: I will provide copies of those and whatever else.

CHAIRMAN: That would be great. These are the questions that I would like you to take on notice:

1. Can you identify any areas of pesticide legislation and policy at Commonwealth, State or local government level that should be addressed to minimise the impact of pesticide use in New South Wales?
2. Are there any improvements that could be introduced in the area of labelling of pesticides and disposing of pesticide containers that may minimise damage to persons, property or the environment?
3. What is your view as to the appropriateness of allowing pesticides to be applied at lower than recommended dosage rates?
4. What is your view on the adequacy of weather stations and forecasting data in providing data for pesticide applicators?

(The witness withdrew)

(The Committee adjourned)

REPORT OF PROCEEDINGS BEFORE

STANDING COMMITTEE ON STATE DEVELOPMENT

INQUIRY INTO THE USE AND MANAGEMENT

OF PESTICIDES IN NEW SOUTH WALES

At Gunnedah on Tuesday 27 July 1999

The Committee met at 10.00 a.m.

PRESENT

The Hon. A. B. Kelly (Chairman)

The Hon. I. Cohen
The Hon. J. R. Johnson
The Hon. I. M. Macdonald

CHAIRMAN: I advise that under Standing Order 252 of the Legislative Council any evidence given before the Committee and any documents presented to the Committee which have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any Member of such Committee or by any other person. Copies of the guidelines are available on the side table.

Motion by the Hon. I. Cohen agreed to:

That, in accordance with the Legislative Council resolution of 11 October 1994, the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held this day.

VICKI ANN DOUBLEDAY, Secretary, Gunnedah Environment Group, of Mulwalla, Gunnedah, and

LEONARD JIM SANDERS, Farmer, of P.O. Box 466, "Gooriabh", Gunnedah, sworn and examined:

CHAIRMAN: Vicki, in what capacity are you appearing before the Committee?

Ms DOUBLEDAY: As Secretary of the Gunnedah Environment Group.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms DOUBLEDAY: Yes, I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Ms DOUBLEDAY: Yes, I am.

CHAIRMAN: Len, in what capacity are you appearing before the Committee?

Mr SANDERS: As a committee member of the Gunnedah Environment Group.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr SANDERS: Yes, I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr SANDERS: Yes, I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that the Parliament has the right to overturn the Committee's decision and make your evidence public.

Ms DOUBLEDAY: The Gunnedah Environment Group, whose membership consists of landholders, traditional mixed farming families, farm workers and townfolk, continues to advocate for the reduction of pesticide usage in the Gunnedah area. We are concerned about chronic low-dose exposure to chemicals.

We understand that sustainability is defined by the World Commission on Environment and Development and that the principles of sustainable development include intergenerational equity, conservation of biodiversity and ecological integrity, an anticipatory and precautionary policy approach, and social equity issues.

Many of our groups and members have had first-hand, albeit negative, experience with the social and equity principle of sustainable development that is occurring here in this area. That is seen by the Helix and the endosulfan debate. We are concerned that the Governments are failing in their duty of care to provide basic civil rights of clean air and water.

We have lost our right of choice, basically. We are concerned that there is no commitment to accountability for a number of stakeholders on this issue by a lack of strong legislation and an outdated Pesticides Act that is 20 years old, adding further fuel to the fire.

We believe that governments are either fundamentally concerned with economic rationalism and that the issues that are referred to in this inquiry that face this many communities are often outside this framework. We have to question industry's ability to self-regulate. If best management practices were occurring and were successful, would pesticides be showing up in our cattle, our rivers, our settlements and our water samples. I have evidence to present and to table to this Committee on those matters. The fundamental issue is that pesticides do not acknowledge boundaries, even if they are best management boundaries. That is a very short summary of our concerns.

CHAIRMAN: Would you like to formally table the documents?

Ms DOUBLEDAY: I would like to table this, and I would like to table evidence that was prepared by our committee to your Committee.

Documents tabled.

CHAIRMAN: Len, would you like to make an opening statement?

Mr SANDERS: Basically, what Vicki has put in that short formulation of the presentation contained the main concerns of the group and those who live in this valley.

CHAIRMAN: You mentioned, Vicki, that you would like to enlarge on a point.

Ms DOUBLEDAY: I would prefer if you asked questions and I could answer those. There is documented evidence of blood samples, sediment samples and rainwater tank samples in this evidence.

The Hon. I. COHEN: Ms Doubleday, I understand your submissions. Could you describe to the Committee some of the examples that you have about pesticide levels in humans, the proximity of spray drift and possible chemical trespass, and also any pesticide levels found in rainwater tanks and containers, and give an explanation of the proximity of spraying and your assessment of the problem?

Ms DOUBLEDAY: Firstly, there was a blood sample given to us by a farmer who runs beef on his farm. He lives approximately a kilometre downwind of a cotton farm. This occurred in 1996. He had a blood sample. He was quite ill. That blood sample actually shows a number of pesticides in his blood. What concerned him the most is that he has never used endosulfan on his property, and endosulfan is showing up in his blood. He is very concerned about that.

There is a billabong sample of the Bluevale Lagoon that actually shows endosulfan 1 and endosulfan 2 and endosulfate, which is actually the breakdown product of endosulfan. It is increasing as it breaks down. Endosulfan is actually bioaccumulative, and it increases as it breaks down. It is an organochlorin.

There are further examples. One of our members was quite ill over a twelve-month period. The table drain at the front of her house has been documented now to have a number of pesticides in it. That information is tabled there too. It took her a long time to get people to acknowledge that she was ill. The results here are a concern to the Gunnedah Council, as documented in the letter. She was taken to hospital on a couple of occasions due to her illness.

The Hon. I. COHEN: Did she use endosulfan on her own property?

Ms DOUBLEDAY: Absolutely not.

The Hon. I. COHEN: What was her proximity to the nearest users of endosulfan?

Ms DOUBLEDAY: Her building is actually within the same block of an agricultural depot and a shire council depot. So, we are concluding that there is runoff or something from that area.

The Hon. I. COHEN: Do you have information regarding pollution, water quality, effects on fish stocks and on other water-dependent animals and birds?

Ms DOUBLEDAY: Certainly.

The Hon. I. COHEN: You might have that in your written submission. Could you give a brief assessment on that?

Ms DOUBLEDAY: With the billabong, it is quite evident that it is in the billabong system, and that has to have some effect. I have got a clipping from the Northern Daily Leader, nearly 12 months to the day, showing that endosulfan and other chemicals have been found in the northern river system. They are quite concerned that the endosulfan is actually in the river system, and about the amount that we presume is being used in the area. The topography of this area means that when pesticides are used, they tend to circulate in the valley. It is in our trees, it is in our rivers, and it is in our water tanks.

The Hon. J. R. JOHNSON: Is there evidence for that?

Ms DOUBLEDAY: Yes, we have that evidence. It is tabled in my evidence.

CHAIRMAN: You have a newspaper article there entitled "Minister in a spin over cotton pesticide war". That newspaper quotes a couple of things, but one is that:

Gunnedah Council recently closed its aerial spraying facility.

We might ask the Gunnedah Shire Council about that matter. The other item in that article states:

A chemist, Mr Peter Dennis, saying he had observed a significant but unquantified increase in demand for medications for allergies and respiratory complaints and calling for an expert survey of Gunnedah health practitioners.

Has that survey been done?

Ms DOUBLEDAY: Not to my knowledge.

The Hon. I. COHEN: Can you give the Committee any information on, as I understand it, a class action being undertaken about the use of endosulfan?

Ms DOUBLEDAY: I will ask Len to answer that because he has been involved in the class action.

Mr SANDERS: At this stage there have been no results come from that class action. I understand that at the end of this year it will be before the courts. But, at this stage, it is in its infancy.

Ms DOUBLEDAY: That is to do with endosulfan, I believe. Are you talking about Helix too?

Mr SANDERS: Yes, that is to do with endosulfan. The Helix program is up and on its way, and the majority of it has been concluded. But the endosulfan class action is in its infancy.

The Hon. I. COHEN: I will address this question to either of you: Would you support the use of chemicals if there was a ban on aerial spraying and other application methods were applied?

Ms DOUBLEDAY: In today's society we are so dependent on chemicals. We cannot say, "No, no chemicals." We are not against chemicals. We are for pesticide reduction. If that is taking aeroplanes out of the air, yes.

The Hon. I. COHEN: Given the genetic engineering used on some of the cotton crops now, do you have any concerns that the industry is moving to genetically-modified crops and the unknown side-effects and its potential to affect water supply, and how that may affect human and animal health? Have you looked into that matter?

Ms DOUBLEDAY: I think the science has to be treated with caution. I am of the understanding that there is a race against time, that we are only just ahead of the bug. I have spoken to a few farmers who believe that their spraying has definitely dropped a small amount. But they still have to spray. The implications of that are a concern. I mean, Rachel Carsons 30 years ago spoke about the DDT, and 30 years on we are still arguing about the implications of the spraying of pesticides around in our environment.

The Hon. I. COHEN: Could you identify the major areas of pesticides legislation and policy that need to be addressed to minimise the impact of pesticide use?

Ms DOUBLEDAY: Firstly, we have to have stronger legislation. Len might like to speak more about that.

Mr SANDERS: In the Pesticides Act, as I understand it, there are two words "wilful intent". To prove wilful intent of chemical drift and chemical trespass and the destruction of both human and environmental health is nigh on impossible.

The Hon. I. COHEN: So the deletion of the "wilful" would satisfy many of your concerns?

Ms DOUBLEDAY: Definitely.

Mr SANDERS: It would certainly open up the system for litigation, and litigation is the only thing that is going to create a balance in this argument.

Ms DOUBLEDAY: Our Pesticides Act is 20 years old. It is totally outdated. Our communities are demanding a stronger Pesticides Act.

The Hon. J. R. JOHNSON: The purpose of this Committee is to update that Act.

Ms DOUBLEDAY: That is right.

The Hon. I. COHEN: In terms of problems under the Act, could you as local property owners and so on describe your relationship with people in the cotton industry and reactions to concerns about aerial spraying near your properties and issues of chemical trespass?

Mr SANDERS: There is no relationship whatsoever now. It is open warfare out there. It has now continued for many many years. In my case, it is in its twelfth year. Initially, back in December of 1989 I sent water samples to the analytical authorities in Melbourne. Even in those days they came back positive with synthetic pyrethroids and organophosphates. The concern was in place, and has simply deteriorated and degenerated, in both human and environmental health, since that time.

The Hon. I. COHEN: Has the industry in any way adjusted its practices in your immediate area through consultation or communication on the issue of pesticide trespass?

Mr SANDERS: In my immediate area, absolutely not. There has been little to no communication whatsoever. Basically, that's it.

Ms DOUBLEDAY: Industry talks about best management practices. We have to acknowledge that things have definitely got better over the last five years, but pesticides do not acknowledge boundaries. It is as simple as that. Everyone can be as careful as possible, but pesticides are drifting. That is the fact. That is in my evidence. Best management practices are not validated, they are not independently monitored or assessed. We are concerned that best management practices are internally monitored and assessed. There is no validation of best management practices.

The Hon. I. COHEN: Would you have a preferred option in terms of regulation and how to deal with best management practices?

Ms DOUBLEDAY: I think government must have some hand in that. I mean, you can say you are doing the right thing, but at least someone from outside comes in and has an audit. Can you imagine someone auditing your books and you saying, "I'm fine"? It is commonsense that we need someone from the outside or from government to come in and audit their best management practices.

The Hon. I. COHEN: As to the effect of chemicals on people in the community, could you comment on the availability of information, and assessment of the health of the community, particularly children? Is there adequate assessment, and what role does the government play there?

Ms DOUBLEDAY: I think the government is not playing any role in it. We have people who ring us who are at the end of their tether: they are sick, they have got

headaches, they are dizzy. Barbara Smith is a classic example. She goes to the doctor, and the doctor will document that it is vomiting or headache, and that is all. There is no connection of the illness symptoms to the causes. The causes are never recorded. It is difficult for someone to state that.

I had a dear friend who was 57 years old. This friend lived in close proximity to a cotton farm. She had to drink the water in her rainwater tank, and she died at 57 of thyroid cancer. The cause or causes of her illness will never be known. It is documented that she died of thyroid cancer. One has to question, in the context, the cause of her death.

The Hon. J. R. JOHNSON: Do you keep records of all of these people who ring you up with these complaints?

Ms DOUBLEDAY: Do they keep records?

The Hon. J. R. JOHNSON: No. Do you keep records?

Ms DOUBLEDAY: We have not got a lot of records.

The Hon. J. R. JOHNSON: You have stated that a lot of people ring you up with complaints. Do you keep records of those complaints?

Ms DOUBLEDAY: No.

Mr SANDERS: Generally speaking, those complaints are referred back to the person making the complaint, to either contact the Environment Protection Authority or seek medical treatment. Might I point out the directions given by, certainly, the local general practitioners here. I have had three of them tell me to get out of town. One of those doctors has since moved because of the ill effects of pesticides on his wife. Having moved out of the district, his wife's health has improved immensely. Plus the fact that prescription drugs for asthma, allergies and a couple of other complaints have significantly diminished since moving out of this area.

Might I refer to a previous question of the Hon. Ian Cohen about chemical drift and so forth? A major concern of chemical drift is volatisation of chemicals. That is something which is pertinent to chemicals and something that cannot be controlled.

The Hon. I. M. MACDONALD: You state in your submissions that levels of endosulfan have been found in various areas across the region. I have just been reading from a document that is pretty interesting in terms of the potential effects of studies on high dosages on mice. What is your realistic solution? For instance, you have stated that you see fewer planes in the skies or what have you as being a solution to some of these problems. How would you see that working in practice, and how would you keep a viable cotton industry going here, if there was a radical alteration of the scheme of chemical usage and aerial spraying in that situation? What I am getting at is: What sorts of controls and mechanisms for chemical reduction will not necessarily wipe out the cotton industry in the Namoi Valley?

Ms DOUBLEDAY: I think ground rigs, because the chemical is applied closer to the plant, does not have the same effect. It is a fair drop for chemicals to come down from an aeroplane.

The Hon. I. M. MACDONALD: So ground rigs is one alternative.

Ms DOUBLEDAY: And, even if there has to be aerial application, the droplet size has to be larger. I don't know what else we can do. It is just that our committee is concerned with aerial application because of the topography of the area. That is our major concern. I would have to acknowledge that a lot of the area is black soil, and that that could make it quite difficult. But I don't know what else to do. Basically, you will have to weigh up a cotton industry and a community's health.

Mr SANDERS: If I could expand on that? It is up to governments to make the decision – and I believe it is a political decision – to create an irrigation industry in this valley, based on known water reserves. The fact that cotton is a large user of chemicals and water – the two main impacts upon this district at this point of time – makes us begin to recognise the water problem that the pesticide issue continues to pose. It is now, I believe, up to governments. Do they want a farming mono-agricultural system here, a farming ghetto, at the expense of conservative farming and communities, because chemicals do play a major part in both environmental destruction and human health.

The Hon. I. M. MACDONALD: So your organisation would want a limiting, in effect, of the cotton industry?

Ms DOUBLEDAY: Yes.

Mr SANDERS: Well, two things. I have lived here all of my life, but in the last 10 or 12 years there has been immense destruction of the environment and human health. Yes, we have used chemicals in previous years, but there is a build-up of chemical overload in this valley and there is a volatisation of chemicals, with a settling in the evenings. My wife's very worst health effects were in the morning hours, when you get the settling effect in the valley floor. In this valley, you have all sorts of environment problems, such as katabatic winds and so forth, which add to the problem.

The Hon. I. M. MACDONALD: I am trying to get a handle on exactly what you are proposing, other than some limitations. In terms of a house study, I am not really convinced about this thyroid issue. I know that Balla Bartock died of cancer 70 years ago, before these chemicals became widely used. Has there been an overall study that shows that any impact of a negative nature?

Ms DOUBLEDAY: There was a report on the health impacts of pesticide-affected persons in the Gunnedah community, done by the Australian Agricultural Health Unit. Sixty-three people took part in that study. Twenty-two per cent of those surveyed had problems probably related to pesticides in the area. That is the report there.

The Hon. I. M. MACDONALD: How was the survey designed?

Ms DOUBLEDAY: I am not sure.

The Hon. I. M. MACDONALD: Is it in your submission?

Ms DOUBLEDAY: No, it is not. But the Australian Agricultural Health Unit would have that. We were given an undertaking that the blood samples and urine samples would be kept, that we would have an independent gentleman from America come and have a look at those samples. Apparently, they were lost and the study was inconclusive. We were really concerned about that issue.

The Hon. I. M. MACDONALD: Following a question put by the Hon. Ian Cohen which was somewhat outside our terms of reference: In relation to Ingard cotton, allegedly that has shown a significant reduction in chemical usage. So would you support more usage of Ingard cotton to try to cut back on chemical usage?

Mr SANDERS: Those are the two main areas of concern: (a) the method of application of chemicals initially, and (b) a reduction of chemical use in this valley.

The Hon. I. M. MACDONALD: So would you support an extension of the use of Ingard cotton to reduce that chemical use?

Mr SANDERS: I would support any means to reduce chemical usage.

The Hon. J. R. JOHNSON: How many active members are there in your group?

Ms DOUBLEDAY: When this came to a head, there were over 300 members in our group.

The Hon. J. R. JOHNSON: How many do you have now?

Ms DOUBLEDAY: Do you mean financial and active members?

The Hon. J. R. JOHNSON: It was clear and concise English. How many?

Ms DOUBLEDAY: Thirty.

The Hon. J. R. JOHNSON: You know of no health surveys undertaken by the local Area Health Service or some collation of information of the various doctors and the hospital in relation to what may be as a result of pesticides in the area?

Ms DOUBLEDAY: Not that I am aware of.

The Hon. J. R. JOHNSON: Have you made any inquiries?

Ms DOUBLEDAY: No, we have not. When people contact us, we ask them to contact the Department of Health in Tamworth and register their complaints with the department, so that they can actually document that, and so that that can be looked at over a period of five years. We were told by the Department of Health that there is nothing that they can do for us; that the only thing that they can do for us is document the complaints.

The Hon. J. R. JOHNSON: Do you know if that documentation is taking place?

Ms DOUBLEDAY: As far as I know, yes.

The Hon. J. R. JOHNSON: On what do you base that "as far as I know" on?

Ms DOUBLEDAY: I was speaking to a gentleman from the Department of Health a while ago.

The Hon. I. COHEN: Could you expand on the comments that you made in your submission regarding your opposition to any transfer of powers relating to the use of pesticides in local government?

Ms DOUBLEDAY: I think what we need is the State Government to handle that. I have grave reservations about local government.

The Hon. I. COHEN: Why is that? Do you have experiences here with local government in this area by which you believe that local government has not acted in the interests of the community on this issue?

Mr SANDERS: I can only express an opinion there. I have been to our local shire manager, and he has said that if I have a problem with pesticides I should look towards moving out.

Ms DOUBLEDAY: It is too close to the bone, I think, with local government.

CHAIRMAN: Was that your current general manager?

Mr SANDERS: That is our current general manager, Mr Max Kershaw.

CHAIRMAN: Following on from the question asked by the Hon. Ian Cohen: If, for example, the Government asked the local government health inspectors to assist the Environment Protection Authority inspectors in the inspection process, would you still have any objection to that? I realise there are not many Environment Protection Authority inspectors around. The trouble that we had put to the Committee yesterday was that, if there is a complaint at the bottom end of the Lachlan and the inspector heads off from Dubbo and gets halfway to the Lachlan and then he gets a complaint from Warren, he cannot possibly get there in the same day.

Ms DOUBLEDAY: That is right.

CHAIRMAN: So, would you still have an objection to local government in those sorts of circumstances assisting the Environment Protection Authority?

Mr SANDERS: Yes, I would. I have grave reservations about the Environment Protection Authority being able to address the problem. I have concerns that a lot of the studies have been designed by the Environment Protection Authority to fail. I also have reservations that the Environment Protection Authority in a lot of instances has designed these studies to be misleading and inconclusive.

Ms DOUBLEDAY: Do you want to expand on that a bit – like when they are taking leaf samples and they are not doing that at a particular time?

Mr SANDERS: Yes. It is indicative of the fact that there have been many many hundreds of complaints over the last number of years. We will see evidence today, I believe, when you go on a trip on a farm, of environmental degradation. But, to my knowledge, there has never been one complaint that has led to litigation. There have been tree investigations, air sampling, water sampling – the lot – but nothing has led to any litigation regarding chemical contamination.

CHAIRMAN: We have some questions that we would like you to take on notice and answer. You will get them as part of the transcript. If you could quickly respond to those that you believe you have not answered completely already, so that that evidence can be part of our report. I thank you very much for that, and I will talk to you later today. The questions are:

1. Do you advocate any improvements in the licensing standards or training standards for pesticide applicators?
2. Can you explain to the Committee the potential benefits of including a “community” representative on the Statutory Advisory Committee proposed in the Environment Protection Authority discussion paper?
3. Are there any areas not addressed in the Environment Protection Authority’s discussion paper that you believe should be considered in a revision of the Pesticides Act 1978?

(The witnesses withdrew)

SANDRA STRONG, Chairperson, Gunnedah Chemical Liaison Committee, of Mountain View, Gunnedah,

SAMUEL PETER LEYS, Farmer, and member of the Gunnedah Chemical Liaison Committee, of "Redlen", Currabubula, and

IAN KERR GRANT, Committee Member, Gunnedah Chemical Liaison Committee, of 20 Walter Rodd, Street, Gunnedah, sworn and examined:

CHAIRMAN: Sam, what is your occupation?

Mr LEYS: Farmer and agronomist.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr LEYS: I am a committee member on the Gunnedah Chemical Liaison Committee.

CHAIRMAN: Sandra, what is your occupation?

Mrs STRONG: Health Service Manager.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mrs STRONG: Chairperson of the Gunnedah Chemical Liaison Committee.

CHAIRMAN: Ian, what is your occupation?

Mr GRANT: I am Executive Officer for the Liverpool Plains Land Management Committee.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr GRANT: As a member of the Gunnedah Chemical Liaison Committee.

CHAIRMAN: Did each of you receive a summons issued under my hand in accordance with the Parliamentary Evidence Act 1901?

ALL WITNESSES: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

ALL WITNESSES: Yes.

CHAIRMAN: If any of you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to

accede to your request and resolve into confidential session. However, I should warn you that Parliament has the right to override the Committee's decision and make that evidence public. Would one or all of you like to make a short statement so that we will have time to ask questions of you after that?

Mrs STRONG: I have a presentation to make.

CHAIRMAN: If you have any documents that you would like to table, you might do that now.

Documents tabled.

Mrs STRONG: The Gunnedah Chemical Liaison Committee is a shining example of a proactive community that has addressed the concerns of local people; put in place a set of best practices; that has lifted, and will continue to lift, the standards and yet allow productivity of local agriculture to continue.

In support of the Gunnedah Chemical Liaison Committee submission "Improving Pesticide Management Discussion Paper", the Gunnedah Chemical Liaison Committee by its charter acknowledges the need for responsibility to be shown by all users of pesticides – farm, domestic, government and commercial users. The government role is to provide the relevant legislation, the revised Pesticides Act, and the appropriate resources for government agencies and community groups to operate within this area.

The Environment Protection Authority would implement the new Pesticides Act. This Act should not be the only standard: it should be the basic framework for the use of pesticides, and then industry groups and community groups should either finetune it to the specific industry requirements or the local community standards and requirements, or a combination of both. The basis for this premise lies within the Gunnedah Chemical Liaison Committee's conception and its growth to date.

Gunnedah, historically, has been a cereal crop/sheep/cattle grazing area, and the speed of change in agriculture in the last two decades has escalated. The Gunnedah Chemical Liaison Committee grew out of community concern of some of the impacts of the rapid change in agriculture.

Gunnedah Chemical Liaison Committee

We are a community-based committee, formed after a public meeting in August 1995.

Community Based Committee etc

The committee is a community-based committee giving community ownership of solutions. To ensure the above, the structure of the committee emphasised the need to be inclusive of industry so that industry had ownership of the best practices and so peer pressure could be applied.

The first full meeting was held in November 16 1995

There were two community farmers, nominated by the Upper Namoi Cotton Growers Association; two non-cotton farmers, nominated by the New South Wales Farmers Association; two chemical applicators; two ANEWPAC representatives, later the Gunnedah Environmental Group; one chemical supplier, now the Avcare representative; one New South Wales farmer representative; one New South Wales Department of Agriculture representative; one New England Area Health Service representative; one Gunnedah shire councillor; four community representatives, with these members being required to apply in writing and to be elected by their peers, and to be non-cotton farmers; and an Environment Protection Authority observer. That is a membership of 17.

Post mediation membership was increased by two nominees from the Liverpool Plains Land Management Committee.

CHAIRMAN: Currently, who are the two non-cotton farmers?

Mrs STRONG: Sam Leys and Jeff Swaine.

CHAIRMAN: And the Gunnedah shire council representative?

Mrs STRONG: Steve Smith.

Mr LEYS: Wheat and cattle producers. Jeff Swaine is wheat, cattle and sheep.

CHAIRMAN: Are the two cotton farmers just straight-out cotton farmers?

Mr LEYS: No. They would have mixed enterprises, too. One of them has a large corporate farm that has feedlot and cattle.

CHAIRMAN: Who are they?

Mr LEYS: Keith Harris from South Pacific Agricultural Company, and Peter Cone, who took over from the original fellow, and he is actually the Cotton Australia representative.

CHAIRMAN: I am trying to find John Lyle's name there somewhere.

Mrs STRONG: John Lyle is the alternative council representative.

Gunnedah Chemical Liaison Committee Charter

(a) Establish our Charter

Mrs STRONG: The first requirement of the committee was to establish a charter. That charter was:

To reduce community concern in the use of agricultural chemicals by developing and promoting “best practice” procedures in the Gunnedah and surrounding districts.

You will notice that there are six points to the charter, and I have included those in the packages that have been tabled today. The six points do address the terms of reference that we are speaking about here today. The last point is one where the Gunnedah Chemical Liaison Committee is a conduit for information flow between government agencies and the community. In fact, at times we have taken the heat off the Environment Protection Authority in more controversial times.

(b) To review the Guidelines and distribute to every farmer

The next thing we had to do was to review the guidelines. I also included those in your package. They are leaflet guidelines.

(c) To establish an Incident Reporting System and responding system

The next thing was to formulate an incident report form, which is also part of your package. These are located strategically throughout our shire council. The result of the development of an incident and reporting mechanism, plus a method of handling of complaints, has resulted, I believe, to one of the important aspects of our committee, in that it led to pre-season meetings between neighbours. So, in actual fact, we had started communication between farmers and applicators of agricultural chemicals. So it was not just communication between cotton and non-cotton growers; it was between cereal crop growers and graziers.

Challenges GCLC has had to face

All that was achieved by the Gunnedah Chemical Liaison Committee has been achieved despite some adversity. Some of the challenges that we have had to face have been the “enviro-politicians” running their own agendas; sensational reporting – and sometimes incorrect reporting; that the GEG was part of our committee, and then it decided to withdraw; and the Environment Protection Authority’s inability to provide leadership in giving solutions – with no line in the sand, no acceptance that it is not achievable to get zero levels.

A challenge has been that frivolous and vexatious complaints can continue without accountability for frustration and worry that that causes, and we have had examples of that; reactionary action, which is time consuming, hindering the proactive direction that the Gunnedah Chemical Liaison Committee is striving to take, as set down by our charter; difficulty in accessing the political ear; and another challenge has been in trying to find solutions, but being hindered by such things as no access to maps, which was another condition of mediation.

Achievements

The most difficult achievements to assess is attitudinal and behavioural change. Yet here, I believe, the Gunnedah Chemical Liaison Committee has been responsible for a huge attitudinal and behavioural change of users of agricultural chemicals. As previously stated, basic communication between neighbours has been the basic change.

Aerial applicators note a marked shift in farmers accepting accountability for their practices, and in farmers working within the guidelines as set down.

We now find that the majority of farmers have undertaken best management practices education. This has been encouraged by the Gunnedah Chemical Liaison Committee. An example of that would be the endosulfan; and Gunnedah area is the only major cattle growing area that has not had a beast go down the chute. We attribute this to the following of the guidelines for best practice.

The Gunnedah Chemical Liaison Committee has given leadership and been part of the testing and monitoring of residue levels. An example of this is the Environment Protection Authority rainwater tank report in February 1998; health testing has been done; and there has been participation in the health impact workshops in Sydney by the previous chairperson.

The Gunnedah Chemical Liaison Committee has been responsible for education of operators – raising community awareness. This is an attitudinal and behavioural change. An example of that is a pest control operator locally who now places alert signs around the perimeters when he is spraying for spiders in houses, raising the awareness of the community.

We believe we are a model of a community group. The Gunnedah Chemical Liaison Committee is a shining example of a proactive community that has addressed the concepts of local people. It has put into place a set of best practices that has lifted, and will continue to lift, standards and yet allow productivity of local agriculture to continue. That concludes my presentation.

CHAIRMAN: Do you have a copy of those overheads?

Mrs STRONG: Yes.

Documents tabled.

CHAIRMAN: How are the incident report forms distributed? I think you said that they are distributed by the Gunnedah Shire Council.

Mrs STRONG: They are available at the shire. We circulate them. I have them at the Health Service. They are at local chemical outlets, and they are promoted in our media and press releases. Our publicity officer from time to time makes mention of the fact that they are available.

The Hon. I. M. MACDONALD: How many of these incident report forms have been lodged?

Mr LEYS: The exact number that have been lodged over the years that we have been operating I could not give, but I think in the first there were something in the order of 30 or 40.

Mrs STRONG: Thirty-five, I think.

The Hon. I. M. MACDONALD: The first year being?

Mr LEYS: It would have been 1996. The second year would have been 1997. Again, there would probably be around 20-odd. Then it would tail off. This last year we have had only about four or five, or something like that.

The Hon. I. M. MACDONALD: Is there a reason for the tailing off?

Mr LEYS: Yes. I think it can be attributed to ---. Initially there was a great deal of concern. One of the things that we are trying to get across here is that in agriculture in the last two decades there has been quite a deal of rapid change in this area and in many other areas, and changing systems. In this particular area, we saw the introduction of a newer crop, or the expansion of a newer crop, as well as changing systems in our normal agriculture of winter cereal and summer cereal production, and the introduction of zero till response cropping, and that sort of thing.

So, in that change that took place there was, I guess, with the irrigated cotton industry some increased visibility with the application of chemicals, and so there was a general community concern that started to appear during 1995. In that time since, we have developed these procedures which I believe have brought the alleviating of that concern. There certainly are some people in the community whose expectations we have not been able to live up to, but there are a vast majority of people who initially had concerns but now feel that there are procedures and best practices that have been put in place that they are more comfortable with.

I think we as a committee have been leading the way with the development and implementation of these best practices. In fact, those best practices that were initially developed here have actually been taken on board by Cotton Australia in the development of its best management practice manual. In fact, we are acknowledged in that best management practice manual as the Gunnedah Chemical Liaison Committee.

Mr GRANT: Just another point on a reason for the reduction in the submission of the incident reports forms. The committee initiated an agreement between neighbours. So a member of the committee might go out to a farm where neighbours are concerned about the application of chemicals, and as we sit down and complete the form, the neighbour who might be applying the chemical on a crop agrees that they will contact the person concerned before spraying and let them know what they are going to use, and they agree on the conditions under which they are going to use the chemical. So that sort of initiative alleviates concerns throughout the season, to a certain extent.

The Hon. I. M. MACDONALD: What about issues like those that have been raised with the Committee, of chemical drift or chemical trespass? Do you think that in recent times that has been reduced through this best practice management system?

Mr GRANT: I will answer that and then hand over to Sam or Sandra. Again, the reduction in complaints would indicate that to a certain extent.

Mr LEYS: Part of the development and implementation of these best practices I believe is somewhat of an intangible that you cannot actually measure. You talk about the number of complaints, and we look at the number of complaints, which may have increased or declined or whatever. But, one of the very important things that this committee has been the promoter of, and I guess the instigator of, is an attitudinal change. We have been part of that, as have other bodies.

One of my throw-away statements has been that I don't believe that in this Gunnedah community any more does a farmer grab a drum of chemical, rip the lid off and away he goes. When he does take the lid off a drum of chemicals these days he does, subconsciously or whatever, think, "What impact will my use of this chemical have?" I think drift is a hazard of the use of chemicals. There is no doubt about that, and no-one steps away from that. There is always the potential for accidents to happen, or for things to be used in inappropriate conditions and for drift or other detrimental impact to happen.

But, what we have been part of is that attitudinal change to look beyond the job that the person is doing, to look across the fence and the impact on not only your neighbours but also the environment. Those are the sorts of things that are happening. We are seeing things like maps going in, not only for cotton farmers but for regular cereal farming and the like. Maps are going in. There are discussions, as Ian said, between farmers so that they will know where sensitive crops are, and where there are potential hazards. Those sorts of things are happening. We believe, therefore, that the hazard of the potential for that hazard of drift has decreased.

Mrs STRONG: One other thing, for example, is our promotion of wind socks and wind meters. We will have a presence at Agquip this year in conjunction with the local shire. We promote having those things available for the community. So we are advocating that these be used and that they be available to be used.

CHAIRMAN: A small wind sock or something like that that the farmer can have when he is spraying?

Mrs STRONG: Yes. And wind meters.

CHAIRMAN: The point you raise is very important. Just as you were about to mention attitudinal change thoughts were going through my mind that we would never have had the success of the Clean up Australia campaign if it were left to the local government measures. Local government would never have achieved exactly the same success by the \$200 fine that it has for littering. However, we do need those fines; we

need to keep those sanctions in place for the cowboys who ignore everything. Another example is trees on farms. Those are two attitudinal changes that have occurred.

Mrs STRONG: We use drink-driving as an example.

Mr LEYS: Drink-driving is the one that we use often. You can have as many policemen and RBTs around as you want, but you won't stop it by using those means. It has got to stop at the attitudinal level. It is a matter of attitude.

The Hon. I. COHEN: Mrs Strong, you all talked about the best practice guidelines. What exactly are they? And do you have records on the effects of the changes in practice? Is there anything that you can submit to the Committee that clearly shows that there is a reduction in the level of chemical trespass today, as compared with a few years ago?

Mrs STRONG: I go back to my comment in the presentation regarding endosulfan and rainwater testing. The communication from the aerial operators is that there is a change of attitude and a change in the behaviour of farmers.

The Hon. I. COHEN: That may be the case. But do you have any results that there is less of this pesticide contaminant in neighbouring tank water, and are there any results that less people are being affected by pesticide trespass – on medical records or on Health Department records? Do you have any of those that you can submit to the Committee?

Mrs STRONG: No. There is the Environment Protection Authority for rainwater tanks, the 1998 report from the Environment Protection Authority. In 1996 the levels of endosulfan were – and I am going from memory – was, I think, 0.27 parts per million. In 1997 it was 0.12 parts per million. The MRL recording is 40 parts per million. So, while we were less in 1997 than we were in 1996, we were still well under the world health standard.

The Hon. I. COHEN: I would ask you to take on notice this question. Could you present to the Committee evidence that is convincing that there is less contamination from this area? Would you take that question on notice.

Mr GRANT: I suppose the place that pesticides are in a catchment area like this is in the water stream. Around Boggabri or somewhere the Department of Land and Water Conservation has carried out some water quality surveys over two years. It was not as thorough as the Liverpool Plains Land Management Committee intended it to be, but there are some results there. But there is no evidence from that to say that there has been a decline. There has not been a history of water quality testing within the area.

That would be the Department of Land and Water Conservation' role and core business, I would think. That is what the Liverpool Plains Management Committee believes is Department of Land and Water Conservation core business. But it has not

been picked up. We are talking about future best practice in farming systems and environmental management systems.

The Hon. I. COHEN: I appreciate the concept of best practice, but it has something of an empty rattle to it when we keep hearing about best practice but there is no proof. I draw to your attention a media release by the Minister for Land and Water Conservation in 1996, giving a warning on agricultural chemicals. He says:

The Central and North-west Water Quality Program is now in its fifth year and is a study into the effects of pesticides from irrigated agricultural on surface and groundwater in the Border, Namoi, McIntyre and Macquarie River Basins. It also studies nutrients and trace metals and monitoring river biology

The Central and North-west Water Quality Program technical papers released today show:

- *a general increase in pesticide concentrations during the past three seasons in the Namoi and Border Rivers basins. Levels in the Gwydir and Macquarie Valleys have remained the same.*

You are saying there is a marked drop in pesticide levels. You are referring to best practice. I am not hearing this is necessarily the case.

Mr GRANT: That is not true. What Sandra said was that there was a drop in rainwater tanks. What I am saying is that you read out three or four catchments, but not one of those catchments is the Namoi. This is the Namoi catchment.

The Hon. I. COHEN: It actually mentions the Namoi and Border Rivers basins.

Mr GRANT: There has not been comprehensive water quality monitoring done in this catchment by the Department of Land and Water Conservation over a period of time. There was two years or something, but that was not enough to indicate any long-term change in pesticides getting into the water stream.

The Hon. I. COHEN: You mentioned complaints reduction. I am hearing real concern that the complaints reduction in part is due to intimidation; that there is a culture of cover-up. I am unconvinced by a witness we heard yesterday who was saying that there are no problems, particularly in children and in general health from the cotton industry. Yet I am hearing other evidence and indications from the community that there is a significant number of children suffering from respiratory diseases. Could you give an opinion on that?

Mr LEYS: Can I make a further comment before we step into that one?

The Hon. I. COHEN: Yes.

Mr LEYS: You are asking us do we have clinical evidence to present to you. One of the things is that to get that sort of information you have to have a resource base

to do the work to collect that data. Now, there are government departments doing that. We have not been sitting around collecting that sort of information. We are working on what is happening here and trying to apply pressure to the users of chemicals to change their ways and change their attitudes.

I know – and this is one of the things that gets raised often – that we do not have statistics, and we don't have clinical evidence, because we are talking about some of those intangible things. Sandra will probably want to talk more about the health aspect, but I was actually part of a health workshop back in 1996 that looked at ways of determining a testing program so that some of these things could be clearly detailed.

I was one of the lay people, but there were quite a lot of professional people involved in it. One of the things that we are dealing with here is probably some-low level, long-term exposure that is not like an acute application or an acute spillage or something like that if you are talking about chemicals.

The Hon. I. COHEN: The aerial spraying of a school bus, for example? We heard evidence of that yesterday.

The Hon. J. R. JOHNSON: Allegations.

Mr LEYS: Allegations. There is no dipstick test that you can do that shows it up. I was part of that committee that looked at developing some sort of testing regime that would look at these long-term, low-exposure to some of these things in our environment.

The Hon. I. COHEN: You do have incident report forms, and you have a number of those forms submitted over the years from 1996, and they indicate that there has been a reduction. But has your organisation made any application to any State government body, such as the Health Department, to actually have adequate testing and assessment of medical records in the community? Have you made that application?

Mrs STRONG: Actually, we have an affiliation with New England Health through the Public Health Unit. The Public Health Unit and the Agricultural Health Unit at Moree, with Dr Lyn Fragar, were the people who were involved in the initial health study that was undertaken in 1995-96. That study in itself asked for people who had a perceived health problem arising from contamination from chemicals to present, and I think there were 58 people who actually presented.

My understanding of the result of that is that it was not conclusive. The other thing that we have done through the Public Health Unit is that they have been undertaking an asthma survey, visiting the doctors. It is quite a simple survey by which they fill out information to try to monitor that. I was actually in touch with them probably six weeks ago, to see where we were up to with that, and were they going to re-run it again. I have been assured that, yes, they will be doing that.

The Hon. I. COHEN: When you said that those results were inconclusive, what does your organisation think of the precautionary principle when we are dealing

with community health here? Do you accept a precautionary principle when dealing with the health of young children in particular?

Mrs STRONG: Yes.

The Hon. I. COHEN: Do you accept that under that principle there may be a crossover between chemical trespass and particularly respiratory diseases in this area?

Mrs STRONG: Yes.

The Hon. I. COHEN: If that is the case, then, other than advising aerial sprayers and trying to change the culture, have you accepted that there is – I dare not say a state of emergency – but that there is a serious emergency in community health in this area?

Mrs STRONG: No, I don't accept that last statement.

The Hon. I. COHEN: You don't accept that?

Mrs STRONG: I accept that there are people who do have a sensitivity to chemicals. I also accept the premise that we are farming/agricultural community, and I believe that it is a community issue and that the community needs to find some resolution to that problem.

The Hon. I. COHEN: If in fact you are wrong, who should be responsible?

Mrs STRONG: It is a community responsibility.

The Hon. I. COHEN: Who is the community? Who in the community is responsible – is it the landowner, is it the applicator of the spray, or is it the government department?

Mrs STRONG: You are dividing and separating community. I am talking about a community as a whole. When you look at the composition of our committee, actually we are a community committee. There has been quite a lot of concern expressed by the environmental group that we have an industry bias. Industry, in reality, is very much part of our community. Industry is not the major part, but it is part of our community.

The Hon. I. COHEN: If someone undertakes violence as part of that community, you lock them up. I don't think it is a very good answer to say that they are part of the community. What I am concerned about is that there is a significant amount of anecdotal evidence and a great deal of concern in the community that there is chemical trespass that is causing illness.

CHAIRMAN: They are a community group. We are only asking: If there is a particular chemical incident, who should the Environment Protection Authority be able to take to court? Is that what you are asking?

The Hon. I. COHEN: Yes.

Mr LEYS: What we have got to look at is that you are talking about one segment of the total community health. Farmers or applicators may be responsible at some stage or at some point in some incident for that segment. But we are talking about a total thing, a long-term thing, which I guess is like the use of motor cars in cities and that sort of thing. There has to be community ownership of that problem. That is the level that I think we are at with these sorts of things.

Mr GRANT: The same as the drink-driving issue.

The Hon. I. M. MACDONALD: Is there evidence beyond what you have said so far of increased mortality and major illnesses above and beyond Australian standards and averages?

Mrs STRONG: Not that I am aware of. We recently had a member from the Public Health Unit, about three months ago, at our meeting and we posed that question to him as well. The standards in Gunnedah are no different from those elsewhere.

The Hon. I. COHEN: Are respiratory disease levels in Gunnedah no different from elsewhere?

Mrs STRONG: Can I speak on a personal example? My father is mature aged; he is 86. My father lived in Lismore. He has had two respiratory arrests in Lismore and has severe asthma COAD. Since he has been in Gunnedah he has not been better; he has not actually had an asthma attack in Gunnedah. Areas are different.

The Hon. I. COHEN: I am still concerned that we are not getting the truth.

CHAIRMAN: In the interests of time, I will ask the Hon. John Johnson to ask his questions.

The Hon. J. R. JOHNSON: Is the Public Health Unit a municipal or State government instrumentality?

Mrs STRONG: The Department of Health.

The Hon. J. R. JOHNSON: Based in Gunnedah?

Mrs STRONG: Based in Tamworth. I think they are going to give evidence later in the day.

The Hon. J. R. JOHNSON: Yes. How many active members do you have in your group?

Mrs STRONG: A hundred per cent.

The Hon. J. R. JOHNSON: A hundred per cent of what?

Mrs STRONG: We have a 19 membership, but the two Gunnedah Environment Group people have resigned. So we have 17 and they are all active members.

The Hon. J. R. JOHNSON: All active members?

Mrs STRONG: Yes.

The Hon. J. R. JOHNSON: But you have a wider group also, have you?

Mrs STRONG: We went back to the community in 1996-97, when the Gunnedah Environment Group withdrew at one stage from our committee. Because we are a transparent committee and a community-based committee, we went back to the community. We advertised extremely well through the media. We asked the community to come along and either endorse us, criticise us, or tell us what we were doing right, wrongly or indifferently. Some 263 attended, I think.

The Hon. J. R. JOHNSON: How is your group funded?

Mrs STRONG: We are not. That is a sore point.

Mr GRANT: The group gets support from Gunnedah Shire Council for administrative duties, such as the posting out of minutes and that sort of thing. The Liverpool Plains Land Management Committee has given provisional funding of \$2,000. It is dependent upon reciprocal funding from industry or from a State agency or from any other body. The Liverpool Plains Management Committee has not paid that money because a State agency has not supported the committee, nor has industry. The committee has been loathe to go to industry for support.

The Hon. J. R. JOHNSON: But a State agency has not funded you?

Mr GRANT: There has been no State money for the group.

The Hon. J. R. JOHNSON: Have you made application for support?

Mr GRANT: Several.

CHAIRMAN: For how much?

Mr GRANT: Enough to run the committee – about \$6,000 a year.

Mrs STRONG: If, for example, the Gunnedah Chemical Liaison Committee were given the same amount of money that the Gunnedah Environmental Group is given to attend mediation, it would run us for two years.

The Hon. I. M. MACDONALD: It sounds like there was a bit of bias there. Is that right?

Mrs STRONG: I would think so.

Mr LEYS: It is our opinion, yes, in that particular instance. I believe what we are all here about is how best in the future we can manage pesticides in New South Wales. I think one the opening and closing statements that Sandra made was that we honestly believe that we are a shining example of the way that a proactive community can get involved in the management of pesticides.

We believe that what we should have in New South Wales is the basic minimum standard set by legislation – the basic framework or the skeleton of the way that pesticides should be used. We believe, from our experience, that the next step from that is to finetune to the local area and to the local community's needs – and they might be different in Goondiwindi to what they are in Nimbin or what they are at Gunnedah – but we should finetune those needs by the implementation of best practices, through involvement with the industry that is in that area, whether it be the beef cattle industry, the vineyards or the cotton industry.

We finetune so that we then have quite possibly an effect that has operated, we believe, here since the end of 1995; that is, levels of standards that are far higher than those stipulated in the Pesticides Act. We believe that here in Gunnedah in the last however many years since 1995 there have been three tiers of management for the use of pesticides. We have the basic Pesticides Act; above that, with a higher set of standards, we have the guidelines that everyone has agreed to implement, guidelines that have been brought about by peer pressure; and then, at a very localised level, farmer to farmer, some initially through the introduction of sensitive area management plans, where we negotiated plans between parties. Since mediation, we are actually having that taking place farmer to farmer, neighbour to neighbour, on a one-to-one level, where there can be even more stringent requirements for the application of chemicals on that farm.

In other words, there will be agreed buffer zones and so on. We have people in the Breeza area where, on one side of the road, cotton is not grown, where only Ingard cotton is grown, and where certain chemicals are not used. That is finetuning it to that specific area. We believe that that is the sort of model that can be used for the management of pesticides in New South Wales. In fact, we believe that we have done a lot of the groundwork that can be modelled elsewhere in New South Wales. As a result, we believe that there needs to be adequate funding for these community types of groups to do that sort of work. It is putting the ownership of these issues back to the community.

The Hon. I. COHEN: You spoke about the finetuning of the genetic engineered crop. If they are going to be spraying three times during that season, they are still spraying pesticides on the genetically-engineered crop in its first generation. Isn't that in itself a danger?

Mr LEYS: I don't understand exactly what you mean. We are getting down to very specific management of a crop.

The Hon. I. COHEN: You are still spraying genetically-engineered pesticides on those crops. Yes, it is less, but you are still spraying pesticides. Is that good management? In the first generation of genetically-engineered crops you still have to spray pesticides.

Mr LEYS: I think we are getting into the specifics of the management of a particular crop, but I would think what you stand back and look at there is that on the conventional crop alongside we may be using five or six times the amount of chemical, and that genetically-modified crop has allowed less pesticides to be used. So, therefore, that reduces the potential hazard. Each time you use one of these, there is the potential for something to go wrong. So you are reducing the potential.

The Hon. I. M. MACDONALD: Mrs Strong, you said in your presentation that part of the problem in the area has been the negative impacts created by the enviro-politicians, by sensational and inaccurate reporting of the industry, and on occasions that there are vexatious complaints. Can you give me some examples of those types of things that are probably inhibiting general community consensus on these issues?

Mrs STRONG: An example of a frivolous and vexations complaint would be a complaint of odour and of people being sick, but on investigation finding that it was fertiliser that was being put out by the aircraft.

The Hon. I. M. MACDONALD: What about the problem of enviro-politicians running their own agenda, and the sensational and inaccurate reporting of those issues?

Mrs STRONG: One of those would be the trees.

Mr LEYS: One of the problems that we really have not addressed here today is that you can say there is serious contamination, with the ability to detect very low levels of pesticide in tanks or whatever. We had media reports here in 1997 that our rainwater tanks are poisoned. That was in one of the local newspapers. Clearly, at the very low levels – 0.06 parts per million of chlorpyrifos, yes, there is chemical in the tank. But let's put that in perspective. There is six-hundredths of an eye dropper in the Olympic swimming pool. There are larger potential hazards around than that. We have had to fight that sensational reporting.

The Hon. I. M. MACDONALD: Is it designed to scare people?

Mr LEYS: It is probably designed to scare and worry people. We have had individuals in this community who are running to their own agenda. I have quite clearly stated that we have not been able to live up to everyone's expectations. I do not think that is possible in any community. What we are trying to do is meet the general consensus of the community, and continually re-assess and lift the standards over time, taking the people with us – the users and agriculture – in raising those standards. I think that is what this community should be about.

The Hon. J. R. JOHNSON: Do you act as mediators?

Mrs STRONG: Yes.

Mr LEYS: Yes. There was a very large component of that initially. I will be quite honest with you: there have been five or six long-running and continual disputes. The chemical issue is only the latest incident in a very complicated neighbour to neighbour situation. That is the honest truth of it. In the initial year we went in and negotiated six what we termed sensitive area management plans, to try to sit people down and get them to negotiate a position where the concerns of one person and the needs of the other person to do a specific task in his agricultural business are discussed and melted together by negotiation. One of the job descriptions for the chairman of the chemical liaison committee was to be a very good negotiator.

CHAIRMAN: We have some other questions that we would ask you to take on notice. Those questions are:

1. Would you comment on the expression “a person shall not wilfully and without reasonable cause” in section 37 of the current Pesticides Act, which provides:

Offence to cause risk

37. *A person shall not wilfully and without reasonable cause do anything likely to cause:*

- (a) *a risk of injury by a pesticide, to that or another person; or*
- (b) *damage by a pesticide, to the property of another.*

2. Do you advocate any measures to limit the occurrence and impact of pesticide spray drift?
3. Can you expand upon the concerns raised in your submission regarding clarification of working in the Environment Protection Authority’s discussion paper?
4. What additional benefits could be achieved through the establishment of a regionally-based advisory committee that operates in conjunction with a statutory advisory committee on pesticide management?
5. Are there any areas not addressed in the Environment Protection Authority’s discussion paper that you believe should be considered in a revision of the Pesticides Act 1978?

(The witnesses withdrew)

LYNETTE JOYCE FRAGAR, Director, Australian Centre for Agricultural Health and Safety, of "Kurraian", Delungra, sworn and examined, and

CHRISTINE MARY ROBERTSON, Director, Population Health and Planning, New England Area Health Service, affirmed and examined:

CHAIRMAN: Dr Fragar, in what capacity are you appearing before the Committee?

Dr FRAGAR: I am appearing before the Committee as Director of the Australian Centre for Agricultural Health and Safety.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Dr FRAGAR: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Dr FRAGAR: I am.

CHAIRMAN: Mrs Robertson, in what capacity are you appearing before the Committee?

Mrs ROBERTSON: As Director of Public Health of the New England Area Health Services.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mrs ROBERTSON: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mrs ROBERTSON: Yes.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that Parliament has the right to override the Committee's decision and make your evidence public. Would you like to start by making a brief statement before members of the Committee ask you questions?

Dr FRAGAR: Mr Chairman, I understand that I am here as a result of the submission that was made by the Director General of Health, Michael Read, and mention of the work of the Australian Centre for Agricultural Health and Safety ,

which was the Australian Agricultural Health Unit, has been made in the submission that was made by New South Wales Health. I have not myself made a written submission to the inquiry, but I would welcome the opportunity to make some observations in relation to the work that I have been undertaking.

CHAIRMAN: You did make a submission to the Environment Protection Authority on the discussion paper relating to the Pesticides Act that was circulated, and that body has forwarded its submissions to this Committee. So this Committee has not only the submissions that we called for but all the submissions that went to the Environment Protection Authority over the last two years as well.

Dr FRAGAR: Thank you. First of all, I would like to correct one error of fact in the submission made by the Director General of Health. It is on page 3 and states that "MRLs are derived from World Health Organisation acceptable daily intakes and are not primary health standards as such." The error is that, within Australia, Australia sets MRLs based on independent Australian assessment of data provided by proponents for the registration of agricultural chemicals within Australia and does not automatically take WHO acceptable daily intakes.

In terms of background, I am the director of a centre that is a centre for research and development that is primarily looking at the health and safety of the farming population of Australia. Also, our centre is the operations centre or secretariat for Farmsafe Australia. If I may use the overhead projector to assist in some of this presentation, that would be useful.

The members of Farmsafe Australia are these organisations. Farmsafe Australia is an association incorporated within the Australian Capital Territory. The member agencies are the National Farmers Federation, Country Womens Association of Australia, the Australian Workers Union, the Rural Industries Research and Development Corporation, what was the Department of Primary Industry and Energy and is now the Transport and Regional Services and Agriculture, Forestry and Fisheries, Worksafe Australia, Rural Training Council of Australia, the Australian Centre for Agricultural Health and Safety as the only unit in Australia dedicated to agricultural health and safety issues, each of Farmsafe organisations in each State which are member organisations of the national organisation, and the Rural Industries Training Council of Tasmania.

I give you this background because one of the key roles of the Farmsafe organisation has been to research and produce guidelines and guidance material for the farmers, farm owner-managers and workers in agricultural health and safety, and a portion of the work that we do in that area relates to safe application and use of agricultural chemicals. It is not the highest priority in the work that our centre undertakes. By far the bigger issues relating to health and safety on farms relate to the very high number of deaths and serious injuries caused by tractors and machinery and animals, and the drowning of children in dams, and so forth. So that pesticides are one of a whole range of issues that we have been addressing.

In terms of the work that we have undertaken with pesticides, early in the life of our centre, back in the early 1990s, we produced a paper that defined issues of concern in relation to pesticides and human health in agriculture. I sit on the National Advisory Committee of Pesticides and Health within the Therapeutic Goods Association of the Commonwealth Health Department that provides advice about health issues to the National Registration Authority. We have undertaken some limited research in the area of agriculture and health and safety relating to pesticides. We did a study of exposure of cotton chippers to pesticides, cotton consultants and bug checkers to pesticides, and a joint study with some other agencies looking at exposure in the horticulture industries.

We are available to give advice on agricultural health and safety matters, including pesticides, to public health units within New South Wales, and more widely to the health system. In that capacity, we have undertaken some work with the New England Area Health Service within the Gunnedah area and elsewhere. As I say, we produced guidance material primarily for farmers and farm workers, so that we have been actively involved in the development of the Managing Farm Safety course that is now available to farmers right across Australia. We have established the Farm Safety Training Australian Centre, which is delivering that course within New South Wales, and we have established similar centres within other States.

Within that program the whole issue of hazard identification, risk assessment and risk control for pesticides is considered along with the other hazards that farmers are required to manage under occupational health and safety legislation. The Managing Farm Safety course for farmers and farm managers has been developed after analysis of hazard and risks within each commodity organisation. However, it is not within agriculture as a whole, but with particular commodity groups.

The work that we have undertaken with the sheep industry, grains industry, cotton, dairy, beef and horticulture has underpinned the development of the guidance and resource material that is available. I will leave with you a leaflet about the Managing Farm Safety course.

This slide on agricultural zones of health importance across Australia is obviously not coming up well on the overhead. Basically, it is just to reinforce the point that agriculture is not homogenous and that across Australia you have got the beef and sheep areas in yellow, down the tablelands area as well. Wherever there is blue there are grains; wherever there is crosshatching on that you have got irrigated cropping systems as well; and then, up the coast, you have sugar cane, dairy, and you cannot differentiate the pink and red there, but basically your banana and horticulture growing areas are of importance.

The reason that I draw attention to that is that, in relation with pesticides along with other hazards, the issues are different between industries, but nonetheless each has health and safety concerns to be addressed in relation to pesticides use. Early in the piece, working with the Department of Agriculture in New South Wales, we defined that the industries of cotton and horticulture and the sheep industries were key

industries that needed attention in terms of assistance with the safe handling of pesticides.

I think it is important, as we consider issues of aerial application of pesticides as being of community concern, it would be our view that the human exposure to pesticides is probably occurring more in the sheep industry at the moment with the handling of pesticides used in ecto-parasite control. The sheep industry is addressing that as a high priority issue of concern.

You have had drawn to your attention, I believe, the issues paper or discussion paper that we produced. Within that paper I have proposed a framework in which we should be considering public health approaches to the issues of pesticides. That is the table that appears within that paper. In fact, I would propose to expand on that a little, and I will leave this one with you. I have focussed on some particular issues here.

Basically, I believe that a well-rounded approach that addresses the public health concerns about pesticides should focus on and be targeted towards understanding more about pesticides and their toxicity; understanding about pesticide exposure and impact relating to those who handle pesticides, such as workers in agriculture and their immediate families; and pesticides and their exposure and impact on rural communities, which is the context in which the paper was written but you could take it, if you are looking at food and products, to be the wider community even beyond the rural communities, when considering residues in foods and whatever.

Then the nature of the sorts of inquiries and the surveillance requirements are listed. That has been recorded, and I do not want to go over all those components that are in that discussion paper. However, I do wish to highlight some issues that are important and some things that have happened since that paper was prepared.

First of all, I think that we can do better in terms of worker exposure monitoring. In my view, the people most at risk to pesticides and adverse human health effects are workers. They are the people who are handling it in a whole range of contexts and work activities. They are as well handling a whole range of different types of chemicals, and it is therefore imperative that we reduce exposure to all chemicals and that workers and farmers are making informed decisions about what they are going to handle and how to do that, and that they are ensuring that they are not exposed.

There are some other issues that I think need to be addressed. I would like to see support given for establishment of an adverse health effects register, which has been on the agenda of various agencies for a long period of time.

But, the thrust of what I would like to say in this preamble relates to the provision of information. When you consider how pesticides are controlled in Australia, I think we have a very complex issue. We have many chemicals that are used in many different usages and under different conditions in different industries. We have three levels of government that are involved in the control of pesticides within Australia – Federal, State and local government being involved in some ways.

We have a whole range of ministries that are associated with those at different levels, so that we have got environmental protection agencies, departments of agriculture, regional services, local government, land and water, planning, health, occupational health and safety, and training – all with responsibility, some of them legal and some of them otherwise – in the whole issue of pesticide control/management/provision of information.

In addition to that, we have a whole range of different industry organisations. We have Avcare, we have the various QA programs of the various commodity groups that are actively involved in reducing residues in products. In addition to that, we have the Farm Care course – and I have just described Farmsafe and its role as well.

The effect of this is that, at the moment, if you are Mr or Mrs average farmer, farm worker, person living in a rural community or even in our own position with an agency with responsibility in this area, is that the whole system is so complex that, to find the information that you need under our current structural arrangements is virtually impossible, unless you have an intimate knowledge of the administration and arrangements and of the legal responsibilities of those agencies.

I would suggest that within New South Wales at least we should be taking action to establish a central co-ordinating and controlling body, in the interests of improving communication between agencies. At the moment, such does not exist. We set out in the Australian Centre for Agricultural Health and Safety with a view to developing guidance material for farmers on this issue, not to walk into a program of research and development.

When we began to look at the problem we realised that there were already so many agencies involved in the issue that we took a conscious decision not to be further involved, and so therefore not to further complicate the issue – only to find that, as we tried to gather information or to provide advice to people who were turning to us for that help, that there were, despite the large amount of activity in the area, gaps in information in the health area that needed to be filled. And so we began a reluctant path to becoming involved in it.

The previous government had a ministerial advisory group on pesticides, not relating to health particularly but that provided at least some arrangement whereby government departments at State level could communicate with each other about their programs and issues; and where, if you identified gaps, then a discussion could be held about what would be a good recommendation to make about filling those information gaps. At the moment we do not have such an arrangement at State level.

I believe that, with the development of that national strategy there are the beginnings of that sort of opportunity for liaison and communication at that level, and some sort of an arrangement whereby government agencies and other agencies with an interest and responsibility in this area can come together at the New South Wales level, and that that would greatly enhance the capacity of agencies to do their work better, in the full knowledge of what each other is doing; and, when problems occur, to be able to

find out who is dealing with; and for clarification of the roles that various agencies have but that are not well understood or known outside the basic “club” of people who are in the know. That would be my main recommendation to come out of my experience in this area.

CHAIRMAN: Have you got a copy of those overheads?

Dr FRAGAR: I could leave those with the Committee.

Documents tabled.

CHAIRMAN: Christine, did you have an opening statement?

Mrs ROBERTSON: Very short. I am actually very fortunate in the New England Area Health Service because Lyn Fragar is our medical officer of health, which means that we do have extra expertise in this area within our Public Health Unit.

The Public Health Unit people who would be involved in issues relating to pesticides and agriculture are the medical officer of health, myself as the director, three environmental health officers, one of which is a senior, and a very small research team that has very limited opportunity to deliver research.

We operate under several Acts – the Food Act, the Clean Water Act, the Public Health Act – but not under the Pesticides Act, which belongs to the Environment Protection Authority. We operate under a charter, which I will leave with you. This charter is not an official Department of Health document but a public health network charter, which the New England Public Health Unit has adopted, with the blessing of the New England Area Health Service.

Our objectives are:

1. To monitor and research health status and trends, and the factors influencing them;
2. To investigate and respond to identified public health risks and potential health hazards;
3. Develop and implement strategies to maximise population health gains and to reduce health inequities; and
4. To develop the capacity of health services, other sectors and the community, to implement strategies to address priority public health issues.

CHAIRMAN: You will table that, will you?

Mrs ROBERTSON: Yes. All these bits of paper will be tabled.

Documents tabled.

Mrs ROBERTSON: I want to give some background on why there is such difficulty in this area, and pinpoint what causes people's illness. We have a phenomena in this area, right through this valley, through Gunnedah and Tamworth, related to ryegrass pollen. We have acute episodes of asthma. Sometimes we may get 20 extra admissions into Gunnedah casualty and 30 into Tamworth, and sometimes they can actually be in the hundreds, and it can be quite a disastrous issue. Unfortunately, this particular phenomena occurs also during spray time. I will leave a copy of the epidemic asthma in Tamworth study, which was done in 1991 by a very distinguished scientist in relation to this problem. It just adds to the fuzziness of what we can actually define as human effects of pesticides.

I have also brought along for tabling the Preliminary Report of the Human Impact of Pesticides on affected Persons in the Gunnedah Community. This was a study done by Lyn Fragar and Rob Loblay and several other people, a study that was mentioned before by Sandra, relating to people who perceived that they had ill effects from pesticides.

What actually came out of that was the upper respiratory tract, lower respiratory tract, skin, eye and general issues illnesses that people were able to say they suffered from. Unfortunately there was not conclusive evidence but enough indication that perhaps this was involved. But then, when you get back to this issue, it is much the same sort of allergy reaction. It is the major problem that we have. From knowledge of world-wide levels, and from working with Lyn and with the statewide so-called committees, these lists of symptoms unfortunately fit into many other descriptives. So that makes for a problem of a definite answer.

I have also brought along what happened because of the perceived overspraying that was going on. This particular study, by the way, was funded by New England Health and the Australian Agricultural Health Unit and a very small amount of funding from New South Wales Health. Because of the problems in the community, and because one of our major roles in the Public Health Unit relates to advocacy – and we have been having a continual stream of complaints from people who perceive that their properties were being sprayed – we did a preliminary Rainwater Tank Pesticide Sampling Survey – Namoi Valley April-May 1996.

We found in that particular preliminary survey some fairly nasty sorts of chemicals, like dieldrin, which supposedly had not been used for a long time. We worked out that there were some major problems for people with fresh water tanks and not using first flush diverters. The dieldrin, DDT and chlordane were in the sludge. So on those particular issues we ran a huge publicity campaign about people monitoring and looking after their tanks. There was not conclusive evidence in the first rainwater tank pesticide survey that was related to current agricultural activity.

It was followed up in 1998 by the Gunnedah Pesticide in Raintank Survey. So far, we have only produced a preliminary summary of results. This was a joint Environment Protection Authority/New England Public Health program which we

funded. It did involve considerable testing costs, and the Environment Protection Authority very kindly supplied the labour for collecting the specimens.

This particular study again did not give any evidence that any levels of endosulfans in the tanks were at all dangerous or above the accepted national guidelines, but what we did find – which we found concerning – is that from 30 metres to 3,700 metres away from the closest possible agricultural spray there were trace elements of endosulfan. I reiterate that those were “trace elements”. There was no proven human risk to people, but there definitely had been drift across those areas.

There were five tanks in this particular study that were tested every week. They ranged from 30 metres to 800 away from the closest possible agricultural spraying. So I will leave the results of that study too, rather than go into the detail of it. But it was of concern to us.

The Public Health Unit has been involved in consultative processes with the shire council, the Environment Protection Authority, the Department of Agriculture, the Department of Urban Affairs and Planning, and certainly some private individuals and crop sprayers. So we have been very much involved in negotiating through best practice policy in this area, and we have been heavily involved with the Gunnedah Chemical Liaison Committee.

CHAIRMAN: You mentioned the traces that you found in the water tanks and the distances that those tanks were from the point source. Bob Meadley, the Director of Environmental Services at the Narromine Shire Council told the Committee yesterday that he did some similar tests and found chemicals up to 11 kilometres away – again, not at significant levels, but that the traces were there.

The Hon. J. R. JOHNSON: Doctor, you made reference to the adverse health effects register. Is that in operation?

Dr FRAGAR: No, it is not. There is no such register in operation in Australia. We at the Agricultural Health Unit designed a program, in association with two divisions of general practice, but we have not had the resources to go through with the implementation of that.

The Hon. J. R. JOHNSON: Are doctors, hospitals and health workers required to report to either you or the department on adverse health effects on individuals, children, adults or seniors, and are records kept of those effects?

Dr FRAGAR: There is no legal requirement for health workers to report on health effects of pesticides, unless under there is a suggestion of any criminal activity. On the other hand, doctors and those with responsibility for health services have a general professional requirement to report any matter of public concern to the Area Health Service, and that would be handled by its Public Health Unit and Environment Health section. But there is no special requirement regarding pesticides. That would be the same for any particular adverse health event that was being experienced.

The Hon. J. R. JOHNSON: I address this question to either you, Dr Fragar, or Mrs Robertson, who said there were continuous complaints about spraying. Do you keep a record of those continuous complaints that are being made, and is there any follow through?

Mrs ROBERTSON: There is a full record of every complaint that has been received by the New England Public Health Unit, kept in the Public Health Unit. We attempt to put them together to see if there is any particular pattern. Some people let us know immediately when they feel that an issue has occurred, and we follow that up as best we can.

We had a particular incident last season in Gunnedah, when inversion occurred across the town for half a day. We did everything we could in our ability, but of course the Pesticides Act belongs to the Environment Protection Authority, and we followed as far as we could to see what had occurred. There were no documented increases from that particular incident of people going to the doctor. But we have little or no ability to collect clinical information, except our normal epidemiological studies that we do on accident and emergency visits by people who might come in.

We have had a major problem with the surveillance program that was discussed earlier in relation to asthma, because we have problems getting the general practitioners to actually provide the information. But, basically, we do have the system going whereby we keep the complaints together, and we certainly contact the Environment Protection Authority immediately we find a complaint and we pass it on.

The Hon. J. R. JOHNSON: Does the Tamworth-Gunnedah basin have a higher incidence of respiratory or asthmatic sufferers than do other areas in the State?

Mrs ROBERTSON: We do, in general, than other areas of the State. But Wagga Wagga is another city that has the same problem, with ryegrass pollen, outbreaks of asthma and respiratory problems. So there are just a few basins that have this specific problem. But it is higher than the rest of the State.

The Hon. J. R. JOHNSON: Do you have a greater incidence of ryegrass here?

Mrs ROBERTSON: It is something to do with the inversion and the way that the pollens go up out on the western plain; and then the thunderstorms start to build up and the pollens break up in the upper atmosphere and then fall down on us as a very easily absorbed pollen. That is where the problem comes from.

The Hon. J. R. JOHNSON: Doctor, I think you made reference to looking at various chemicals or pesticides that may be licensed for use. Do you take cognisance of the fact that certain pesticides and chemicals have been taken off the list of useable products, prohibited or withdrawn in overseas countries but have not been withdrawn in Australia?

Dr FRAGAR: I personally and our Australian Centre for Agricultural Health and Safety does not have jurisdictional responsibility in that area. Our work mostly has

been to do with chemicals that are in use. And, where there has been a particular issue that we have investigated, we have been looking at exposure to that chemical in that setting – chemistry, exposure and so forth.

The Hon. J. R. JOHNSON: Have you heard of some types of products that had been in general use overseas or in the country of manufacture, or in countries in close proximity to the country of manufacture, where the product has been withdrawn but has not been withdrawn on a world-wide basis by the manufacturers?

Dr FRAGAR: It is my understanding that in Australia the submissions by chemical companies are considered on the basis of the information about usage requirements, and the effectiveness of dealing with a particular pest or whatever, and on the toxicological information that is available. That assessment is done by the Australian system. While the system of assessment has information about where a particular product may be registered, and why it may not be registered, Australia makes its own decisions.

The Hon. J. R. JOHNSON: But have you heard of products that are not permitted to be used overseas but that are permitted to be used here?

Dr FRAGAR: Yes. And also the reverse: where Australia has declined to register some chemicals or applied more stringent conditions than is the situation in other countries.

CHAIRMAN: Phosphine was banned for use for flies in sheep because it was arsenic-based, but it was still allowed to be used for vegetables.

The Hon. I. M. MACDONALD: Mrs Robertson, in view of the continuing albeit anecdotal allegations or evidence, or whatever you want to call it, stemming from this region, do you think there is a case for a more comprehensive health study to put to bed or allay the fears of local residents, to let them know that something is not going on that could be a problem to their health over time?

Mrs ROBERTSON: I think the issue relating to a study relates back to that map that Lyn put up earlier as an overhead. Doing a bit of a study on this very small population does not give us enough epidemiological evidence one way or the other. I think it has to be dealt with at a State or Australia-wide level. We should actually be requesting that the industry look at the best way for this study to be instituted, along with the academics.

I think, for a small unit like ours to be involved in such an enormous study, which requires so much empirical evidence, is just beyond our ability. I think what we took on was as much as we can take on. What we take on with checking what actually makes people sick, or what people in our area are dying of every year, is as much as we can commit ourselves to. But further research would be very valuable.

When this discussion came up at the meeting of experts early last year, or the year before, the biggest issue that came on the table was: Look how many millions of

dollars it took us to find out whether lead was causing a problem or not? Our problem is that we have not got evidence to prove whether there is a problem or not. Therefore, we have not the right to make decisions on this sort of issue.

The Hon. I. M. MACDONALD: But you are satisfied overall that at this point of time there is not the evidence to suggest that there is something dramatic going on in this region, compared to what is going on with the health of other people across the country?

Mrs ROBERTSON: There is no evidence world-wide on the long-term small-dose effects of pesticides. However, I would like to add that one of the major outcomes of the mediation process that occurred here in Gunnedah was that spray should stay where it was sprayed. What troubles us in the Public Health Unit is that we are still getting evidence that the spray is not staying where it is sprayed. So I will add that.

The Hon. I. M. MACDONALD: That was from complaints?

Mrs ROBERTSON: I think it was fairly conclusive that spray moved into Gunnedah this year. Certainly, the cotton industry was doing its best to find out exactly why that had happened. But it certainly was not acceptable from a public health point of view.

The Hon. I. COHEN: You mentioned an asthma study in 1991, but there was no clarity as to whether it was due to pesticides or ryegrass. Were people who had problems with asthma at that time blood tested for pesticide levels?

Mrs ROBERTSON: This study was very conclusively ryegrass. You can have a copy of the study, but I really do not want to go into the fine detail. What they did was recall everybody who was admitted to accident and emergency that night. The study was actually done in 1991. This particular phenomena occurs regularly, but it was done in 1991 because we had a very acute episode. All of the affected people were recalled and tested for allergies, and the empirical evidence of ryegrass influence was definitive. It was definitely ryegrass. I only mention because it makes it more difficult for us, if we are getting reports of higher levels of asthma in the Gunnedah basin, whenever that occurs we check whether it is equated with Tamworth, because Tamworth does not get affected by that. So far, each time that has happened, that has been the case. So it is just a checking device that we can use in the Public Health Unit. I don't think it would stand up in any sort of court. But it is all we have got.

The Hon. I. COHEN: Would it be recommended that there be comprehensive testing of pesticide levels in certain circumstances – perhaps not like the ryegrass outbreak – where people have those problems?

Mrs ROBERTSON: No, not within the public health system. Lyn might like to talk more on this because it is dealt with in the farm worker situation rather than as a general community.

Dr FRAGAR: There is a major problem if we try to look to blood testing or urine testing for the wider community not occupationally exposed, in that it takes a substantial amount of exposure to a chemical to find the measurable levels in body fluids. So, to pursue that as a means of confirming that a person was in some way affected by a pesticide or other agricultural or pesticide type of chemical would probably be very wasteful of resources and probably providing the sort of feedback to the concerned community that would be not in keeping in what can be delivered.

If we take the definition of “health” of the World Health Organisation, health is not just an absence of disease; health includes wellbeing. I think we have to be more prepared to accept that the wellbeing of people does not have to be measured by physiological and pathological testing. If people are saying that they are being affected in some way – with headaches, runny noses, asthma – in relation to an obvious smell from a chemical, then we have got to try to remove that smell.

If it were from a piggery or from another industry next door or whatever, we have mechanisms for planning to reduce exposure to noxious smells. I think that we need to be moving to a high level of control so that people are not affected in that. But, to try to make this into something that is measurable – and I don’t think Health is ever going to be able to come up with those sorts of concrete measurements – would be to pursue that I think we have neither the resources nor the technology at this stage to be able to do.

The Hon. I. COHEN: You mentioned before, in answer to a question from the Hon. John Johnson, that there was no national register to report health reactions related to pesticides. Does that mean that we have no way of really knowing how big the problem is? Or is there some way of directing resources to that?

Dr FRAGAR: I think we do need to direct resources to that, because we do not have a consistent way of doing that. What we do have are coronial records of deaths, which tend to be either use of agricultural chemicals for suicidal or intentional poisoning. There are very very few of those in Australia; you could count the number of those incidents over a few years on the one hand.

We have admissions to hospital for poisoning by agricultural chemicals. There are very few of those across any State, including New South Wales, and most of them tend to be related to child accidental exposures.

We have emergency department presentations, which again are not necessarily associated with the causal effect if you are looking at rhinitis, runny noses, and asthma. And then you have the Poisons Information Australian Centre, which receives calls from the public and from medical practitioners about what to do if they have been exposed to a particular poison, and that would include chemicals.

So, at the moment, those are the bodies that we go to to try to get information. On the other hand, there is anecdotal information about some chemicals having effects on some people in the workforce in particular, and we have no way of reporting that

through to the registration authority process. I think some form of adverse reporting would be really important for us to establish.

The Hon. I. COHEN: There was a report from the Total Environment Centre Toxic Chemicals Committee, released in 1987, which stated:

.....in 1981 over 500 people reported symptoms such as fatigue, headache and gastro-intestinal upset thought to be related to pesticides to Dr Cook, a local GP in Gunnedah. Dr Cook considered that these patients were suffering from.....chronic fatigue syndrome. However, after some investigation, the Department of Health at the time concluded the condition was one arising from neurosis, not pesticide exposure.

Do you have any knowledge of that period, and was it correct and reasonable to come up with that assessment, or would it be different now?

Dr FRAGAR: I have no information about that – unless that relates to the Gunnedah study you speak of.

The Hon. I. COHEN: It was in Gunnedah and in the Breeza Valley.

Mrs ROBERTSON: I would like to reinforce that, from the Public Health Unit's point of view, there has never been any inference of neurosis. We say that some people appear to be more affected by pesticides and that they have these symptoms because that is what the people tell us. There has never been any inference of neurosis.

There were a couple of crises episodes – I can't even remember what year it was, but about three or four years ago – when, under our public health responsibility, we had to get assistance from the mental health team. But at no time was there any inference that these persons were exhibiting neurosis.

I was really interested to hear that they produced a paper that said there were 500 people who reported those symptoms. Five hundred people coming forward with symptoms that you could actually prove would have been a very valuable study group. But that information about that 500 has not been shared by us. I seem to remember that we did see the paper from the Total Environment Centre.

The Hon. I. COHEN: There was a report by Verkerk in 1987. Are you not aware of that?

Mrs ROBERTSON: No. I have to rely on information, as Lyn says, that comes through the hospital system or through a surveillance system with doctors. We cannot use data like that.

The Hon. I. M. MACDONALD: Surely a study of that significance, if it existed, would have come to someone's attention in the network up here. Five hundred people is a lot of people.

Mrs ROBERTSON: I guess the issue is the credibility of the data collection. I cannot remember that study, and I do beg your pardon that I can't. I am sure that the Total Environment Centre sent it to us at some stage. I can hear people behind me getting angry, and I find that most unfortunate when we have put so much of our resources into trying to get information. But to have a doctor reporting 500 cases in a town of this size, without us getting involved in order to reinforce or prove that information, I find pretty unfortunate. I just want to reinforce that at no time through the public health system has there been an inference of neurosis.

CHAIRMAN: We are just about out of time. We have some questions that we will ask you to take on notice. You will get those in a copy of the transcript. Lyn, you mentioned horticulture as being another significant area related to cotton. Has sarcoidosis shown up much at all in those horticultural studies?

Dr FRAGAR: Not that we have looked for. As we have been examining the health of rural populations, the cancers that appear commonly for farm worker exposure are cancers of non-Hodgkin's lymphoma and cancer of the brain. That is international experience. Those are being examined by the Cancer Council of New South Wales.

The other one that is not commonly reported for agricultural Australia and for farmers in particular relates to higher incidence of deaths from cancer of the prostate and rectum. We have got to be very careful about looking at those death rates because they may relate to an increase incidence of the disease, or they may relate to a difference in whether people go to get treatment early, or late, or how doctors deal with that. So we have not teased out whether it is a higher incidence or a matter of management.

CHAIRMAN: I am pleased that you have been so heavily involved in the education process to protect farmers from themselves. I operated in a market garden for 35 years, and until five years ago when I bought my first tractor with a cabin and airconditioning, there were some 70 tractors in a market garden situation that did not even have rollbars and were continually misted with all sorts of herbicides and pesticides. These chemicals were being sprayed back over the operator all the time.

The reason I asked about sarcoidosis is that I know a number of the people driving those tractors ended up with that problem. So I am pleased that you are heavily involved in the education process to protect people from themselves. Thank you very much for your time here today.

Mrs ROBERTSON: Could I add one thing?

CHAIRMAN: Yes.

Mrs ROBERTSON: Throughout the entire process of working on this issue there has been very good communication between all the government departments and the local government and the community, that is, the community who perceive themselves as affected and the cotton farming community and the general community.

Within the last year, however, there has been a change to the structures of the Environment Protection Authority that I think is well worth mentioning.

It means that the Environment Protection Authority have placed two positions in Tamworth to deal with this issue. For some reason, our communication levels are not as good as they used to be, and I find that unfortunate. I think it would be very good if from this inquiry there came formal structures for local and State communication regarding this issue.

CHAIRMAN: Thank you for your excellent information and I am sure it will feature heavily in our report. I have a number of questions that I would ask you to take on notice. If you could give us your answers to those questions as soon as possible, that would be appreciated. Those questions are:

1. Are rural communities that are subjected to large-scale agricultural pesticide application statistically more susceptible to health problems?
2. What approaches have been taken by health departments in other States or overseas to protect the health of the community from pesticides?
3. Can you identify the pesticides that are providing the greater health concerns for the community?
4. What is your organisation's view on the existence and prevalence of multiple chemical sensitivity?

(The witnesses withdrew)

(Evidence continued in private)

PETER JOHN MIDDLEBROOK, Manager/Owner, Middlebrook Air Services Pty Ltd, of "Pullaming", Gunnedah, sworn and examined:

CHAIRMAN: Mr Middlebrook, in what capacity are you appearing before the Committee?

Mr MIDDLEBROOK: As the Manager of Middlebrook Air Services.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr MIDDLEBROOK: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr MIDDLEBROOK: Yes, I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that Parliament has the right to override the Committee's decision and make your evidence public.

Mr MIDDLEBROOK: I would like to give my evidence in private, if I could, with the help of my secretary.

CHAIRMAN: Mr Middlebrook has requested that his evidence be taken in private, which is different from in camera in that it means that the evidence will become public later, but the room has to be cleared while this evidence is taken by the Committee in private. Taking the evidence in that way allows it to be part of the public record and available after.

Mr MIDDLEBROOK: I would like to give something of a preamble or introduction to who we are. The Middlebrook Air Services airstrip is located 13 kilometres from Cowal. The business is a small private company incorporated in 1977. The prime function is the service of aerial agriculture. Middlebrook Air Services has seen large changes in its 22 years of being in business. I purchased the spraying side of the old Air Farm Associates in Tamworth in 1981. That is when wheat was the biggest part of the business. We used to spray something like 100,000 acres of wheat back in those days.

Then insect control in sorghum took over in 1981-82, and cotton first started being planted around here in 1982. Our base today was just a grass airstrip and a truck used to come along and load the aeroplane. We have built that into an Environment Protection Authority accepted loading facility which is quite comprehensive. In the

past six years our business has changed dramatically from small piston-engine aeroplanes. We had seven or eight aeroplanes to do the same job that two or three do now. I will explain later why we did that.

We have been a member of the Aerial Agricultural Association of Australia since 1992, being an accredited operator. We fly approximately 2,000 to 3,000 hours a year, depending on the frequency of the season. Some seasons are bigger than others. The area that we cover is Gunnedah, Quirindi, Tamworth. Basically, we do not have any ambitions to go further afield because we started this as a family business to provide food for the table, and we are not interested in empire building. We employ four full-time pilots, including myself, and three full-time ground crew and three in the office. One of the pilots is my son. Judy, who is my wife, and my oldest son work in the office along with Carline.

We realised in 1992 that we had to get better or get out, because aerial spraying, as we are all aware, has been a hot potato for a long time – the old cowboy image and that sort of thing. I never ever believed that I was a cowboy but, through ignorance, I should say by going off the label on the chemical drum and applying it how they wanted it applied, was not necessarily the thing that the public wanted, and then there was this over-the-fence thing. So we decided that we had better get into the accreditation system and do it better.

We used to get, and still do get, Gatton University in to calibrate our aeroplanes. We have changed our style of spraying to be totally different. We use the weather to our advantage, not to our disadvantage. At this stage we have four turbine aeroplanes doing what we used to do with two – simply so that it can be timely, about the weather condition, and to put the product on so that it is not affecting anyone over the fence – unlike we have heard from a few people under oath here today.

We only employ pilots that are Spraysafe accredited and with above average qualifications. They are becoming very hard to get, especially in a little outfit like ours. They will gravitate to the big places out west, where there are less contentious issues – or, at least, there used to be. So we get the young fellows, train them, and they are ours for three years before they go anywhere else and they learn our system.

We purchased global positioning satellite marking systems in 1994, and we were actually the first company to buy those global positioning satellite marking systems for spray application. That has been just a remarkable bit of gear. We have got rid of human markers out of the paddocks, so that we have no problem with contaminating people while we are spraying. It has a downloading system that records where you are every two seconds, and that comes out on a print, which I have copies of here.

We use anaerobic microbes to break down the flush-out water systems that we have and to neutralise the chemical waste. We had the first turbine-powered aircraft in the Liverpool Plains. The reason that we did that was that it was taking us up to 12 hours to do 2,000 acres with one of the older types of aeroplanes. The same aeroplane

does the same work in two hours, which is all about timeliness – to get it done when the conditions are right.

CHAIRMAN: And in the right wind conditions.

Mr MIDDLEBROOK: Yes. We travelled to the United States to undergo specialised training. Some of that was excellent, but I can tell you that what I saw in the United States and what has happened here in the last three or four years does not match. I think we far exceed what they are doing over there and what they are expected to do.

All of our staff participate in specialised courses, depending on their position, in dangerous goods, et cetera, as well Avco chemical handling. We assist local government departments with research on what is grown where and all that sort of thing. We think that we run a fairly tidy business at this stage, and we are striving to improve that all the time. As technology comes on board, if it suits our area, we take it on board. That is Middlebrook Air Services.

CHAIRMAN: The global positioning satellite marking system allows you to spray within a metre, doesn't it?

Mr MIDDLEBROOK: Yes, within 25 centimetres. The pilot is the only governing factor there; the machine is more accurate than the pilot. We say a metre, but it will position you within 25 centimetres on the earth's surface.

CHAIRMAN: That is what has enabled you to get rid of the human markers.

Mr MIDDLEBROOK: Yes. As you can understand, we have a lot of small areas here, as compared to out west, so that we did not have marking crews; we had farmers and their workers marking for us. The global positioning satellite system alleviated that problem. There still has to be someone on the farm when we spray.

CHAIRMAN: Are you in contact with that particular person?

Mr MIDDLEBROOK: Yes, by UHF radio.

CHAIRMAN: When you say you exceed the USA standards, is that your company personally or in general?

Mr MIDDLEBROOK: No, not in general in Australian aviation. I believe that what we do and with what we have in place – and there may be other areas in the States that I did not see that do what we do – but we have a very comprehensive system to get a spray order activated in the system and then get the job done.

CHAIRMAN: One of the proposals is that the new legislation is to do with contributory negligence or share negligence. It has been explained to us by the Environment Protection Authority that one of the reasons that should be in the

legislation is that the farmer may be negligent in some circumstances as well as the spray operator. The reason that the Environment Protection Authority suggest that provision should be in the legislation is that not all the cowboys are necessarily in the aeroplanes but farmers might ask pilot A to fly in certain conditions and apply certain chemicals, and pilot A might say, "No, that is not according to the guidelines." So the farmer will go to another operator and eventually they will find someone who will do it. Have you got any comments on that shared liability? Also, have you had a bit of pressure put on you from time to time?

Mr MIDDLEBROOK: That has virtually disappeared in our area. That used to be a very big problem in the 1992 to 1995 era. We actually went on strike with the cotton industry of Australia and said, "We are not going to do a job that we deem will affect somebody else in this area, unless you stand wholeheartedly behind us on what we have been asked to do." What was happening is exactly what you were saying: We will get somebody else, or we will do this or do that. We would say, "No, the weather is wrong, or we can't spray because of inversions in this valley."

It is very rare that you don't have an inversion in this valley overnight and early in the morning. That is why we have gone to four aeroplanes. We normally don't start before 8 o'clock in the morning, and everywhere else is going all night and all day, so that we can get the work done by 12 o'clock, when it gets too warm. The farmers fell into line – especially the cotton farmers, and we are now getting the broadacre growers in a very similar train of thought. That is great. I didn't think it would happen, because some of them are bits of old rogues and say, "Oh, put the bloody stuff on. Don't worry about his sunflowers, or the house downwind." Could I show you an order form?

CHAIRMAN: Yes. Have you got one that you can table?

Mr MIDDLEBROOK: Yes. You can have any of this material. I can put it up on the overhead.

CHAIRMAN: While you are adjusting that, there was one other question I wanted to ask you, and that is about helicopters. I know it is a difficult question for you to answer, but do you believe the helicopters would have more or less spray problems?

Mr MIDDLEBROOK: It depends on how they are configured. We have some very good operators. The helicopter is a confined-air aeroplane. It is no different from an aeroplane, except it can get into a confined area much easier than we can. At 120 knots, you have to go over and down. A lot of the work that we used to do round rivers and stock routes and what not has been given to the helicopter because we don't want the problem of contaminating a stock route or river.

An aeroplane would do that if you dived in over trees and what not. So we have given that work to helicopters. There are a couple of operators that are very very good, but there are a few who have not conformed with technology. They are still mixmasters; they spread it everywhere.

The ultra low volume (ULV) spray is very difficult to control. Because of the confined areas, the number of neighbours that we have, ultra low volume spraying is very difficult to control in a confined area. It is different with 20,000 acres – and I question that too. This is something that the chemical companies lumbered onto the scene back in the sixties as an efficient way of spraying. They were not concerned about who was downwind, who was smelling it and swallowing it. It is like that Curacrom smell that came into town. We were not involved in that at all; a guy with a ground rig went out and sprayed in an absolute inversion.

The Hon. I. COHEN: When was that?

Mr MIDDLEBROOK: Last January, I think.

CHAIRMAN: It was the one that Christine Robertson told us about.

Mr MIDDLEBROOK: The stink of the stuff! It is a terribly smelly chemical, and it just oozed down the valley.

CHAIRMAN: So that was basically from one ground rig operator?

Mr MIDDLEBROOK: There were three rigs involved. Suddenly, they come back to us – and we hadn't even started an engine because of those conditions that morning. In the last 10 years that has happened quite a few times. Before we do a job the client rings us up, and we say okay, and he faxes a request form. I will go back one step further.

Before the season starts for cotton we go and look at the cotton farm and get the neighbours – and there are only two or three neighbours here that won't stand at the fence and talk about it any more – to agree that, yes or no, that is how we will do it, or whatever. They come to a handshake over the fence that that is how they will do it. We must know the client's name, the farm, the order number, the date of the order, the date required.

The date required is a very flexible thing because if the weather is not right on that day it won't be done. This is one of the big turnarounds in the last three or four years – convincing people not to go ahead and do it when it will affect someone downwind. Now we have several customers which, on odd occasions, wait up to three and four days to get an application done because the weather conditions are not right.

The Hon. J. R. JOHNSON: Does that have a deleterious effect on the crop?

Mr MIDDLEBROOK: It does. It has been a very big problem, because you get bigger insects and you have got to use more chemical, and it snowballs. Then they have a loss effect, which might be 0.2 per cent each time. The form has the information “ordered by”, “contact” “phone number/fax” and his UHF number, which is very important.

Then we ask are there chippers or workers in the field so that they can be notified of what is going on, yes or no. If they say no there, then we have to ring up and say, "Is there anyone in the paddock and who is going to supervise this?" Then immediate neighbours, advise as per the guidelines, any considerations as to dwellings and buffer zones. Buffer zones include a school bus, and what time it goes past there. We usually give it an hour each way. If a bus is going on the Breeza Road at 8 o'clock we don't do anything within a kilometre of the road while the bus is going down that road.

CHAIRMAN: Do you think three minutes is a bit fine?

Mr MIDDLEBROOK: Yes, I think so. The bus could be three minutes early too.

CHAIRMAN: It was.

Mr MIDDLEBROOK: What crop it is, then the field numbers, and the chemical to be used, use rate, and supplier. Down the bottom is additional information, and it has to be signed by the person who puts it in.

CHAIRMAN: Just going back to the school bus situation: you basically give the bus about an hour, and you also keep a kilometre off the route?

Mr MIDDLEBROOK: We try to achieve that, or go right away – get out of the area. That is what happens on my own place, but I have just got that to show you. That is the work order given to the pilot. It has got the UHF number, the type of crop to be sprayed, the volume carried, any hazards – and the hazards there include the Mooki River. We don't do anything closer than 500 metres to the river; or, if the breeze is blowing away, we can go to the edge. However, if the breeze is blowing towards the river, we just don't do it.

Then, as the pilot does the job, he fills in the date, the aircraft, the tacho start, tacho stop, take off/landing, fields treated, swathe used – that is, the width of the aeroplane treatment lane – and the dispersal equipment that he used, which would be CP nozzles or hydraulic nozzles, and the droplet size. Now, that depends on what equipment you use. Micronaires, which we use for ultra low volume application, crack the stuff up into small, fairly unmanageable droplets. So that is why we don't like doing ultra low volume.

Drift control. Now, what steps do we take with drift control? Well, I have just told you what we do. If the wind is blowing towards the river, or a house, or neighbouring crops or whatever, we don't do it. The other thing is that if the wind is blowing towards a neighbour's property, we may just do that part of that block, to get ourselves at least 500 metres away, and then wait until the breeze comes from here somewhere and then go closer. That has been at great cost to our business; it is going back, and it is quite tedious really. But it is satisfying at the end of the time when you

get very few rocks thrown at you. So that is the pilot's record that he fills out on completion.

This next slide is the record that is kept back at the base – your precheck that everything is set up right on aeroplane before you leave; all the mobile numbers and the UHF check numbers, and so on; the product used; who loaded it, so that we have a check back if something did happen to get into the wrong place at the wrong time, so that we will know exactly why it happened and who did it; and all the other area such as suppliers and so on.

CHAIRMAN: No wonder you have got a staff member in the office for every pilot.

Mr MIDDLEBROOK: Yes, we have. But, unfortunately, that is the way it has had to be.

CHAIRMAN: Do insurance companies take that into account in setting the rate of insurance?

Mr MIDDLEBROOK: Our insurance is the same as everyone else's.

CHAIRMAN: Is that right?

Mr MIDDLEBROOK: Yes. It's nice not to have a claim. This is one of many weather stations that we have around the district. We have our chill factors and our ambient temperatures, wind direction, wind speed. This comes from the Breeza weather station, and that is at 10.40. That gives the annual rainfall to date; that is the wind speed; that is the direction; that is the temperature; and that is the chill factor.

Before we go into that area with work, we dial that up, get that information out of it, and put it back into the pilot's hands, so that he has a record, so that if he gets down there and it has changed he can call us up and say, "It has changed," so that we can go back in again and say that is different, and he can pull out straight away. That is the satellite map. Not all global positioning satellite marking systems have this.

CHAIRMAN: This is a tracking of where your aeroplane has been?

Mr MIDDLEBROOK: Yes.

CHAIRMAN: Where you have turned too.

Mr MIDDLEBROOK: Yes. Since we got this the complaints lowered by 80 per cent, because we could prove that is where we were, and we could say that that was a vexatious complaint. Before that, we had to go through every complaint and justify.

The Hon. I. M. MACDONALD: So the red is where the chemical is applied?

Mr MIDDLEBROOK: That is right.

Mr MIDDLEBROOK: On the edges of the map is probably the only bit that is little bit suspect. It is updated every two seconds. The GPS system on the marking updates 12 times per second, but you never have enough memory or paper to print 12 of those little dots per second. So, everywhere the aeroplane went is marked: the red is where it applied the chemical, and the red there is where he has trimmed up the edges, because there may have been trees or something like that; and the green is where he went on the turn.

You can change anything on that map that you want to except those little dots, which always remain on that point on the earth, regardless. What I mean is that, if there is a road there, you can change that road on the computer but you cannot change the dot; it still will be at 30° 51" east, by 150°, and it will always remain on that spot. We have several people who have come along and said, "You have falsified the records," or, "You have changed them," but there is no physical way we can do that. We can change the map to make it look like anything we want to, but those dots, if you put your cursor on that one there, will remain in the same position on the face of the earth, which is great and very comforting. That concludes the presentation.

CHAIRMAN: How much did the GPS system cost you?

Mr MIDDLEBROOK: The first one cost \$50,000, with a program; the next one cost us \$30,000. We have got six of them, and they have all been between \$28,000 and \$30,000, but that is because the software is already in place for the printouts.

CHAIRMAN: I would have thought your insurance company would have given you some discount for that. It is a bit like carrying a fire extinguisher in your car and getting a 10 per cent discount

Mr MIDDLEBROOK: We were hoping it would help.

The Hon. I. M. MACDONALD: Do other companies have this equipment and these regimes in place?

Mr MIDDLEBROOK: There are quite a few that I frequent that do have it. Of course, doing one thing and saying another is another thing, isn't it? A lot of people really have not come to grips with it. They have got the fluffy stuff, and they will tell you all about it, but actually transferring that to a job and using that in practice is another thing. I don't think there is 100 per cent compliance in that respect.

The Hon. I. M. MACDONALD: The reason I asked is that over the luncheon adjournment today we visited a farm which was surrounded by cotton growers. There were substantial criticisms made that they are getting a lot of drift over their property. It struck me that if you were using this technology correctly, it should be minimising that problem.

Mr MIDDLEBROOK: Exactly. That farm that you visited goes back to an age-old problem between neighbours. The farm was supposed to be left to Len, and it wasn't; it was left to the other boys to share farm, and Len never got over it. We have been the applicator there for nine or ten years probably, and I can tell you now that any of the contamination that is on that farm – which is very little, and you should get him to show you a figure – did not come off our aeroplanes. There are helicopters doing around the edges because we didn't want to do that; we did not want to have to stand up and face him every day of the week whingeing and complaining to the Environment Protection Authority.

Every time the Environment Protection Authority comes to us, it ties up two of us for three or four days, and maybe longer, until they get all the facts and everything. We never go there unless the wind is exactly right and it won't affect him. I thought that he was very naughty in saying that things haven't improved in the last nine years, because in the last four years we have more than gone out of our way to make sure that there is no trespassing of any sort on there.

About three years ago the helicopter was spraying Predator along the boundary in a wind that was blowing straight towards Len. I went back there the next day, when the wind had changed around, and 500 metres from the road I was with the wind blowing away, and he went out of his way to prove that I had put the stuff on his paddock. It has been an absolute nightmare for our family and business that one particular man. I don't want to start off on that.

The Hon. I. M. MACDONALD: What about the trees?

Mr MIDDLEBROOK: It was a government tree pathologist who went out there and checked the trees and gave a verdict on it. It is an ageing population of trees, and maybe the surface water has been taken by irrigation, not by spray drift. That was another breach of the truth this morning. It wasn't aerial spraying that did that. The tree pathologist said that they are sick from age and lack of water.

The Hon. J. R. JOHNSON: But it is not peculiar to that property, is it?

Mr MIDDLEBROOK: No. It is happening all through the Namoi Valley – because nobody is planting trees, and stock and spraying, whether be at ground level or whatever, is probably knocking out the little trees. Grazing has just a big a share of responsibility as people going through and spraying their pasture with MCPA or something like that to keep the weeds out of it, and it is killing the little trees.

CHAIRMAN: We will get that report from the Department of Land and Water Conservation.

The Hon. J. R. JOHNSON: Are there any accidents in your particular business?

Mr MIDDLEBROOK: Accidents as in crashes, or accidents otherwise?

The Hon. J. R. JOHNSON: As in crashes.

Mr MIDDLEBROOK: We have had one wire strike in the last three years, off the top of my head.

The Hon. I. M. MACDONALD: But not a crash?

Mr MIDDLEBROOK: No. In 1989, when we were operating these little aeroplanes, we had a disastrous year. We were spreading fertiliser, not spraying, and we lost three pilots and five aeroplanes in 15 months. That was under the old system. This is part of the awakening that we have got to get better and we have got to do it properly. Pilots were working long hours in these little aeroplanes, trying to get productivity. Farmers were saying, "Do it now or we will get someone else in." All of those things were happening. I guess we had to mature from that.

CHAIRMAN: And you jacked up on them?

Mr MIDDLEBROOK: Yes.

The Hon. J. R. JOHNSON: Was there any illness associated with your industry?

Mr MIDDLEBROOK: I feel okay. I don't know what I look like to other people, whether I am different or not.

The Hon. J. R. JOHNSON: But your other workers as well?

Mr MIDDLEBROOK: No. We have not had any of that.

The Hon. J. R. JOHNSON: Do they wear any protective clothing?

Mr MIDDLEBROOK: We wear our overalls and gloves and face masks when they are tipping chemical and that sort of thing. But it is all about cleanliness and hygiene. If you go to the toilet and don't wash your hands afterwards, you're going to get sick, aren't you? We are in a very dangerous industry, so we have to be clean and tidy about it all. If someone is caught doing the wrong thing, then they really cannot work in our industry. It is as simple as that.

The Hon. J. R. JOHNSON: Do you supply the product to be applied, or does the owner of the property make arrangements for that to be delivered to you at a certain place for you to apply and he is billed for it?

Mr MIDDLEBROOK: The latter is correct.

CHAIRMAN: On the advice of agronomist.

Mr MIDDLEBROOK: Yes. We only do work for an agronomist who says, "That has got to happen." We don't say, "Oh, you need a litre of this on that," or so on. We don't want to be tied into that, and we don't want to be tied into chemical sales, because we are in the business of application only, and if that doesn't pay our wages then we won't be in it.

CHAIRMAN: The contributory negligence is actually a three-way equation: it is not just the aerial applicator, but the farmer, the agronomist. They could all be negligent dependent on the circumstances.

The Hon. I. COHEN: Another person, not Len Sanders, said that she witnessed your application in about February spraying in high wind. Would you care to comment on that? What is the limitation, and are there any rules or regulations about that?

Mr MIDDLEBROOK: There are limitations regarding wind, and those limitations on wind, when it is blowing away from Len's place, will probably be taken just a couple of knots further so that we can get the job done and so that it is away from his place.

The Hon. I. COHEN: Isn't it the case that in that particular area you were spraying towards Len's place or that you were spraying towards the town?

Mr MIDDLEBROOK: No. That is wrong. The predominant wind in this valley is a south-easterly. If you go to work too early, you will have a backing effect. Up here, about 100 feet off the ground, it is a south-easterly. But what happens, through friction and gradient wind, it will be backing. So, if you are going to have a catastrophe on Len's place, you will be spraying with a south-easterly howling and a backing wind. That takes place between about 5 in the morning, just before daylight, until probably about 8 o'clock. This is generalising; it is not every day. The complaint in February was that we were putting out ---

The Hon. I. COHEN: It was not from him, I might add.

Mr MIDDLEBROOK: No. It was that we were putting out urea, which is a fertiliser, Prill fertiliser. We have got that well documented.

The Hon. I. COHEN: In terms of your duty to notify neighbours, if your neighbour objects how much weight does that have?

Mr MIDDLEBROOK: That is up to the grower. All we can do is ask whether he has notified his neighbour, and he puts on the work record that yes he has or no he has not. In the case of Len, he won't meet with us and talk to us. So, what do you do? Do you jeopardise the man with 2,000 acres of work next door? All we can do is stick to the framework of doing it properly so as not to subject him to any problems.

The Hon. I. COHEN: There has been a litany of complaints relating to chemical trespass, cancers, et cetera, in this area. Do you have an opinion on that?

Mr MIDDLEBROOK: My opinion is that chemical, as I see and know of it, is dangerous. It is very, very dangerous. For me to have an opinion: of course, if you sat with your finger in whatever chemical for too long, you would absorb it. But every person may have a different reaction. I have been living, sitting, smelling the stuff since 1970. At this stage I have not had a problem from chemicals. But my dad died of a melanoma at 62, so if I have that genetic trait and I die of a melanoma about then they will probably say of me, "Oh, it was the chemical he was using!" I am not qualified to have an opinion on that. I believe that anything that I use, if the National Registration Authority has done its job and given me the correct way to apply it, then that is 70 per cent of the way to doing it properly. Then it is up to me to fulfil my responsibility not to affect anyone else.

The Hon. I. COHEN: A previous witness talked about wind socks and all sorts of data. Is that sufficient to do the job well enough of monitoring positions so that you get it right?

Mr MIDDLEBROOK: I have an opinion on this. The weather is our worst enemy, and it is also our biggest tool to use when it is correct. All the wind socks under the sun will not necessarily be the best thing for us. That appeases the man driving along the road, who might say, "Oh, yes, it's a south-easterly" when we are doing the job; or it appeases the fellow at his house who walks out the back door and sees the breeze is pointing away from his house.

The pilots that operate the aeroplanes – and this would be in general – always know where the wind is coming from. The use of smoke generators has been reversed and thrown back at us. When we put smoke up to determine which way the wind is going, if we are a little bit left of the track we always tend to say, "Look at the drift" when it is only the smoke. Of course, that gets in the media, saying, "He has put drift everywhere," when all it was was someone going down a fence line and putting the smoke out to see where it was going to go. Next thing, we have got the Environment Protection Authority there saying, "What did you do at 11 o'clock on whatever day?" That has become very prevalent.

Over the other side of town about two years ago there were two aeroplanes working from a strip a long way away. They were not our aeroplanes. One fellow called the other and said, "Where are you?" He said, "I've just let a bit of smoke go, and I'll tell you where I am." These are aeroplanes at 1,500 feet. Someone on the ground saw it and said that the aeroplanes were dumping chemical all over the countryside when all it was was an identification thing. So we are very, very apprehensive about using the tool of smoke generation at the moment.

The Hon. I. COHEN: You are confident that you are working in line with your expertise and with the latest equipment and that you are not undertaking chemical trespass?

Mr MIDDLEBROOK: I am confident, barring accidents, yes.

The Hon. I. COHEN: Sure. But, in your general run of work, with your knowledge and with the equipment that you have got now.

Mr MIDDLEBROOK: Yes. I could honestly say that we go to work not to put it over the fence.

The Hon. I. COHEN: I appreciate that. But what is the reality?

Mr MIDDLEBROOK: I am confident that we are not putting anything into the environment more than the MRLs stated in the World Health Organisation guidelines. Last year, which was a large year for us, we applied I think 300,000 hectares in this valley. We had two complaints of any consequence in that time. Out of that 300,000 hectares, which is a fair bit of country, believe it or not, cotton was less than a third of our application. Yet with those two complaints the complications came from neighbours around cotton.

We had some people out here who put in 76 complaints to the Environment Protection Authority hot line. Since they have left, there has not been one. So some people get hell-bent on complaints even though there is nothing happening out there. They were 3 kilometres from a cotton field and we were very, very careful which way the wind was blowing when we went out there, smell-wise and what not. So, out of that 300,000 hectares, some 100,000 hectares of it is cotton. So there is a lot of other spraying and application going on out there. That might be urea and fertilisers, trace elements, and all that sort of thing.

CHAIRMAN: What percentage of operators do you think would have your sorts of controls?

Mr MIDDLEBROOK: I would say there are probably 60 per cent.

CHAIRMAN: Sixty per cent operate the way that you do?

Mr MIDDLEBROOK: Well, so I am told.

CHAIRMAN: Roughly though?

Mr MIDDLEBROOK: Yes. You would have to go and watch the operation to get that accurately.

CHAIRMAN: But, just by your rule of thumb guess.

Mr MIDDLEBROOK: I would say it is a lot more than half, yes.

The Hon. I. M. MACDONALD: What happened to the two substantial complaints?

Mr MIDDLEBROOK: We were spraying a field out at Revigne and there were some chippers upwind 250 metres from the paddock. It was a new fellow who had come in to help us. We had given him all the training that we could, and told him if there is anyone within a kilometre of the paddock, apart from the fellow observing, don't go there. And he sprayed the paddock, and he was turning over these chippers who were hidden in behind some trees and what not – he reckoned he didn't see them, but I doubt that – and they went to the Environment Protection Authority and said they were contaminated and so on. That is still under investigation. But there has not been any problem with those people. I think the fact that the aeroplane flew over the top looked like an easy dollar.

CHAIRMAN: He wasn't sprayed, I take it?

Mr MIDDLEBROOK: No.

CHAIRMAN: There are some questions that we would ask you to take on notice. They will be included in the transcript of your evidence. If you would get your answers back to us as soon as possible, that would be appreciated. Those questions are:

1. *What is your view with respect to section 4.4 of the Environment Protection Authority's discussion paper, which raises the issue of shared liability for those involved in misuse of pesticides?*
2. *Are there any improvements that could be introduced in the area of labelling of pesticides and disposing of pesticide containers that may minimise damage to persons, property or the environment?*
3. *Can you expand upon the comments made in your submission opposing any devolution of power from the Minister for the Environment to the New South Wales Environment Protection Authority for actions such as commencing prosecutions?*
4. *Would the proposals outlined in the Environment Protection Authority's discussion paper have any financial impact on the viability of your organisation?*
5. *Are there any areas in the licensing, training and education of operators in the pesticide application industry that may need to be addressed?*
6. *What is your view as to the appropriateness of allowing pesticides to be applied at lower than recommended dosage rates?*
7. *For the purposes of licensing all users of pesticides, what is your view on the registering of chemical users at the point of sale?*

8. *Are there any areas not addressed in the Environment Protection Authority's discussion paper that you believe should be considered in a review of the Pesticides Act 1978?*

(The witness withdrew)

(Conclusion of evidence in private)

(Public hearing resumed)

GEOFFREY JAMES MARSHALL, Mayor, Gunnedah Shire Council, of “Springfields” Curlewis,

MAXWELL JOHN KERSHAW, General Manager, Gunnedah Shire Council, of 71 Lincoln Street, Gunnedah, and

MICHAEL JOHN SILVER, Manager, Environment and Development, Gunnedah Shire Council, of 32 Baxter Street, Gunnedah, sworn and examined:

CHAIRMAN: Cr Marshall, in what capacity are you appearing before the Committee?

Cr MARSHALL: As the Mayor of Gunnedah Shire Council.

CHAIRMAN: Mr Kershaw, in what capacity are you appearing before the Committee?

Mr KERSHAW: As General Manager of Gunnedah Shire Council.

CHAIRMAN: Mr Silver, in what capacity are you appearing before the Committee?

Mr SILVER: As an officer of Gunnedah Shire Council.

CHAIRMAN: Did each of you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

ALL WITNESSES: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

ALL WITNESSES: Yes.

CHAIRMAN: If any of you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that Parliament reserves the right to overturn the Committee’s decision and make your evidence public. Would you like to make a short statement before members of the Committee ask you some questions?

Cr MARSHALL: Firstly, I would like to thank the Committee for the opportunity to address this inquiry. Council has a great interest in the matter and sees the need to be involved in this process. It is fairly obvious that ours is a rural shire that is reliant on agricultural production, and part of that agricultural production process is the responsible use of agricultural chemicals, or pesticides as you have referred to them today. That broad interpretation includes, as term them, pesticides, herbicides and

rodenticides, et cetera. That is the direction that we take in the statement that we will be putting forward, but in addition we will be offering some options. I will work through the statement.

Agriculture is the largest industry operating in the Gunnedah shire area, employing almost 1,000 people directly. This employment is based on 539 establishments with agricultural activity occupying an area of 410,000 hectares within the shire area of 5,000 square kilometres.

Gunnedah is a truly diverse agricultural area supporting both winter and summer cropping, cattle, sheep and pigs. Wheat is still the most widely grown crop, with sorghum, barley and sunflowers also being significant. The gross value of agricultural commodities produced in the district is \$128 million annually.

Cotton is now second to wheat in terms of area cropped, with 18,110 hectares. There are several reasons of the expansion of cotton to the upper portion of the Namoi Valley over the last ten years, in particular the development of new varieties, with shorter growing seasons capable of producing higher yields, and that combined with the drop in commodity prices of traditional crops, has forced farmers to diversify their cropping operations. The potential for further increases in cotton are good, although the number of hectares grown will vary with prices and changes in the market. That is what we see will happen in the next twelve months.

The number of properties growing cotton in the Gunnedah local government area in 1997 was 115. Currently, 64 per cent of cotton is grown by irrigated means, with the balance by dryland farming. But that does not necessarily reflect the areas grown. With the average yield for irrigated cotton being seven bales per hectare and 2.6 bales for dryland, the estimated gross value of cotton production based on a return of \$475 per bale is \$46.6 million, or one-third of the district's gross agricultural return.

It is estimated that an average of the 95 per cent of cotton from the Gunnedah district is exported. Similarly, 90 per cent of durum wheat and 60 per cent of bread wheat is sold off shore. The agricultural chemical industry is a significant part of the agricultural infrastructure within the Gunnedah district having regard to all levels of agriculture. It is estimated that its overall value is of the order of \$40 million annually, with cotton production representing approximately \$13 million annually.

With the ever increasing need for improvements in productivity and the fluctuations in agricultural markets, there has been a significant move to a more commercial approach to agricultural production. This has led to intensive methods of product development, with a focus on more effective resource utilisation. Clearly, the principal resource in this regard as far as cropping is concerned is water and its availability. As a consequence, capital intensive irrigation properties have developed, with a view to increasing production at sustainable levels and providing a more significant return on investment.

In this respect, the region has seen a more corporate approach to farming and, in some instances, a move away from the traditional family farm. Given the extent of

capital investment, there is a need to establish crops that provide adequate return on investment. As a consequence, the investment – the crop – must be protected in order to secure that return.

Greater capital investment and a shift from traditional cropping types to those of a more intensive nature have led to impacts on neighbours from the use of agricultural chemicals. These impacts are extremely broad and cover issues from farming methodology, health and lifestyle, to chemical usage, to chemical application methods, to water usage and resource allocation, to economic considerations, to environmental matters and the right to farm.

Some changes have been driven by environmental issues, such as conservation tillage. The positive aspect is the retention of topsoil longevity and fertility of the soil profile. On the down side, the move to non-volatile herbicides has led to weed resistance and a resultant higher chemical load, with potential soil contamination.

The total number of persons employed in the Gunnedah shire area is 5,009, supporting a total population of 12,800. Agriculture represents 19 per cent of the workforce, second only to wholesale and retail with 22 per cent. Manufacturing is third with 11 per cent of the employment numbers. It is therefore reasonable to assume that a considerable amount of the wholesale and retail and manufacturing employment is directly reliant on the level of agriculture within the immediate area.

Taking this a step further, a study by Powell and Chalmer in 1995 into the cotton industry in the MacIntyre and Gwydir Valleys found an employment multiplier of 2.2:1. Accordingly, if this multiplier is relevant overall to agriculture, 2,256 jobs or 45 per cent of the total Gunnedah workforce, have a dependent on agricultural activities. When consideration is given to 73 per cent of the workforce being in the private sector, it can be seen that agriculture is critical to the maintenance of private enterprise within our region and the very lifeblood of the district's economy.

I now turn to issues of concern and the history. The development of intensive irrigation agriculture into the upper Namoi catchment over the past ten to fifteen years has clearly changed the approach at all levels of agriculture. Government and community approaches to international competitiveness, combined with technological changes, has placed greater pressure on the farming community to become more competitive and, as a result, more productive from the investment resources available to the farming sector.

The search for crops delivering greater returns has seen levels of irrigated cropping increase and new crops emerge, such as cotton and intensive vegetables. Given the level of investment and potential returns with such crops, the farmer is extremely protective of his product to ensure that it reaches its peak potential. Accordingly, the use of agricultural herbicides and pesticides has become critical to the maintenance and protection of the crop. This change in approach to farming practices has caused distress and concern amongst various sections of the community. It is reasonable to suggest that, in the past, application of agricultural chemicals was in certain instances not carried out with due regard to neighbours or the environment.

I now wish to speak about the Gunnedah Chemical Liaison Committee. In 1995, as a consequence of the level of community concern, council assisted in the establishment of the Gunnedah Chemical Liaison Committee. Initially operating as a committee of council, the group brought together representatives of all sectors involved in the agricultural chemical debate.

The committee is now a separate incorporated community organisation. Council saw the need to involve all parties, particularly environmental groups, in order to reach a balanced judgment on issues of concern relating to pesticides and pesticide application. Unfortunately, the role of the committee has been questioned at times, and this ultimately led to a State government sponsored mediation process in 1997.

The final outcomes of the mediation process have been questioned. However, the broad thrust of the community-based group providing education, arbitration and conciliation services on matters of community concern has been most successful. It clearly reduces the level of expenditure by the State government on complaints pertaining to agricultural chemical use and providing the community with a mechanism for addressing its concerns at a local level.

Of concern to council is the New South Wales Government's lack of tangible acknowledgment of such a group's importance to the management of this issue. Council has been seeking and continues to seek an insignificant contribution of \$2,000 each from the Environment Protection Authority and the Department of Agriculture to support the Gunnedah Chemical Liaison Committee's annual administration expenses. However, this has been consistently declined. I might add that council was to make a similar contribution to make that operation viable.

It has been apparent that much of the community and individual anxiety over the last few years has been due to a poor understanding of the impacts of pesticide use from all quarters, with a consequent generation of distrust and anger. The selective use of information has fuelled this social impasse. It is therefore imperative that communication and education levels are improved and that government agencies promote clear and precise outcomes from investigative processes.

Best management practices incorporating community and neighbour education and notification procedures have been developed and established to meet this demand. Scepticism still exists over self-regulation. However, there is as much negativity regarding the effectiveness of a totally regulated system. Extreme difficulty has been experienced in validating complaints or for that matter the impacts after the event. This is demonstrated by the number of complaints and the number of complaints that proceed to a conviction.

There is a role for regulation. However, to meet community expectations and provide a workable solution, an acceptable balance interaction between best management practices and regulation is required.

I now turn to best management practices. The establishment and ongoing review of best management practices in agriculture is seen as the most positive way of dealing with agricultural chemical issues. The Gunnedah Chemical Liaison Committee has developed a workable set of guidelines to manage chemical application in order that all parties are aware of their responsibilities.

It is vital that ongoing development proceed between agricultural peak bodies and the various community interest groups to continuously improve such guidelines and the best management practices that underpin them. Education is therefore imperative, with a co-operative effort between government industry, environmentalists and community organisations, to ensure a balanced approach is achieved.

Alternative pest management regimes. The Ord River project has been in action for three years. It is an experimental process that aims to deliver sustainable pest management regimes to Western Australian agriculture. We would all remember 15 to 20 years ago when pest pressures put an end to cotton and sorghum production in the Ord River area.

There are 17 growers currently involved in the Ord scheme growing cotton, with also a much publicised program of Market Gardening – sweet corn, cabbage, lettuce, et cetera. These crops are all extremely susceptible to thrip and heliothis pressures. This new program aims to grow (and successfully done so) these crops without the use of “hard” chemicals. Endosulfan is not used.

The program relies on “host crops” to harbour predators, and a unified group approach to the application of alternative insect control measures. There is a similar program in use in the Moree district. The alternative applications entail the use of viruses and soft chemical applications. This approach has two-fold benefit for industry and the community: reduced reliance on chemicals, resulting in reduced risk of offsite contamination; and longer sustainable life for the existing chemicals, resulting from reduced insect resistance pressures. Although there is acceptance, this operation is small, and initiatives such as the Ord model need to be further expanded into other areas of Australia in an endeavour to reduce the total chemical load.

I now address planning issues. Considerable knowledge has been gathered by catchment management organisations over the last few years with regard to the environmental balance of catchments across New South Wales. The Liverpool Plains Catchment Management Committee is one of the leaders in this respect.

Council perceives a partnership between itself and the Liverpool Plains Management Committee to establish an integrated action planning approach to agricultural issues in the Gunnedah area. This will involve using farm management plans as a self-regulatory tool through identification of such plans in the Gunnedah LEP.

This passive regulatory approach is seen as providing some meaning to the previous initiatives of catchment management organisations. Currently, council is at the forefront of developing a regional environmental plan for the whole of the

Liverpool Plains in conjunction with the Department of Urban Affairs and Planning. The plan will deal with catchment issues and ultimately dovetail into the LEPs for the six local government areas in the Liverpool Plains, thus establishing a consistent approach to rural planning within the catchment without regard to local government boundaries.

In 2002 council anticipates implementing a new local environment plan. As a lead into this plan, a complete environmental study will be initiated, very much with a rural focus. The study will give consideration to integrating the various tiers of substantial-catchment plans into the LEP, calling up National Registration Authority restrictions for chemical use in respect of specific crops, establishment of land use subzones within agricultural zones and buffer zones having regard to potential agricultural chemical use.

It is essential that planning zones not only provide differentiation and protection from land use zone to land use zone, but also clearly outline the extent of the activities that may be undertaken within the zone, whether such activities are with or without consent. This may lead to the need to specifically redefine agriculture.

The opportunity exists to provide a tangible link between actual land use, agricultural zoning and the environment sustainability of an LEP. Among possible mechanisms that could be included in a revised LEP are:

- Identification of all current land use activities or “primary use” of land (ie in terms of existing use, for example, broadacre, irrigation, or grazing).
- Redefining the term “agriculture” to differentiate between intensive, irrigated, cropping and grazing.
- Establishing agricultural “precincts” or subzones based on primary use.
- Identifying the “intention” of the zone or precinct, together with objectives making allowances for future uses and diversification.
- Linking back to other natural resource management issues (vegetation, fauna conservation, water management), plans and studies undertaken and operating in the local government area or wider catchment.
- Investigating the use of complying development for agriculture based on standards associated with best management practice, agricultural chemical application guidelines, farm plans and subcatchment plans.

Bear in mind that all of that would be upfront; it could not be retrospective.

CHAIRMAN: The Department of Urban Affairs and Planning is coming to our Sydney hearing, and a few of these things that you have raised will be dealt with at that hearing. We want to make sure we finish on time today, and therefore I will be hard on the time allocated to members.

The Hon. I. COHEN: Councillor, what is your view or your council’s view of the Dubbo Council’s decision, in terms of a development application process, for the establishment of cotton farms near the Dubbo city? Do you see that as a step in the right direction for closer scrutiny by a local council over industry?

Mr SILVER: You are referring basically to the fact that cotton is a consent use, I take it, within the Dubbo LEP?

The Hon. I. COHEN: Yes.

Mr SILVER: And the fact that to establish a cotton farm activity, you need to acquire consent. The question that that then raises is: What impact does that have on other uses which may well have other associated pesticide type uses and the balancing of those uses? The question that the council is looking at as far as the Gunnedah local environmental plan and the long term is concerned is to not have a totally regulated system, given the need to monitor that regulated system.

It may well be satisfactory to provide consent in restricted locations for certain activities, given the environment problems that surround it, but, on a broad scale – in terms of the Gunnedah situation, with 5,000 square kilometres – the number of staff that would be needed to monitor that and to actually put in place or look after the conditions associated with it would be far too great.

I am not aware of the situation at Dubbo as far as conditions are concerned and their ability to actually monitor any conditions that that council put on the consent. But I would be surprised if a council in this area would go to a totally consent-driven or regulated system.

The Hon. I. COHEN: I appreciate what you are saying about staffing problems. Do you think your council, given its staff problems, has the expertise and resources effectively to manage the issuing of penalty notices outlined in the Environment Protection Authority discussion paper?

Mr SILVER: Council did respond to the discussion paper. One of the items that council highlighted in its response was the indications in the discussion paper that other public authorities may well be granted that power. I question whether council has the expertise to do that, and I question whether it does have the resources to successfully undertake that monitoring process and issue penalty notices.

The Hon. I. COHEN: Does the council receive complaints or concerns by workers using chemicals? If so, what are those complaints, and how many of them are there?

Mr SILVER: You are referring to workers across the shire?

The Hon. I. COHEN: I guess I am mainly focussing on council workers, but other workers in the council jurisdiction as well.

Mr SILVER: To be honest, no, council does not receive complaints in that regard. From time to time council has received complaints from the general community in relation to other activities, and those are passed on through the Environment Protection Authority reporting mechanism.

The Hon. I. COHEN: Do you have any idea how many complaints there are over a year from the community?

Mr SILVER: In more recent times, the number of complaints made to the council has reduced. Going back three years or four years, when some of this debate initiated, it was probably of the order of half a dozen to 10.

The Hon. I. COHEN: How many of those complaints would relate to damage to other crops from spray drift or chemical trespass? Does your council still consider that to be an issue in the area, or has there been a refinement of practices to resolve that?

Mr SILVER: Clearly, from council's complaints received, there has been a reduction in that. Really, that would have to be assessed through the Environment Protection Authority reporting mechanisms. But the perception of the council is that, from a council point of view and certainly from an officer point of view, the work that is being done by the Chemical Liaison Committee has overcome the reporting to the council.

The Hon. I. COHEN: Have there been any complaints over the release of contaminated tail waters?

Mr SILVER: Not to the council, to my knowledge, no.

The Hon. I. M. MACDONALD: In your analysis of the local environment, have you found problem areas caused by chemical usage as a result of any monitoring programs that you may have conducted yourself? If so, where are they?

Cr MARSHALL: Some time ago, prior to my involvement with the council, an option was presented in regard to probably a spray-free zone around the town. I guess that would reflect that at some stage there was a problem. I guess, realistically, in this sort of area, the problem will generally come – and I don't think it is any different in the Gunnedah area – where you have rural 1(c) or smaller allotments encroaching into areas where there is broadacre agriculture.

The Hon. I. M. MACDONALD: You now have a buffer zone around the town?

Cr MARSHALL: No.

The Hon. I. M. MACDONALD: There was a proposal to have it, was there?

Cr MARSHALL: It was never adopted.

The Hon. I. M. MACDONALD: Do you feel there could be a need, given the problem that encountered last January or February, given the unique inversion problems that you have here, to have such a buffer zone?

Cr MARSHALL: The comment I would make in response to that is: How big are you prepared to make the buffer zone? The research that has been provided in regard to the problem that occurred last year would suggest that we would almost take a buffer zone to Cowal. I question the effectiveness of that, and the impact on agriculture in this community. I don't move away from the factor of protection of community health, but the information that is available to me about that incident in the town is that it came from a considerable distance from town. The process – which I don't think even reached council consideration – was for a 10-kilometre buffer zone, I think. That incident was from considerably further than 10 kilometres.

CHAIRMAN: We have a number of questions that we will ask you to take on notice. Those questions will be incorporated into the transcript. Those that you have not already covered, would you respond to and forward that information to the Committee as soon as possible.

Mr KERSHAW: Will a copy of the full transcript be sent to us?

CHAIRMAN: For checking, you will just get your part to start with. Later, we will be able to give you a copy of the complete transcript.

Mr KERSHAW: We would appreciate that.

CHAIRMAN: Those questions on notice are:

- 1. Can you expand on the concerns raised in your submission regarding the opportunity for applying pesticides at a lower rate than stated on labelling?*
- 2. Are any of the proposed legislative amendments outlined in the Environment Protection Authority discussion paper unacceptable to the council?*

(The witnesses withdrew)

MICHAEL JAMES SLACK-SMITH, Chairman, Narrabri Rural Lands Protection Board, of Moana, Burren Junction, and

ESLYN HAZEL JOHNS, Administrative Officer, Narrabri Rural Lands Protection Board, of North Lynn, Kaputar Road, Narrabri, sworn and examined:

CHAIRMAN: Mr Slack-Smith, what is your occupation?

Mr SLACK-SMITH: Grazier/farmer.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr SLACK-SMITH: As Chairman of the Narrabri Rural Lands Protection Board.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr SLACK-SMITH: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr SLACK-SMITH: Yes, I am.

CHAIRMAN: Mrs Johns, what is your occupation?

Mrs JOHNS: I am the Administrative Officer with the Narrabri Rural Lands Protection Board.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mrs JOHNS: As Administrative Officer.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mrs JOHNS: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mrs JOHNS: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that

Parliament has the right to overturn the Committee's decision and make your evidence public. Mr Slack-Smith, did you want to make an opening statement?

Mr SLACK-SMITH: Yes, Mr Chairman.

CHAIRMAN: You have a document there that you may want to table, is that right?

Mr SLACK-SMITH: Yes, Mr Chairman.

Document tabled.

CHAIRMAN: You might make your opening statement.

Mr SLACK-SMITH: Narrabri is one of 48 Rural Lands Protection Boards in New South Wales. They provide a wide range of services to the New South Wales community, including land management, animal health and food quality, animal welfare, stock identification, pest animal control, noxious insect control, management of travelling stock routes and reserves, natural disaster relief and drought management.

Each board is a statutory body, funded by ratepayer contributions and established to give a service to its ratepayers through the implementation of the Rural Lands Protection Act. Boards are managed by an elected board of eight directors who are ratepayers and represent their local areas. Directors oversee the operations of the board, monitor services delivered to ratepayers, and focus on land protection issues. Directors are supported by a small number of staff, comprising veterinarians, rangers, administrative officers and support staff. At this moment, Mr Chairman, I would like to apologise for you having the B team in front of you; our district veterinarian, who has dealt with this issue before, has a prior appointment in Canberra. The director who has also handled the chemical pesticide issues is under the knife in Sydney, having an operation. But we apologise for that, but we are willing to take questions on notice so that those might get back to them, if we may.

CHAIRMAN: Thank you.

Mr SLACK-SMITH: In respect of animal health and food quality, the boards provide the official front line for animal disease control services in this State. This involves animal disease investigation and advisory activities in respect of herd and flock problems, including the investigation of pesticide residues.

With regard to pest animal control, the boards are responsible for managing the control of rabbits, wild dogs, feral pigs and noxious insects. Boards also assist landowners in the control of other pests such as foxes, feral cats and mice. The control involves: preparation of poisoned baits; providing landholders with advice and assistance; controlling such animals on travelling stock routes and reserves; and the inspection of properties to ensure that landholders are in fact fulfilling their obligation to control such pests.

Boards are responsible for the management of travelling stock routes and reserves. This area totals approximately 500,000 hectares, or 2.7 per cent of the State's land area. This involves: management and protection of this land; control of travelling stock movements; protection of remnant vegetation; and maintenance of watering points and other improvements. The travelling stock route network is funded via levies collected from the users of the various travelling stock routes and reserves.

I move on to pesticide management. Incidents with DDT, Helix and endosulfan demonstrate the potential for spray drift to contaminate off-target pastures. Subsequent grazing of these pastures has caused residues in cattle. Chemical residues pose a continual threat to the domestic and export meat industries. The majority of residues causing spray drift incidents involved aerial application by the cotton industry. Spray drift can affect the applicator's cattle, neighbours' cattle and travelling stock routes.

Much of the concerns with stock residues are not the individual affected animals but the potential to affect the meat export industry. This is the true seriousness of the offence, not only the value of the affected cattle. The endosulfan crisis showed that the actions of a few incidents put at risk the export meat industry, which is worth \$3.5 billion.

On another scale, as shown in the 1997-98 endosulfan crisis, a handful of residue incidents largely concentrated in one area of the cotton industry created severe marketing difficulties for many beef producers in all cotton growing valleys. In the Narrabri Rural Lands Protection Board district we had one beast above half MRL and it was traced to a beast that strayed into a cotton paddock. Beef producers on the E list found the sale of their cattle very difficult unless they took a substantial discount. The E list included cotton growers and neighbours of cotton growers (regardless of distance from the cotton crop). Thus approximately 900 beef producers, of whom Narrabri Rural Lands Protection Board had 282, across the cotton areas, found themselves in de facto quarantine for the cotton season.

Spray drift incidences have been spasmodic, but casual observations indicate that there is a climate of greater awareness and co-operation with chemical applicators and users. The use of smoke indicators to detect drift is an incident.

One problem that has become apparent is the division between New South Wales Agriculture and the Environment Protection Authority over the responsibility for residues causing spray drift. New South Wales Agriculture indicates that spray drift is not its responsibility. New South Wales Agriculture concentrates on reducing the market impact of residue incidents, leaving action on spray drift to the Environment Protection Authority. It is a bit like the specialist medicos and panelbeaters involved in car accidents.

The Environment Protection Authority indicates that it is an environmental protection agency. As such, residues are low priority. It is an industry matter, similar to Accident Investigation Units in a motor car accident; they come in after the accident. This has resulted in a failure to have a co-ordinated program to prevent residues caused by spray drift and to investigate the factors surrounding residues caused by spray drift.

The Rural Lands Protection Boards are like the towtruck operators and the ambulance; they are there to clean up the mess after it.

Rural Lands Protection Boards have a responsibility for sustainable management of travelling stock routes. In the Narrabri Rural Lands Protection Board the stock routes comprise 38,000 hectares and most are adjacent to large areas of cotton and other crops. Stock that have been grazing on travelling stock routes contaminated by spray drift have recorded residues. Monies from stock grazing on travelling stock routes are used by the board to maintain the travelling stock routes. Any reduction in grazing stock numbers has a direct financial effect on the board and its ability to maintain travelling stock routes in a sustainable fashion.

Following the chlorflurazon and endosulfan crisis, travelling stock routes in the Narrabri board developed a reputation for being chemically contaminated. The District Veterinarian received numerous calls regarding chemical status of the stock routes, and as a result large mobs were diverted to other boards. In your hand-out there is a breakdown of some figures in that respect.

Traditionally, drought years attract greater numbers of stock onto the stock routes seeking agistment. There have been incidents in the Narrabri board where aerial application of herbicides by cereal growers has caused considerable damage to travelling stock routes pasture. Herbicide damage is very obvious and perhaps indicates the latent problem of pesticide drift. It is quite easy to see when you put a Roundup spray over a patch of barley grass.

Sustainable management of travelling stock routes requires the use of herbicides and pesticides. Rural Lands Protection Boards have responsibility to control noxious weeds, insects and animals, as well as maintaining travelling stock routes in a fit state. It is important that travelling stock routes do not become a source of problems for adjacent landholders. The vast majority of herbicide and pesticide use on travelling stock routes is spot spraying, with aerial application being largely confined to campaigns during locust plagues.

Locust plagues are a regular occurrence in the Narrabri board. Locusts pose a severe threat to pastures and crops. Control involves pesticide application by a number of methods. Hatched wingless locusts can be controlled by ground spraying, but swarms can only be controlled by aerial application. Successful spray control depends on vary narrow time windows, and these are under the control of the Plague Locust Authority and New South Wales Agriculture. This control is essential to prevent the increase of locust numbers and the exponential damage caused.

Noxious animals are a threat to agriculture, and it is becoming increasingly apparent that they are a threat to the general environment. Among other control methods, poison baits are an essential part of many control programs. As an instance, this month so far the Narrabri board has issued 1,200 individual fox baits and 600 kilograms of grain for poisoning pigs. The environmental damage that will be prevented by that program is remarkable, but it requires the co-operation of the

ratepayers. At the moment National Parks is planning a major campaign for the Pilliga Nature Reserve to control foxes and pigs.

The Hon. I. M. MACDONALD: In your submission you deal with who should be responsible and who should be liable for offences. You advocate that the advising agronomist also be roped in. I have a bit of a problem with that in that I am sure the agronomist is working out what sort of product is to be applied, but other parties will make decisions about when the application will be made.

If we are going to rope in agronomists in this way, would you not find that the agronomist will become more reluctant to give correct advice on what to do and to get involved in many ways? In other words, you would be putting a penalty on their business, and people become very reluctant to provide adequate and proper advice if they are subject to possible extensive litigation.

Mr SLACK-SMITH: The agronomist issue has been bounced around by our board a little bit, for the reason that you have just said. In the cotton growing situation, quite often the decisions are made by the agronomist on behalf of the landowner. A lot of this has been covered by the best management practice of the cotton industry, and we feel reasonably happy with the way that the industry is going with its guidelines on that issue. I grew cotton for 10 years, so I have an idea how it works. Admittedly, it was 10 years ago, and the water has travelled under the bridge since then.

The Hon. I. M. MACDONALD: Or hasn't.

Mr SLACK-SMITH: Quite often decisions are made by the agronomist that a spray has to go on. He contacts the aerial operator and tells him that a spray has to go on for Mike Slack-Smith. He tells the operator which fields, and then the agronomist contacts the grower via fax, and sometimes the grower may not even know that the spray is going on. That has happened to me in the past: you wake up in the morning and hear an aeroplane and you know that you're doing a spray. Maybe it is because you had not checked your fax machine.

The time windows for spraying cotton are pretty small. You are spraying an egg or something a millimetre long, and the smaller you can spray it the more effective is your result. So you do not have big time windows to do a successful and cost-effective job, which is the main issue there.

The Hon. I. M. MACDONALD: Tell us a little bit more about this division, as you describe it, between New South Wales Agriculture and the Environment Protection Authority and their responsibilities in these matters.

Mr SLACK-SMITH: Basically, this came from our District Veterinarian. He had a serious situation where he could not get the Department of Agriculture to mother the residue problems that he had, and the Environment Protection Authority were not interested until after it had happened. We feel that there should be warning signs, like a traffic warning sign, to liken it to that, to slow down. There is a problem. We are not really sure just how it can be addressed. At the moment we have two groups that are

looking for the after happenings and no-one there to try to prevent it from happening. We feel that a little bit of prevention is a lot better than a lot of cure.

The Hon. I. COHEN: You mentioned that the aerial spraying industry in general is acting in a more responsible manner. You talk about the tightening up of legislation and the Pesticides Act. Do you support changes to the Pesticides Act to regulate the industry more?

Mr SLACK-SMITH: I am not really sure that regulation for the sake of regulation is the way to go in a lot of this. As we have seen in the Narrabri board, with this endosulfan, Narrabri and residues go back a long way. We had DDT 20-odd years ago now. Last year has been a bit of a highlight from the Narrabri area in the fact that we are still growing the major proportion of cotton in the State and we had one beast that was straying into a cotton paddock that was a problem.

I think the message is getting through to the industry to be responsible, and the industry is hearing that message loud and clear. I am not totally convinced, from a personal point of view, that legislation would be the answer. I think if you are getting people wanting to do it, they are doing it a lot more successfully than if you are flogging them to do it.

The Hon. I. COHEN: You mentioned that the agronomist has a responsibility, but who should be responsible if we are looking at pilots spreading the pesticide, the landowner and the agronomist. How do you see the responsibility lying for those various parties in terms of chemical trespass?

Mr SLACK-SMITH: It is a bit of a joint effort. The property owners, I suppose, are a bit like the managers of any institutions: the buck stops with them. It is very hard to stop the buck when the aeroplane is on its way. Admittedly, communications have helped that, as have smoke detection and that sort of thing. I had never seen smoke used until the last couple of years, where they started to drop fuel onto the exhaust pipe, or whatever they do to make the smoke. That is a tremendous move forward, because you can actually see what is happening there and then.

It is important to have a wind to spray successfully. I picked up earlier about that drift over Gunnedah. I'll bet that happened in an inversion situation when there was not an ounce of breeze. You need breeze to get a successful spray. But I get back to your question about who should be responsible. It has got to be a joint responsibility, because once the aircraft is putting the spray on, if he sees that something is going wrong, he has got to be responsible enough to stop spraying.

The same goes for the agronomist. He has to select a product that is suitable for an environmentally sensitive area. He cannot go in with a hard product where a soft product would do for the sensitive situation.

The Hon. I. COHEN: You mentioned the inversion layer, which obviously is a very deceptive situation for those who have to deal with it. Do you see that problem of inversion layers occurring outside this immediate area, or is it just the landform here, in

terms of your overall pastures protection interest? Is it something that is occurring in other areas?

Mr SLACK-SMITH: I think inversion layers occur everywhere. I am right out of my depth here when it comes to talking weather, but I have seen one happen at home, where the neighbour's chemical sat in the air for maybe two hours; it wasn't going anywhere, and it wasn't doing him any good or anyone else any good. It is a situation where, unless you get the circumstances right to put the product on, everyone is wasting their money. That has happened in the past, and I daresay it will happen in the future.

The Hon. I. COHEN: From your perspective, given your area of interest, would the focus on ground application be a significant improvement in the situation that you have been witnessing in the last few years?

Mr SLACK-SMITH: I am sure it would be, and I think the National Registration Authority guidelines point that out pretty well to. It is a situation where you have different buffer zones and the like, with different methods of applying chemicals. They seem to suggest 1.2 kilometres or 1.5 kilometres, or whatever it is, for ultra low volume down to 200 metres for ground rig endosulfan application. The same principle works all the way through with all chemicals. There is a lot more spraying by ground rigs at the moment. I was speaking to a bank manager yesterday who said that he had just financed so many dollars worth of ground spray rig so that they will get a better application.

CHAIRMAN: You mentioned the E list, farmers whose farms were put on the E list purely because they happened to be beside a nearby cotton farmer, not because they are contaminated or anything like that. You mentioned that they suffered a discount. What sort of a discount?

Mr SLACK-SMITH: It was notable.

CHAIRMAN: Was it 20 cents or something?

Mr SLACK-SMITH: Up to that amount, yes.

CHAIRMAN: Is that 20 cents live weight?

Mr SLACK-SMITH: Yes. But, basically, in Narrabri, one major cow buyer just wouldn't touch them. And, once they start that, everyone else gets them cheap.

CHAIRMAN: I thank you very much for your time in coming along today.

Mr SLACK-SMITH: Thank you, Mr Chairman.

CHAIRMAN: The questions on notice will be in the transcript.

Mr SLACK-SMITH: That is good, because the people who will answer them are not here.

CHAIRMAN: I thank you very much for your evidence and your submission. The questions on notice are:

1. Can you outline any areas of concern regarding pesticide management that are particularly related to Rural Lands Protection Boards?
2. What measures have the Narrabri Rural Lands Protection Board or other boards instituted to minimise the impact of pesticides on livestock?
3. What legislative or policy mechanisms would you like to see in place to ensure the effective aerial application of flying insects such as locusts?

(The witnesses withdrew)

(The Committee adjourned)

112 Chapman Avenue
Beecroft NSW 2119
Phone (& Fax): 9484-4787

Tuesday, 3 August 1999

The Director
State Development Committee
Parliament House
Sydney

Reporting Fees – W. Norris

To:-

Monday, 26 July 1999

Attend at Dubbo to report inquiry into the use and management
of pesticides in New South Wales\$ 300.00

Render transcript of proceedings (pp 1 – 114):
114 pages @ \$10/page.....\$1,140.00

Tuesday, 27 July 1999

Attend at Gunnedah to report inquiry into the use and management
of pesticides in New South Wales\$ 300.00

Render transcript of proceedings (pp 1 – 75):
75 pages @ \$10/page.....\$ 750.00

Supply of disk of transcript of proceedings.....\$ 40.00

Total fees.....\$ 2,530.00

Reporter

REPORT OF PROCEEDINGS BEFORE

STANDING COMMITTEE ON STATE DEVELOPMENT

INQUIRY INTO THE USE AND MANAGEMENT

OF PESTICIDES IN NEW SOUTH WALES

At Lismore on Wednesday 4 August 1999

The Committee met at 9.30 a.m.

PRESENT

The Hon. A. B. Kelly (Chairman)

The Hon. I. Cohen
The Hon. J. R. Johnson

CHAIRMAN: Under Standing Order 252 of the Legislative Council any evidence given before the Committee and any documents presented to the Committee which have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any Member of such Committee or by any other person. Copies of the guidelines are available on the side table.

Motion by the Hon J. R. Johnson agreed to:

That, in accordance with the resolution of the Legislative Council of 11 October 1994, the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held this day.

RICHARD GEORGE STAPLES Councillor, Byron Shire Council, affirmed and examined:

CHAIRMAN: Cr Staples, what is your occupation?

Cr STAPLES: Shire Councillor, landowner and farmer.

CHAIRMAN: In what capacity are you appearing before the Committee?

Cr STAPLES: As shire councillor.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Cr STAPLES: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Cr STAPLES: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that Parliament may override the Committee's decision to keep matters confidential and make the evidence public. Would you like to make a brief statement before members ask you questions?

Cr STAPLES: Yes. I will start by setting the scene. I am a councillor on Byron Shire Council. Byron shire has probably got a lot in common with its neighbouring shires in that it is a very attractive area for settlement. We have had a lot of movement in the last 20 years from urban areas, particularly from Sydney but other cities and other urban areas of Australia, of people moving to the North Coast. We have a burgeoning population.

In particular, we have people who want to move here for ~~life~~ reasons: people who tend to be asset rich but income poor and who enjoy perhaps the finer things of life,

who have been in the rat race and want to move on and perhaps explore other ways of spending their lives in what they see as more productive ways. This is great in a lot of ways, but it also creates conflicts.

A lot of people want to live in rural areas, and there are all types of models and patterns of people doing that – through alternative living arrangements, multiple occupancies, community titles – and also through regular rural living. Of course, I am focussing on the rural living here because of the conflicts that can occur.

If we look at the regional environment plan for the North Coast, it talks about protecting agricultural resources from incompatible land uses nearby. Just about all of the conflicts that I have become aware of between agriculture and human settlement in this area have related to the use of chemicals and pesticides. There has been a little to do with noise, dust, traffic and a few other things, and people are concerned about water pollution from intensive animal industries, but the huge swathe of concerns that I get constantly from constituents relate to chemical use and about the effect of those chemicals on human health and on the environment.

There have been attempts by the Environment Protection Authority to address this. There was a rather futile attempt at mediation to do with banana spraying by air at Middle Pocket last year, which I was part of. Coman, another councillor from Byron Shire Council, was part of that mediation. I don't know how much the Environment Protection Authority spent – it was probably well over \$50,000 – but it was futile. Basically, it was an attempt to put out a bushfire. As far as I could see, it was not aimed at getting towards any reform or any real solutions to the problem. In fact, the agreement was not even signed off in the end. So it was a bit of a joke, really.

Kathy Vail, who is also here today, will also mention the mediation. She was part of it, and has been affected by the issue. It is ironic that you have a situation where you have a banana industry on the North Coast that has just about folded, and even the Department of Agriculture does not want people to grow bananas in some of these areas because of bunchy-top, and yet there are farmers who are hanging on to an uneconomic industry and who are spraying incredibly small areas of bananas by air.

I mean, aerial spraying on cotton, where you have 600 acres of ground, makes some sense. But, we have got a small valley, with katabatic winds blowing down slopes, with kids getting on buses next to people who are spraying early in the morning – because the aerial spraying has to happen early in the morning, apparently. Of course, there are other alternatives to these kinds of things.

I don't dispute the farmer's right to make decisions, but there is a principle involved. The principle, which does not seem to be coming through, is that people have a right to clean air and clean water on their own properties. The legislation, which still seems to be hanging on in this State, seems to give farmers the right to pollute their neighbours. I do not agree with that, and I don't think our council is very happy about that either.

Our council passed a resolution a few weeks ago expressing concern at the problems associated with rural residential and agriculture and conflicts that arise from that situation. Basically, in my books, it comes down to the generational change. Some of these farmers involved admittedly are getting on in years. You can't expect people to change their spots overnight. There are a lot of solutions to pesticide use in what might be

called traditional agriculture – and I don't see anything traditional about pesticides use, because it has only been around for a couple of generations, and we fed ourselves for a millennia before that without chemicals, and yet we hear a lot of people saying, "There are no alternatives."

I am also council's delegate on the Far North Coast County Council, which is a regional weed-spraying authority, if you like. I call it that consciously. There is an incredible bias towards chemical use within the county council. Basically, I feel like a complete stooge being on that organisation. The county council is a creature of the Department of Agriculture and we have virtually no say in determining policy. The Department of Agriculture rules the roost. Any substantive decisions are made by New South Wales Agriculture. We get agendas on trying to decide whether the General Manager should get a Prado or something else when he upgrades. We call it chook feed. We get fed a lot of chook feed.

I will go to some of the issues involving the county council. There was a push last year – and it was unclear where it was coming from – basically to outlaw camphor laurel. Camphor laurel is one of the main elements of the landscape on the North Coast. It is a plant introduced from China about 100 years ago. It is very common in Byron shire, and it is quite common throughout the Northern Rivers.

There was a big push to get it declared as a noxious weed. I was one of those who successfully fought strongly against that campaign for Byron shire. Byron shire has been exempted from that attempted listing. I understand the county council and the Noxious Weeds Advisory Council are still trying to get camphor laurel listed with the Department of Agriculture, unsuccessfully, because of concerns of the Department of Land and Water Conservation – concerns about, particularly, degradation of stream banks.

The reason I mention this is that I don't see a great push within the farming community to register camphor laurel. It seems that there is an unseen hand there working sometimes. There are plenty of alternatives to list camphor laurel. The smart way to deal with any so-called weed from a human perspective – and I will come back to the term "weed" later on if I get a chance – is to find a use for it.

Whether a plant is a weed or not depends on its circumstances, not upon its species. A sunflower can be a dreadful weed in a wheat crop because it mucks up the front of the header. I am coming from a very human-based perspective here – and that, of course, is what people do. Camphor laurel may be a weed, but maybe it is just a tree. What is it really doing? It is displacing a few percent of our area. What about kikuyu? That is covering an awfully large area. You could say kikuyu is a useful grazing plant for cattle, but cattle are virtually uneconomic in this area.

Camphor laurel is a very valuable tree for turning, for furniture, and smart people are exporting it. It is being exported from this area to China for coffins. We import camphor oil. We are pretty clever in this country sometimes! That is an unresolved issue. It is a question of whether or not the Far North Coast County Council gets itself a new bogeyman. The bogeyman they have at the moment is groundsel bush, which again is held up being the threat to life and limb and agriculture on the North Coast.

Groundsel bush, in my books, is not a great problem. Basically, it is a plant that indicates that the land needs repair. It grows on steep, rocky ground generally, in areas that

are not really suitable for pasture. Groundsel can be controlled by slashing. If you can't slash, perhaps that area should be returned to some other form of utilisation, for instance, reforestation.

There are a lot of interlocked issues here. A lot of it has to do with catchment maintenance and catchment protection and water protection. I come to water weeds. Again, in the county council, there is a tremendous fear of water weeds: how they clog waterways and do dreadful things. Water weeds – and there are a whole range of them – are merely a symptom of something deeper. If you keep spraying water weeds, they die, they rot, they eutrophicate the water, and more water weeds grow. It is a great little money earner for whoever is doing it and for whoever is supply the chemicals no doubt, but it is a futile exercise, and we are not really looking at what the environmental effects are.

The fate of a lot of the break-down products are not checked out. I will go on to the complete lack of any systematic epidemiological work within this State, and perhaps it is not within the bailiwick of this inquiry, but the Department of Health I believe has a great responsibility to do some systematic epidemiological studies of hot-spots of perceived problems with children and patterns of diseases.

There are very simple ways to do this. For instance, milk teeth in kids. Children shed their teeth at the age of about eight or ten, and that offers a very useful spectrum of exposure during their early years of life by analysis of those teeth. This program could be done through the schools. If kids could be encouraged to donate their teeth, via the tooth fairy or whatever, we could very inexpensively get a pattern of what is happening in this State. That is not happening at the moment. We have a lot of claims being made, and counter-claims, but we get very little empirical evidence.

I would like to make a couple of more points before I finish my opening remarks. The backyard use of chemicals is, I think, an area of incredible abuse. I would like to know, for every litre of chemical that is sold in containers in hardware stores and used in backyards, how much is effectively used. I would venture to suggest it is just a few percent of what gets sold. Most of it ends up in garbage bins or in inappropriate application containers, or on people, or accidentally getting spilt, or missing the target.

There have been some initiatives within our council to reduce the quantity of chemicals used in roadside spraying, for instance. To my mind, there is no need for the use of sprays on the shoulders of roads. In fact, I believe it is quite counter-productive in the long run. It creates a chemical treadmill. It creates generally a scorched earth policy along the shoulders of roads, which leads to increased road maintenance costs. The alternative of slashing, et cetera, promotes prostrate growing species, particularly very tough grasses that are ideal for holding shoulders together. It has got a lot to do with design of the roads when they are first put in. So we are still working on that.

There are differences of opinion within our council about this issue. I am probably one of the most strident members of the council in this regard. However, there is a consensus that there is a problem and that it is not going to go away. In the long run, changing land use and land ownership will resolve the issue because the trend in this area is for a very high level of awareness of human health and quality of life issues, and not necessarily accepting the conventional wisdom of the Department of Agriculture and its sponsors.

CHAIRMAN: You have raised a few issues there. You spoke about the council's slashing along roads versus poisoning the edges, but you did not say what Byron Shire Council decided to do.

Cr STAPLES: Council resolved to cease all spraying of roadsides about two or three months ago. There subsequently was a motion to water that down a little bit, to reduce spray use to 25 per cent, I believe, of current usage. I see that as a typical politician's compromise. It is basically going to cost more to monitor the new system than it would be to cut out that type of spraying completely. Lots of people do not spray, and lots of agencies do not spray. For instance, in New Zealand there are a lot of local government authorities that are instituting no-spray programs, and I believe there are similar bodies in Australia too. I think it is quite easy to go down that path. It is a very simple win for the environment to do that, and it also will create more employment. Nearly all of these initiatives create jobs.

CHAIRMAN: The reason I asked is that I was formerly a general manager of a council in western New South Wales, and only one of all the surrounding councils actually sprayed. Everybody else, including the council of which I was general manager, had always slashed.

Cr STAPLES: Yes.

CHAIRMAN: Are you proposing to put camphor laurel on a category 1, 2 or 3 in the noxious weeds list?

Cr STAPLES: Yes.

CHAIRMAN: Is it not in any category in that list?

Cr STAPLES: The proposal was W3.

CHAIRMAN: Which is the lowest of the three?

Cr STAPLES: W4 is environmental weeds, which is virtually just putting a cross against them. It was W3, but the prescription for the south of the county area, down towards Grafton, was to continuously suppress and destroy all trees under three metres and gradually destroy trees over three metres. I believe that is based on a misinterpretation of the camphor laurel seed ecology. I should mention that I have got a degree in agriculture and I have studied genetics and a few other things.

I believe that the limiting factor for camphor spread is not seed supply but germination sites. I say that because, in the last 40 to 50 years, many large, mature camphors have grown and may have produced tens of thousands of seeds a year. As a general philosophy for a non-chemical weed control approach, I say, "Don't bother about the seeds. There are going to be seed banks out there for all kinds of weeds for a long time. Deal with the maintenance of the land. I have got lots of camphors coming up on my place but they are no problem, provided you find their Achilles heel, like with any so-called weed, treat them in a timely way and get them at their most vulnerable point.

A lot of the big camphors are actually performing a very useful function in terms of amenity screening, and in the long run, provided they are managed – and that may

require a certain amount of silviculture – and they can become a very valuable product. A large camphor log can be worth well over a thousand dollars.

CHAIRMAN: Are there any other weeds county councils in the area that have declared them noxious weeds?

Cr STAPLES: No. Camphor is more or less restricted to the Northern Rivers and down as far as about Coffs Harbour.

CHAIRMAN: I would be interested to know what your weeds county council is doing to restrict weeds other than by the use of chemicals.

Cr STAPLES: Nothing.

CHAIRMAN: Interestingly, you mentioned the residential use of chemicals. What is Byron Shire Council doing to see that local government is minimising the risk of impact on persons and properties from the use of pesticides, but particularly in relation to residential use? For example, there are some proposals that if somebody wants to spray their house for spiders, white ants or whatever, notices should be put out because neighbours could be susceptible to chemicals.

Cr STAPLES: We have not taken any specific initiatives in that area yet. I would certainly – perhaps in the next term, if I am back there after September – I will be looking at particularly termiticides, and the use of even chlorpyrifos – and the various health effects of that are fairly disturbing at times. Given that there are so many good alternatives available these days for termite control, I would suggest that that needs to be in DCPs and so forth.

CHAIRMAN: That leads me to my next question. What do you think the role of State government agencies like the Department of Urban Affairs and Planning should be in minimising the risks from pesticides? I am not sure whether you know the situation in Dubbo, which I think is the only council in the State that has made it a condition that somebody who wants to set up a cotton farm has got to put in a development application. Obviously, that is causing a big fuss there.

Cr STAPLES: So it is regarded as intensive industry.

CHAIRMAN: And because of the pesticides use associated with it. There are no cotton farms in Dubbo yet, but the council now has an application before it from a farmer who wishes to grow cotton. Obviously, has your council considered that with your DCP or your local environmental plan?

Cr STAPLES: Not specifically. But that is certainly possible. But, in general terms, I would like to say that, as with the water reform package, where there has been a strong emphasis on throwing the decision back to regional areas and letting the regional areas set their own standards, I think a similar thing should happen in this area with pesticide use. There are a lot of benefits in giving more control to local government to set their own standards, given a minimum bar set by the State government if you like. But then, if local areas, through their constituents, want to have a higher standard they should be allowed to do that.

CHAIRMAN: Are there any proposed legislative amendments outlined in the Environment Protection Authority discussion paper to change the Pesticides Act that would cause problems to the council or that would be unacceptable to the council?

Cr STAPLES: I must admit that I am not that familiar with the matter to be able to comment in a comprehensive way.

CHAIRMAN: But there is no problem that you are aware of?

Cr STAPLES: Not particularly, no.

The Hon. J. R. JOHNSON: Cr Staples, you made comment of some restrictions being placed on or encouragement given to landowners not to plant bananas. What evidence do you have for that?

Cr STAPLES: The Department of Agriculture periodically has published brochures on bunchy-top and ----

The Hon. J. R. JOHNSON: I will ask about bunchy-top in a minute.

Cr STAPLES: Could you repeat the question?

The Hon. J. R. JOHNSON: What evidence do you have that somebody, the department or its officers, are placing restrictions on or encourage landowners or leaseholders not to plant bananas?

Cr STAPLES: All I know in relation to this area is related to the question of bunchy-top. That is the main concern.

The Hon. J. R. JOHNSON: But you said that they were encouraging farmers not to plant bananas. What evidence do you have for that?

Cr STAPLES: I have been told, and there has been lots of media on ----

The Hon. J. R. JOHNSON: I have been told a story about Santa Claus too, and Cinderella, but what evidence do you have?

Cr STAPLES: None.

The Hon. J. R. JOHNSON: How prevalent is bunchy-top in the Middle Pocket area?

Cr STAPLES: There is very little of bunchy-top because there are not many bananas grown there any more. There was a terrific banana industry there 20, 30 or 40 years ago in the Main Arm Pocket, because the metamorphic soils in that area were seen to be suitable for the growing of bananas. But they are nearly all gone now. The area is turning back into rainforest. It is a generational shift, and there are only two or three significant growers still left there. It is seen as not being a suitable area for growing bananas, I guess, because people have moved out and moved on.

The Hon. J. R. JOHNSON: Wasn't the bunchy-top controlled? Did bunchy-top drive them out?

Cr STAPLES: I don't know whether that was the main reason. I am sure there were a lot of other factors involved. But it is an ongoing problem.

The Hon. J. R. JOHNSON: Bunchy-top is an ongoing problem now?

Cr STAPLES: Yes. I have got brochures from the Department of Agriculture saying that. They are saying that it should be reported, et cetera. Periodically, over the last few years, they have been putting out brochures. I could, perhaps, dig out one of those brochures.

The Hon. J. R. JOHNSON: Further up the Tweed Valley, towards the Numinbah Valley, is that still under bananas?

Cr STAPLES: I am not so familiar with the Tweed as I am with Byron shire, but I understand that there are still some bananas still there. Perhaps Kathy Vail can help you with that.

The Hon. I. COHEN: Cr Staples, could you enlarge on the issue that you have mentioned regarding the Environment Protection Authority's waterways reforms and whether those reforms are having any impact on the pollution of waterways in your area?

Cr STAPLES: How do you measure that? It is going to take time.

The Hon. I. COHEN: Has it been successful? Do you think it is going in the right direction?

Cr STAPLES: I am very optimistic, yes, that that process can be a useful one. The Water Management Committee, which is operating in this area, seems to be performing pretty well. I am an alternative delegate on that and, although I have not been to all the meetings, it seems to be a very inclusive process and a comparatively bottom-up process compared to most of them.

The challenge is going to be to put in place some form of monitoring regime which will give us some sort of data, such that we can say, "In 1990, this was happening; in the year 2005 we have moved from A to B." Of course, the experts would be able to help us get those sorts of regimes in place, but a lot of it again will fall back on local government, through its State of the Environment reporting process, to look at the most appropriate parameters. The rivers are basically the kidneys of the land, the canaries in the coalmines if you like, and we have to focus on what drains off the land as being a symptom of what is happening on the land. Riparian repair is very important in this regard. There is an awful lot that we can do at a local level.

The Hon. I. COHEN: You mentioned the proximity of spraying activities to other activities that clash. Has council formulated minimum buffer zones from residences, school bus routes, waterways and areas of environmental sensitivity? Does council have any position on that, or any specifics that can be used as a guide? Do you have any program that ultimately may be brought into effect on that?

Cr STAPLES: Not really, no. It is very hard to get evidence that can be used to back up draft instruments of that type. For instance, the only study that I have seen on pollution of water supplies from spray drift was in the Namoi Valley, and it was inconclusive, even over quite a distance. I guess we are going to have to pluck a figure in a way, based upon size of blocks. It is the art of the possible, to a certain extent. The overriding principle, to my mind, should be that if you are going to pollute your property you should provide the buffer and not expect your neighbour to provide it.

CHAIRMAN: Buffers are to some degree inappropriate, because, for example, if you pick 100 metres as a buffer, it could be an excuse for somebody to say, "Well, I didn't spray within a kilometre of a river." It might have more to do with the day on which they sprayed and the chemical that they used, rather than the buffer distance. In that case, it might be 20 metres from the river. We heard evidence in Gunnedah that endosulfan had travelled 11 kilometres. So how big have you got to make the buffer? Does it have to be 100 kilometres? It seems to be a matter of the appropriateness of the use of a particular chemical on a particular day, rather than the width of the buffer.

The Hon. I. COHEN: Does the council have officers to deal with this situation? Is it something that can be effectively monitored in terms of complaints made? Are you familiar with the Pesticides Act, and can you see any changes in the Act that would allow the council to be more effective in dealing with disputes over chemical trespass, for example?

Cr STAPLES: I am not a legal technician, and I would not be able to point to specific clauses and so forth. But, in general terms, our council has taken a lot of steps in the last four years to gear itself up to deal with these issues a lot more. We opened our own laboratory last year, and that is getting NATA registration at the moment. We have in the last year or so employed an environmental officer specifically to deal with these kinds of issues. We have had an environmental officer all the time, but we have an additional officer now. So I think we are getting to the stage where we are well equipped with the technical expertise that we need; or, if we have not got it, we can go and get it.

The Hon. I. COHEN: Has council discussed any marketing potentials that would come about with a pesticide-free zone, for example, in the Byron shire? Is there any win-win for the farming community of export products and tourist potential?

Cr STAPLES: It is just enormous.

The Hon. I. COHEN: Could you give a couple of examples.

Cr STAPLES: We are dealing with enormous public good versus a few individuals in this area. At a national level we talk about clean-green industries. There is an awful lot of rhetoric, but I doubt whether it is matched in reality. It may be, compared with other parts of the third world, but I do not believe this part of the third world is clean and green on a national level.

Nevertheless, at the local level, we have the potential to get there quite quickly and market this area – as we are in other aspects, such as tourism, alternative forms of settlement. In the same way, this can be a leader for sustainable agriculture, which produces a lot more rural living opportunities for people to live on the land and work the land.

The old way of farming in this area is inimical to life. People don't want to live near their crops because it is too dangerous to live near their crops. If we can let this process evolve, that would be an advantage. It is not that the new settlers need re-educating. We have a very aware community here. It is the governments that need educating. If we let this process keep going on, we can have a lot more people living in rural areas.

I say quite happily that I have got no problems with people moving into rural areas provided they take care of the environment and enhance it, thereby enhancing the local economy at the same time. All those things can happen. We have an impediment in the way of that at the moment in the form of chemicals and pollution, perceived or real health problems, and the effect that those matters have on our image. In terms of marketing particularly, it is very bad.

The Hon. I. COHEN: In terms of chemical trespass, do you have sufficient staffing to be able to monitor that? How effective is council in pulling up people who are actually responsible for chemical trespass? Would something like a dye in the chemical, for example, be of assistance to council officers in assessing just where that chemical has spread? And do you have any other simple ideas that may be of assistance to council in policing matters to do with chemical trespass?

Cr STAPLES: Yes. I know one of your Committee members, Dr Brian Pezzutti, raised this many years ago, and I supported it at the time. I think it is a good idea. It is perhaps optimistic in supporting it. That is one of many measures that may help. To answer your question: council, like the Environment Protection Authority, has a lot of difficulty in pinning down the cause of an event. For instance, about two kilometres of Mullumbimby Creek, which just happens to include Mullumbimby's water supply, got practically sterilised about two years ago by chlorpyrifos. That was a massive chemical event, but there was no prosecution. It is a question of getting strong enough evidence, and so forth. But I really do not see the courts as being the primary focus for generating reform here.

CHAIRMAN: Thank you very much for coming along and giving evidence to the Committee. We have some questions that we had intended to ask you to take on notice. In a couple of weeks we will send you a copy of the transcript to check before it is released to anyone else. When you receive that, it will include this list of questions. I will give you a copy of those now, so that council may add something, if you consider that, having read the transcript, you believe you have missed something. Technically, would you take these questions on notice. They are:

- 1. Can Byron Shire Council outline the types of activities that council or its contractors conduct that involve the use of pesticides, including fungicides and herbicides?*
- 2. How important is town planning to minimise incidences of local conflict between incompatible land uses?*
- 3. In the council's opinion, what is the minimum buffer zone that residences, school bus routes, waterways or area of environmental significance should be away from pesticide applications to avoid the impacts of pesticide drift?*

(The witness withdrew)

KATHERINE MARGARET VAIL Spokesperson, Poison Watch, of Middle Pocket, Billinudgel, affirmed and examined:

CHAIRMAN: What is your occupation?

Mrs VAIL: I am a trained nurse.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mrs VAIL: I am appearing as spokesperson for Poison Watch.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mrs VAIL: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mrs VAIL: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that Parliament always reserves the right to override the Committee's decision and make anything you say public. Would you like to make an opening statement?

Mrs VAIL: I have a written submission.

CHAIRMAN: Would you like to table that?

Mrs VAIL: Would you like to also read it out, or also to read it?

CHAIRMAN: If you table that, it will be exactly the same. It will end up ^{in Hansard} word for word. So, if you then read it out, it will end up in the record twice.

Mrs VAIL: But the submission also has recommendations at the end.

CHAIRMAN: Could you briefly talk to those, rather than read the whole lot word for word. Would you like to formally table that?

Mrs VAIL: Yes, I will table it.

Document tabled.

CHAIRMAN: Would you go ahead.

Mrs VAIL: I want to bring up a couple of things and quickly go through what Poison Watch is particularly after. Poison Watch as a group is particularly after 24 hours pre-notification of aerial spraying on the North Coast. We are also asking for no fly times during

school bus hours. We ask for buffer zones of 3.6 kilometres along all public roads, around all schools and public playing fields, according to the documented evidence of the Environment Protection Authority with the presence of pesticides in rainwater tanks in the Gunnedah district that are 3.6 kilometres off target.

We also want buffer zones of .3 kilometres around all aerially sprayed agricultural crops; buffer zones of 3.6 kilometres around all water courses; local government to include in the LEP the requirement for a development application for all agricultural activities that involve pesticide use; the revocation of pesticide licences for irresponsible use; monitoring of all water courses; and the investigation of alternatives to chemical use. If I could return to the monitoring of all water courses. We thought that maybe the Department of Land and Water Conservation and perhaps the water catchment committees under the guidance of the local councils could be involved in water monitoring.

As to alternatives to chemical use: I have a friend down the road in Middle Pocket who happens to be a banana farmer. His name is Barry Lang. He has given me permission to submit today this letter to the inquiry. It is a letter that he has written on the ineffectiveness of aerially applied chemicals on his banana crop.

CHAIRMAN: Would you like to table that on his behalf?

Mrs VAIL: Yes.

Document tabled.

Mrs VAIL: The other thing that is most important on this issue, particularly in the Middle Pocket area, is that since 1995, when the Carr Government came to office previously, we were promised many things, but since then there have been 17 unannounced aerial spraying incidents outside school bus hours in the Middle Pocket/ Billinudgel/Yelgun area. Despite mediation, we still do not know when this pilot is coming in.

There have been 28 unannounced aerial spraying incidents during school bus hours that have been reported to the Environment Protection Authority and have been documented by the Environment Protection Authority. Despite 28 reported incidents, there have been no prosecutions at all. It is a case of business as usual. The children are still waiting on public roads for their school buses in the morning, and the pilot is still coming in despite pledges that he made to Ian Armstrong in 1991 that he would not spray while children were likely to be waiting at bus stops. He renewed that pledge with Ian Causley. Pam Allan, as Minister for the Environment, sent him a letter reminding him of his duty of care. The letter was sent to all aerial operators that they had a duty of care.

Despite all of this, the pilot is still coming in and spraying during school bus hours. So, until we get the amendments in during the next parliamentary session, this will continue to happen. Poison Watch, as a group, will not sit back for another season and watch our children sprayed as they go to school.

The Hon. I. COHEN: Mrs Vail, Cr Staples mentioned the difficulties with mediation with the Environment Protection Authority. Could you enlarge on that? I understand that you were involved with that mediation.

Mrs VAIL: I was involved with mediation. If we start from the very beginning: The mediation letter that was handed to me before mediation was an agreement to be signed. I rang my solicitor right there and then, and he advised me not to sign the mediation agreement because it already had a predetermined outcome: that is, the outcome was that aerial spraying would continue, when we had not yet even sat down at the table to discuss anything.

The mediation was confined to Middle Pocket alone. ~~There~~ were many other people there from many valleys, but they were not allowed to attend the mediation process. The agenda for the process was from 9 o'clock to 5 o'clock for two days. I had to leave at 6 o'clock on the first day – because I have a very bad back, and I could not sit for any longer. Many of the community did not have any after-care for their children because the agenda noted that the proceedings were to finish at 5 o'clock on the first day, and they did not. Many people had to leave.

But the mediation agreement was signed, under duress, at 11 o'clock at night, with most of the community absent. We came back the next morning for our second day of mediation, according to the agenda, only to find that we were presented with a mediation agreement that had been drawn up and signed in our absence. We were there for the second day of proceedings, and nobody turned up, except for us and the committees there.

The Hon. I. COHEN: Having been to Middle Pocket and seen the size of the banana plots there, do you regard that there is effectiveness in the farmers continuing to undertake aerial spraying on those plots?

Mrs VAIL: I cannot see any effectiveness at all. The gentleman who has a patch of bananas has been in question for many years, like many other banana plantations, happens to be next to the bus stop. The children are often caught unawares by the aeroplane. I have an opinion as to the only reason that he does it. He only has a hectare, a very small patch of bananas – is that he has been asked by the Banana Growers Federation to hand spray, and he has been asked by the BIC, to use a backpack on it, and he won't do that.

I see no other reason than that he is using it as a tax dodge, for tax purposes, like many other banana farmers in Middle Pocket. They don't rely on their banana farms as a total source of income, because they are not getting very much income from bananas. So it is all a back-up really.

The Hon. I. COHEN: Can you see improvements that chemical manufacturers could undertake, or that distributors and applicators could undertake, to improve the management of pesticides?

Mrs VAIL: I think the farmers very much need to be educated on what they are using, and how to adhere to the label instructions. Many labels are not adhered to. In fact, the banana farmer that I just spoke about also sprays his banana crop in Mayvartis, which manufactures Tilt, a fungicide that is used on the bananas, recommends against any spraying after April. I don't know whether he is breaching regulations, or whether that is on the label of the can. If it is on the label of the can, he is breaching his legal requirements. Nonetheless, he sprays after the time recommended.

The Hon. I. COHEN: You mentioned a number of changes to the Pesticides Act that you would like to see occur. I understand that one section of the Act that makes it

difficult for the public to lodge objections and claims in respect of applicators involves an offence that the applicator wilfully or knowingly committed a breach.

Mrs VAIL: Wilful intent.

CHAIRMAN: It is clause 37.

Mrs VAIL: They are terrible words. They don't mean anything.

The Hon. I. COHEN: Do you think that provision could be tightened up?

Mrs VAIL: Absolutely.

The Hon. I. COHEN: What would you like to see?

Mrs VAIL: I don't think wilful intent is the correct wording to be using there at all. How do you prove wilful anything? I don't even know whether you would use the word "intent". Perhaps you can. I know the particular pilot in question has been asked so many times to please let people know when he is coming in, so that we can take the necessary precautions, that is, making sure our children are not in the firing line and that we are not in the firing line.

Of course, the biggest issue there is spraying on public roads. Public roads are not covered by the pesticide legislation. They are exempt. They have to be brought under the Act by amendments so that they can be protected under the legislation.

The Hon. I. COHEN: We mentioned before about dyes in chemicals. Do you have any other defensive tactics that might be effective in terms of policing these operations? A dye seems like a simple idea.

Mrs VAIL: For policing, I think vegetable dyes are probably the cheapest way of finding out where the spray is going. I know Dr Brian Pezzutti contacted me in 1991, pushing for dyes in sprays. I commend him on his efforts. If it is alright, I would like to table this document also. It is a newspaper cutting.

Document tabled.

The Hon. I. COHEN: You say that the farmers in the area have been contacted by the various authorities regarding use of backpack ground sprays. Has any significant reason been given, especially as the areas under cultivation are so small, as to why ground spraying cannot be used? Do you feel that ground spraying could solve the problem?

Mrs VAIL: I think ground spraying could most definitely solve the problem. In fact, I would go as far as to say that there should be a cut-off point; that is, there should be a minimum allotment size, of whatever crop it is, before it is acceptable to aerial spray. I don't think spraying of one hectare when there are 38,000 people in Byron shire today. That is one plot, but it is one of many plots. You cannot do that any more; it is affecting too many people.

The Hon. I. COHEN: Has the farmer given any reason why ground spraying would not be effective?

Mrs VAIL: No. He is a 70-year-old man and he is very set in his ways and he is not about to alter.

CHAIRMAN: Is the plot on the side of a hill?

Mrs VAIL: It is actually next to the road, on very undulating land. Topographically, it is not steep at all. It is very accessible and very close to the road.

The Hon. I. COHEN: I would have to say, having looked at the site, that it is a bit of an aerial circus to get the aeroplane over there safely, because the power lines make it some feat of flying. It makes one wonder.

Mrs VAIL: Yes.

The Hon. J. R. JOHNSON: Could you tell us where the pilot's base is?

Mrs VAIL: As far as I know, it is in Murwillumbah. It Tapps Aviation in Murwillumbah. I would also like to add here that I have nothing personal against the pilot. The pilot is not my problem. The lack of legislation is my problem. The pilot is not going to come into line until the legislation is amended.

The Hon. J. R. JOHNSON: Is your organisation Poison Watch an incorporated body?

Mrs VAIL: No. It is actually a group of community people.

The Hon. J. R. JOHNSON: How many members do you have?

Mrs VAIL: There are about five members. It was formed in 1991.

The Hon. J. R. JOHNSON: Are there many other banana farmers in Middle Pocket?

Mrs VAIL: Apart from the gentleman that I just spoke of, there are two other banana farms in Middle Pocket. One would probably have about 95 per cent of the bananas in Middle Pocket. The other plantation is on the south side of the hill. This is the plantation that belongs to Barry Lang, who has done testing of Tilt on his own property. He is also making his property available to the Environment Protection Authority or whoever would like to conduct any alternative trial testing on his property. He is making it freely available for alternatives to be tested.

The Hon. J. R. JOHNSON: Are there bananas at Yelgun, Billinudgel, Byron Bay and Stokers Siding?

Mrs VAIL: Yes.

The Hon. J. R. JOHNSON: Is there aerial spraying of those bananas?

Mrs VAIL: Yes.

The Hon. J. R. JOHNSON: Do you have complaints from that area to your body?

Mrs VAIL: Yes.

The Hon. J. R. JOHNSON: From all of those areas?

Mrs VAIL: Not the Stokers Siding area. I am not very familiar with Stokers Siding. I mean, I know Stokers Siding, but I am not very familiar with the topography there and where the bananas are there. I do know that the other place that they have a lot of trouble with is up on the Gold Coast, at Bilambil. A lot of them complain.

The Hon. J. R. JOHNSON: Bilambil is in New South Wales.

Mrs VAIL: Yes.

The Hon. J. R. JOHNSON: I get concerned at Committee hearings when people make statements, on oath or affirmation, that go into the public record without any evidence to support those statements. You made a statement about a gentleman whose banana property is being sprayed by aerial spraying. You said that it is probably a tax dodge. Do you have any evidence of that?

Mrs VAIL: No, I don't.

The Hon. J. R. JOHNSON: I do not think a lot of causes are done any good when these statements are made.

Mrs VAIL: I could say that is my own personal opinion. I don't have evidence.

The Hon. J. R. JOHNSON: Thank you.

CHAIRMAN: I thank you very much for your time. You may have answered all the questions that we had intended to ask you to take on notice. I will give you a copy of those. You might, in particular, answer the question numbered two. That question is:

1. *Can you expand upon the comments made in your submission as to the advantages of introducing a National Registrar of Analytical Method?*

(The witness withdrew)

STANLEY ARTHUR SCANLON Spokesperson, Byron Environment and Conservation Organisation, Conservation of North Ocean Shores, and Byron Environment Centre, P. O. Box 828, Billinudgel, affirmed and examined:

CHAIRMAN: Mr Scanlon, what is your occupation?

Mr SCANLON: Social welfare worker.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr SCANLON: On behalf of the Byron Environment and Conservation Organisation, the Conservation of North Ocean Shores, and the Byron Environment Centre.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr SCANLON: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I warn you that Parliament has the right to overturn the Committee's decision and make your evidence public. I should also add that has not happened, but I feel it is my duty to warn you of that. You have given the Committee some confidential papers that are attached to your submission. I am not sure how the Committee is to handle those confidential papers. I think the Hon. John Johnson might want to ask you some questions in private.

The Hon. J. R. JOHNSON: I am concerned that we have before us a document that is marked "Private and Confidential". Whilst, as the Chairman has said, the Parliament has never superimposed its overriding power on the Committee, it does have the authority to publish everything. My concern is: Do you wish to leave this document in the Committee's hands, or do you wish to withdraw it?

Mr SCANLON: May I peruse that document to see its contents?

The Hon. J. R. JOHNSON: It is your document. You sent it to us, with the appendages.

CHAIRMAN: Mr Scanlon, the Committee is in your hands. Would you like us to go into camera?

Mr SCANLON: No, I don't wish the Committee to resolve into private.

CHAIRMAN: Private is different from in camera. We have had a couple of occasions where the evidence in these hearings has been taken in private but that evidence is still public. In other words, we cleared the room so that the witness could give evidence to the Committee without fear of being heckled by some members of the public. However, all

of that evidence given in that way is public evidence. That is different to in camera evidence. When the evidence is given in camera, it is not published ~~in camera~~ it is kept confidential, unless Parliament overturns the Committee's decision and decides to publish that evidence. I wonder whether you want us to go in camera.

Mr SCANLON:No.

CHAIRMAN: Do you want to consider your position on that document a bit further?

Mr SCANLON:May I?

CHAIRMAN:It is up to you.

The Hon. J. R. JOHNSON: I would like to ask questions on it. I cannot understand, with due respect, why a document submitted to a Standing Committee of the Parliament is marked "Private and Confidential", when it goes for pages and pages.

Mr SCANLON: Basically, at the time my main concern was possible intimidation of my family and myself.

The Hon. J. R. JOHNSON: That is understandable. What do you want us to do with it? Do you want to withdraw it?

Mr SCANLON: As the Chairman just mentioned, if this can be viewed by the Committee and not published, would that be satisfactory?

CHAIRMAN: So you want that submission to be kept in camera?

Mr SCANLON: Yes.

The Hon. I. COHEN: Could I suggest that, if questions are asked on that, at that point we should go into camera. If Mr Scanlon chooses to answer, he can answer the questions in camera.

The Hon. J. R. JOHNSON: It does not concern me; it concerns Mr Scanlon.

CHAIRMAN: At any stage when you are giving evidence, if you feel that the answer that you are about to give should be given in camera, just ask us, and we will go into camera for 30 seconds, five", or whatever period you want, to hear what you have to say, and then resume in public. It is entirely up to you as we go through.

Motion by the Hon. I. Cohen agreed to:

That the submitted document marked "Private and Confidential" and appended newspaper clippings be taken as evidence in camera.

CHAIRMAN: Mr Scanlon, would you like to make a statement before members of the Committee ask you questions?

Mr SCANLON: Yes. I have no experience or qualifications, nor do I have a scientific background, regarding pesticides of any description. Nevertheless, I have been a resident of the Byron Shire for 21 years and I have been involved with the pesticides issue for 20 years after experiencing its misuse near my home and property was first exposed to pesticides in 1979, shortly after moving to the North Coast of New South Wales. The pesticides 2,4,5-T and 2,4-D were widely used on a large land holding adjacent to my home.

Following wide media coverage regarding the concerns I had for the health of my family, community and environment, I received countless telephone calls from concerned individuals who had been placed in similar situations regarding pesticide exposure on the mid and far north coast of New South Wales. Some of these telephone calls were from elderly widows of ex-government and industry employees, for example, dip site operators, banana inspectors and farmers. These individuals have related their husbands' work-related activities within the pesticide arena, their daily exposure to such, and what they believed to be the consequent health effects experienced by their spouses. Many had died from cancer-related symptoms. Some of these ladies' health had also been affected. Many other individuals have also related their experiences, especially the health effects they suffered, some similar to my own regarding exposure to pesticides.

Complaints have been raised regarding the irresponsible use of pesticide spraying by farmers, government agencies, developers and neighbours. It may only be a small percentage of operators that continue to misuse pesticides, however, it is the government's duty to introduce strict legislation to protect the health and safety of the community, in particular innocent school children.

Under the current legislation of the 1978 Pesticide Act it appears that misusers can elude and continue to misuse pesticides as there is no law in place to protect the people. When it comes to aerial spraying, the Environment Protection Authority, which is the regulatory agency, appears to have a conflict of interest, which must be removed if the government intends to take this issue seriously.

The Environment Protection Authority issues and renews the licences of aerial pesticides applicators. It also appears that the Environment Protection Authority has been reticent to take appropriate action in court where members of the public have been affected by pesticides misuse. Could this be because the Environment Protection Authority issues the licences to these aerial applicators? The Environment Protection Authority's response to these incidents is to write to the applicators concerned reminding them of their duty of care. This, of course, has been non-effective and offers no security to people and parents of children whose safety is repeatedly placed at risk.

There have been numerous incidents and complaints raised with the Environment Protection Authority regarding one particular aerial applicator on the far north coast of New South Wales. The EPA has evaded genuine complaints and concerns by merely writing to the applicator reminding him of his duty of care. It would appear that the EPA does not take into account these complaints, as licences continue to be renewed and aerial spraying operations still continue during school bus times. This practice is totally unacceptable and is one that must be amended via appropriate legislation.

In September 1997 I attended a mediation process initiated by the Environment Protection Authority and interested parties regarding aerial applied pesticides in and around the Middle Pocket area, located in the northern part of the Byron Shire. Many participants believed

that the community was ignored by this process, which in the end achieved nothing, yet cost tens of thousand of taxpayers' money. This mediation process left community participants with a sense of disempowerment and a feeling of professional manipulation. It was no alternative to effective legislative regulation. Please note: this mediation process focused around one small rural valley only.

Numerous individuals I have spoken with have expressed how they have experienced intimidation, rudeness and lack of co-operation when they have raised concerns with contractors, government agencies and industry representatives. There is presently no legislation in place requiring the applicators to notify nearby residents or warn schools, et cetera. A 24-hour notification requirement is essential and must be written into the Act. At the very least, it would give residents time to cover rainwater tanks, close windows, drive children to school, keep young children indoors, or vacate their homes if they so choose.

The aerial spraying of banana plantations has been a contentious issue on the far north coast of New South Wales for many years now. Many children live in rural areas where bus stops are located near these plantations. Whilst aerial spraying operations continue unabated during school bus times, the children remain "sitting ducks" to potentially dangerous chemicals. In 1998 there was an incident where an aerial spraying operation, using the pesticide Tilt, was being undertaken at the same time a school bus was picking up school children from one of the scheduled stops.

A school student who was sitting directly under the ventilation hatch, which draws in cool air from outside, became violently ill later that morning. After a lengthy investigation, the Environment Protection Authority decided not to prosecute. Despite reliable information and witnesses, no satisfactory reason for not pursuing the case was given. There is no provision under the present Act to protect school children waiting at school bus stops, or whilst travelling on school buses, from pesticide exposure. Approximately 1,700 children are transported by one bus company alone to numerous schools from the northern part of the Byron Shire. Many of these children live in rural communities.

It is more than apparent that the current Act is outdated and totally inadequate. As the demand for residential land has increased dramatically in the Byron Shire over recent years, development and that of other further agriculture pursuits have spread into existing rural and adjacent to environmentally sensitive areas. The spraying of chemicals, in particular aerial application, can no longer co-exist with the increase of "new settlers" moving into these areas without stringent legislation set in place.

By law, it is compulsory for all children to attend school, yet there is no law in place to protect these defenceless children from pesticide exposure etc. It is the expectation of every responsible parent that the New South Wales Government has a duty of care to protect innocent children from such practices. The current 150-metre aerial buffer zone outlined in the current Act is not realistic. Concern has also been raised by the community as to the effect pesticides have on the environment, contamination of soils and waterways, the effect on flora and fauna, et cetera.

According to the Department of Urban Affairs and Planning, the population of the Byron Shire alone will double from the present population of approximately 26,000 to 52,000 by the year 2019. The shire is one of the fastest growing areas in New South Wales. The Tweed Shire is also experiencing similar growth patterns. Problems arising from pesticide drift are becoming more intolerable and unacceptable to rural populations. People have a right to live in a

healthy environment, breathe unpolluted air, drink uncontaminated water and eat uncontaminated food. I wish to table the submission to the Committee.

Document tabled.

Mr SCANLON: I also have a number of photographs, taken over a period of years, of examples of aerial spraying and ground spraying operations that the Committee may find of interest. But I am not tabling those photographs. They are there to view at your leisure.

The Hon. I. COHEN: Mr Scanlon, you mentioned that there is a problem with the Environment Protection Authority issuing licences and then potentially being held responsible? Should it be the government, the pilot or the owner?

Mr SCANLON: I believe that one agency should be responsible for the policing – issuing of fines, et cetera – and that that authority currently is the Environment Protection Authority. Its powers should be expanded to a much more realistic program and that it should have a much bigger stick under the legislation. Under the current Pesticides Act, it does not have that stick.

CHAIRMAN: I think the question asked by the Hon. Ian Cohen went a little bit further than that. Whom do you think the authority should be able to prosecute?

The Hon. I. COHEN: If there are to be changes to the Act, who should be targeted, from your experience, when there is an incident of chemical trespass? Should it be the Environment Protection Authority, the pilot who is actually flying the aeroplane and not picking the conditions for doing so properly, or should it be the owner who gives permission for that spraying?

Mr SCANLON: I think both the applicator and the owner.

The Hon. I. COHEN: What changes would you or your organisations like to see to effectively tighten up the Act and give greater protection to potential victims?

Mr SCANLON: Because of the time that I was taking in reading part of the submission that I put before you, I did not read the recommendations that are made. Do I have your permission to refer to those?

CHAIRMAN: Are those recommendations in the tabled document?

Mr SCANLON: They have already been given to Ms Marshall.

CHAIRMAN: They will already be incorporated in your submission. So perhaps you would like to target or highlight some points from those.

Mr SCANLON: Those recommendations are:

1. That the Pesticides Act be amended in the next session of Parliament to adequately protect the community and the environment from pesticide misuse.

2. That the provisions of the new Act include a minimum of 24 hours notification to neighbours, schools, et cetera, about intended spraying operations.
3. That a pesticide advisory body, equally represented by all parties, be established under the new Act to advise the Minister on pesticide risk.
4. That planning controls via development applications and environmental impact statements be adopted for areas of intensive agricultural use dependent on aerial spraying.
5. That licences be mandatory for on-ground applicators.
6. That it be an offence to injure people, property or the environment.
7. That employers also be liable for acts of their employees and contractors.
8. That aerial spraying be banned during school bus hours.
9. That the Environment Protection Authority be given more powers to issue notices and to prosecute for offences.
10. That the Environment Protection Authority respond within a reasonable time period after a complaint is raised.
11. That third party rights be put in place to enforce the new Act.
12. That stricter fines be implemented.

The Hon. I. COHEN: Should aerial spraying in your area be banned?

Mr SCANLON: In my opinion, yes.

The Hon. I. COHEN: Do you think that the topography and size of the farms would allow for on-ground application of chemicals in a manner that would be adequate for the grower?

Mr SCANLON: I believe so.

The Hon. I. COHEN: Has that been discussed with any of your neighbouring farmers at all? And have you had any reaction to that position?

Mr SCANLON: Most individuals that we have spoken to have immediately referred us to their industry representative. Unfortunately, we have not been met with a great deal of favour, and there have been many excuses as to why aerial application is so important in a particular area.

The Hon. I. COHEN: Could you give a couple of examples of why the industry sees aerial application as so vital?

Mr SCANLON: I believe the cost factor was one important point that was made. Further, that, basically, the community really had nothing to worry about because these chemicals are perfectly safe.

The Hon. I. COHEN: Has Byron Shire Council's policy of ending roadside spraying and such like been of benefit to your local community?

Mr SCANLON: Any reduction in pesticide use is a benefit to the community as a whole as well as to the environment.

The Hon. I. COHEN: In your local area, would you see any specific opportunities for food production if those products were able to be declared pesticide-free? If you were living in a pesticide-free zone, could you see any agricultural export opportunities there?

Mr SCANLON: I feel that the general consumer, not only in Australia but especially overseas, cannot get enough of organically-grown food. Basically, a pesticide-reduced industry would surely enhance the monetary value of such products.

The Hon. I. COHEN: Is organic food cultivation being undertaken in your area?

Mr SCANLON: There are only very, very small farms – if I could call them that, of maybe a house block or maybe a hectare – of organically-grown foods. Most of the industry in the area in which I live is dependent on pesticide use.

The Hon. J. R. JOHNSON: Mr Scanlon, you have suggested that an all-parties committee be set up. What do you mean by that?

Mr SCANLON: Many individuals and industries have their opinion on how pesticides could be used.

The Hon. J. R. JOHNSON: So you are not talking about political parties; you are talking about individual parties.

Mr SCANLON: No, I am not talking about political parties. I am talking about an advisory body with representatives from the banana industry, the sugar cane industry, and so on – of representatives of industry in my particular area.

The Hon. J. R. JOHNSON: Taking you at your word, you said "all-parties". If that were set up, you would have a committee so large that you would not find a room big enough for it to meet.

Mr SCANLON: I feel that the community as a whole should have some form of input to such a body. I feel it is important that there be representation on it from the State farmers body, or whatever industries are involved. There is an environment movement in Sydney called the Nature Conservation Council of New South Wales which possibly will be represented by one individual.

The Hon. J. R. JOHNSON: I think your representations might need a little more refining. You might like to submit that to us.

Mr SCANLON: Thank you for bringing that to my attention.

The Hon. J. R. JOHNSON: You said you would like to see all on-ground applicators licensed. How practical is that? If I have got a can of spray that I wish to apply to some noxious weeds in my garden on my ordinary suburban plot, that I would have to make an application for a licence to apply it?

Mr SCANLON: I am mainly referring to individuals who are involved in the agricultural industry, such as noxious weed eradication councils, private contractors, or whatever.

CHAIRMAN: The way you have worded it would mean every single farmer in the State.

The Hon. J. R. JOHNSON: And not only the farmers.

CHAIRMAN: You mean the users who do not use it for their own use?

Mr SCANLON: Yes. I would like to bring something to your attention, if I may, as an example of an incident that occurred in 1996. One Sunday afternoon in 1996, in an area known as The Pocket, which is located in the northern part of the Byron shire, parents and young children were exposed to spray drift as the landowner and his contractor sprayed the pesticide 2,4-D in close proximity to a child's third birthday party.

When approached by a concerned parent about what chemical he was using, the contractor responded by saying, "Hippy killer." The Environment Protection Authority in this case successfully prosecuted the persons responsible. It is important to note that the contractor involved in this particular incident held a pesticide handler's certificate.

CHAIRMAN: Are you saying that the Environment Protection Authority successfully prosecuted the persons responsible?

Mr SCANLON: Yes.

CHAIRMAN: We have been told that the Environment Protection Authority has successfully prosecuted only one person in the last 20 years. So that must be the person.

The Hon. I. COHEN: No. There was one in Dorrigo as well – and aerial sprayer in the Dorrigo area.

Mr SCANLON: May I expand on that by saying that if individuals are applying for such certificates, such as the pesticide handler's certificate, then it is important that they be licensed. Let us be optimistic and say it is a one-off case where an individual may have been negligent, but the fact is that the frustration and concern of the parents of the children at that party was quite unnecessary.

CHAIRMAN: Was that 2,4D amine or ester?

Mr SCANLON: I think in this day it is amine.

CHAIRMAN: Thank you very much, Mr Scanlon. I think you may have answered the questions that we intended to ask you to take on notice. I will give you a copy of those

now. When you get the transcript of today's proceedings, check to see whether you have answered those questions. If you have not, would you answer those questions and send in your responses in the next couple of weeks.

Mr SCANLON: Thank you for the opportunity to appear before the Committee.

CHAIRMAN: The questions are:

1. *What issues do you have with the use and management of pesticides that are perhaps regionally specific?*
2. *Can you identify any issues not outlined in the Environment Protection Authority's discussion paper that you believe need to be addressed?*

(The witness withdrew)

RODRICK RICHARD HARRIS FAYLE President, Australian Macadamia Society, of Rosebank Farm 552, Rosebank Road, Rosebank, New South Wales, and

ANDREW CHRISTOPHER HEAP Executive Officer, Australian Macadamia Society, of 1/113 Dawson Street, Lismore, sworn and examined:

CHAIRMAN: Mr Fayle, in what capacity are you appearing before the Committee?

Mr FAYLE: In the dual capacity of a farmer, principally a macadamia grower, and as the President of the Australian Macadamia Society to represent the industry's viewpoint.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr FAYLE: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr FAYLE: Yes, I am.

CHAIRMAN: Mr Heap, in what capacity are you appearing before the Committee?

Mr HEAP: As Executive Officer of the Australian Macadamia Society.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr HEAP: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr HEAP: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that State Parliament can override the Committee's decision to hear your evidence in confidential session and could decide to publish your evidence, although it has not done that yet.

Perhaps you would like to make a short presentation, and table any documents that you wish to, and then we will ask you some questions.

Mr FAYLE: First of all, might I say that I do not intend to formally table any documents. But, if you should so desire, I would be happy to prepare any material that you might want. Might I start by giving the Committee some idea of my own personal background, so that you will understand where I am coming from and to enable you to determine what weight you can place on what I say.

I might be a macadamia grower but I have a mixed farm. It is principally in the farming of macadamias that I have been involved for about 10 years, and my third term of the Society is coming up. The Society is the peak industry body for the Australian macadamia industry. It is not just a State-wide organisation; it represents the industry right through Australia. The industry is not just a growers organisation; it encompasses the growing, the processing, marketing, research and development and promotional areas. Indeed, we have members of the Society who come from all sorts of backgrounds, for example, financial service people.

As part of my duties as the President of the Society, I have been quite heavily involved with the matters that are before you: that is, the use, regulation and control of pesticides. It is a subject in which I have taken a special interest. The industry has quite well-developed strategic plans and policies in place dealing with these matters. We have compulsory levies, which we raise from our production base. Quite a number of projects that we have in place deal with the subject of pesticides in various ways. I would be quite happy to explain some of those if you would like me to do so.

I have also had personal and quite close dealings with the National Registration Authority, particularly with its existing chemical use program, particularly in regard to the use of endosulfan and other products that are on the National Registration Authority's current list of things to review. So I do have a quite thorough understanding of the rules of the legislative framework within which pesticides are used in agriculture, and particularly the way in which they are used in my industry. I, of course, can only speak as an individual, although I do bring with me, I suppose, the collective wisdom of my board and of my members.

CHAIRMAN: Andrew, did you want to make any opening comments, or should we go straight into questions?

Mr HEAP: I do not have an opening statement.

The Hon. J. R. JOHNSON: Is there wide application of aerial spraying in your industry?

Mr FAYLE: No. Could I answer the question in this way. Our industry does not have an ideological outlook on any of this stuff. We have a pragmatic approach. Within the present legislation, it is quite possible for an individual to opt for that method of application if it fits within the rules. So, as an industry, we would not either bless, condemn or make any other comment on whether somebody wanted to use aerial spraying, as opposed to ground application, or indeed if they chose to be an organic grower and not use anything.

The Hon. J. R. JOHNSON: But is aerial spraying widely used?

Mr FAYLE: No, it is not. It is used to a very minor extent, but I would say that the vast majority of aerial applications of anything in our industry are in the nature of fertilisers and trace elements, rather than pesticides. And even that is not a large usage.

The Hon. J. R. JOHNSON: What is the major disease that affects the industry?

Mr FAYLE: You would perhaps appreciate that this tree crop originated and evolved here in this subtropical rainforest region, so there is a reasonably natural balance of both insects and diseases. So, if I can try to answer your question directly, in the disease area there

are two principal diseases with which we are concerned. There are a larger number, but there are two that have a significant economic effect if we do not maintain proper controls.

The first one is botrytis. Excuse me if I do not give the correct botanical names. Botrytis is a disease of the flower. If you get particularly wet conditions during flowering times, then the fungus can attack the flower and destroy the oncoming crop. So that in fact you can have a crop failure if botrytis gets out of control.

The second – and probably equally significant – problem is known as husk spot. Husk spot is another fungal organism that attacks the developing fruit and causes premature drop of the fruit. Under adverse weather conditions, it can also cause something like a 50 per cent or greater reduction in the crop.

CHAIRMAN: So you use fungicides mostly, rather than pesticides?

Mr FAYLE: We use fungicides for those. The question was related to diseases. I could give you a similar answer concerning insects, if you would like me to do so.

The Hon. J. R. JOHNSON: What is botrytis caused by?

Mr FAYLE: Botrytis is caused by a combination of weather conditions – particularly moist weather continuing with a particular weather regime over an extended period. In this part of the world, flowering typically occurs around about the end of August or early September. This area is known, generally, for having a dry spring season. That is the evolutionary condition that brought this tree into bearing. So botrytis only affects the crop in some years – probably one year in five, or even less frequently.

The Hon. J. R. JOHNSON: What was your major concern in coming before the Committee?

Mr FAYLE: My major concern was to ensure that there is factual information presented to the Committee, so that you will have a clear understanding of the issues as seen by our industry – to ensure there is not what we would regard as unreasonable legislation, or legislation that might unduly inhibit our wellbeing. We recognise that there is a duty of care and all of the other things applying. I think you will find that we are a quite responsible industry.

If I could perhaps develop my answer a small amount. If I could use the area of insects and diseases in the same sense: pesticides, of course, incorporates all areas, including herbicides. But just looking for the moment at insecticides and fungicides: these have always been something in respect of which we try to achieve an eco-balance. As I mentioned, this is a naturally occurring tree crop. We have a very wide adoption of the integrated pest and disease management principles.

That may seem to be a bit of a jargon thing, but essentially it means that, to a very high degree of adoption in our industry, we employ pest and disease scouts. Either individual farmers have these skills, or they contract that service out to professional people working in the field – and there are a number of them in this area – to come and monitor what is going on in your crop. They do this on a regular basis, depending on the time of the year and which particular insect or disease may be an issue. So they will physically do a bug count, or a

disease risk assessment. They will count not just the beneficial or problem-causing insects, but both, and will determine from that insect count what we describe as an intervention level.

An intervention level is where you determine that the eco-balance is no longer satisfactory and that you are at risk of suffering significant commercial loss if you do not take some corrective action to effect that balance. So the individual farmer will have to select from the range of options available to him what he will do. Those options include both “soft” and “hard” chemicals. We choose not to take an ideological view on this again. But, in the area of soft treatments, you do see predator insects being introduced into orchards. You might see some so-called soft chemicals – things like a petroleum oil spray, which generally will be regarded as a soft chemical. Or there is a particular bacteria known as *Bacillus thuringiensis*, which is a synthesised bacillus. It is ingested by the caterpillars, causing the caterpillar to wither up and die, so that they will not eat our flowers or developing fruit. There are a number of options in this area that we use, and use quite extensively.

However, there are some insect and disease pests for which we have not yet been able to find any such treatments. For those ones we may have to apply a so-called hard chemical. If I could develop that a bit. One of the insect pests that we have is known as a fruit spotting bug. A fruit spotting bug is quite a difficult pest to deal with. It has been causing problems in other crops in this part of the world. It tends to attack most subtropical fruit crops.

One of the most effective chemicals for the treatment has been endosulfan, which is a registered product for use in our industry. It tends to attract the ire of the environment movement because it comes from the family of chemicals known as organochlorines. We have done quite a bit of research into this product, because clearly our members do not wish to expose themselves unnecessarily to risk, and they certainly do not want to put a food safety question mark on any of the crops that we produce. So we have examined the effect that endosulfan has, both on the beneficial insect population, and we find it to be the softest of all the chemicals that we use on the beneficial insects. So it actually helps us with our integrated pest disease management program.

We have had a very exhaustive look at the evidence that has been presented to the National Registration Authority on risks to the food safety chain, including the operators, and found there to be no evidence to concern us, providing that the product is handled in accordance with the label. To put it in perspective, we are though a very minor user. Many farmers do not spray at all because they will do this insect monitoring that I have mentioned and find that they have not in fact reached the threshold that requires some action.

If I could quote my own farm as an example. During the last twelve months I have used one application of endosulfan, back in the time of round about October, if I can remember the dates correctly. And it is not uncommon for there to be one or two applications of some form of pesticide during a season. So we are a very minor user. But, nevertheless, we do use them.

The Hon. J. R. JOHNSON: Do you grow other crops in between the macadamia trees?

Mr FAYLE: Most growers do not. The land up here is very expensive, and people tend to plant the trees at the maximum density that they can to achieve a commercial return.

The Hon. J. R. JOHNSON: Do you employ contractors or day labour?

Mr FAYLE: The decision is one for the farmer. There are many operations that handle everything themselves. That is, the individual farmer does all his own work. But there are certainly plenty of people employed in this area. It is one of the largest employers in the farming sector in this part of the world. In fact, in this part of the world, that means one of the biggest employers. So you have people who are directly day labour, or permanent staff on farms. But then there is another option for people, and that is to employ a contractor to do this type of work. So you can access through the normal channels a choice of several people to apply either ground or aerial or whatever application techniques you want to use.

The Hon. J. R. JOHNSON: Are your employees monitored for health or any deterioration in their health? If so, what is the basis of that monitoring? Is it regular, or irregular?

Mr FAYLE: The choice to do that is one for the individual farmer. If I quote my own case. I have an annual checkup, and I have a blood test taken at the time when I have most recently been doing any spraying, to ensure that I am not placing myself at risk. I have never had any detections of anything in my own personal wellbeing. But I could not answer for the rest of the industry in that regard. It is a personal choice that exists between the individual employer.

The Hon. J. R. JOHNSON: Are your staff checked?

Mr FAYLE: On my farm, my staff is essentially myself and my wife. We both do that.

The Hon. J. R. JOHNSON: I hope you are getting your wife checked too!

Mr FAYLE: Yes, indeed.

CHAIRMAN: Does the Department of Health do that here? With some apple orchards, the Department of Health actually comes and does a free campaign.

Mr FAYLE: That has not happened here. The onus is on the individual, and that is done through your local general practitioner or local hospital.

The Hon. I. COHEN: Could the industry in this area survive with ground application of chemicals only?

Mr FAYLE: If we take the current season as a good example, we have had quite extensive rainfall, starting in January, and it is continuing now. I don't know whether it will continue for too much longer, but I hope not. It comes down to the question: How urgent is it to apply a particular product at a given time? You would understand from this integrated pest management program that I described briefly that the intervention level is at quite a critical moment in time. If you do not take corrective action when you reach that point, you can lay yourself open to quite substantial commercial risk.

If the weather conditions permit, you can certainly apply product from the ground. There is no question about that. That could be imposed, if you like. There are cost differences – although, as I said, very few people use the aerial application anyway. Certainly,

as far as I am aware, you can apply those products very much more economically by aerial application – but often by helicopter, I would say, rather than necessarily by aeroplane.

The Hon. I. COHEN: Have you experienced that? The Committee heard at Gunnedah that there were some people objecting to the supposedly better option of the helicopter rather than the crop dusting aeroplane, because the down winds from the helicopter stirs the chemical up, atomises it and so on. Have you had experience of this?

Mr FAYLE: No, I have not. As I said, almost all of the aerial spraying here is to do with fertilisers, not pesticides. So I don't think there would be very much practical experience here to give evidence one way or the other.

The Hon. I. COHEN: I heard what you said about the value of the land and that therefore you essentially go for a monoculture.

Mr FAYLE: I would have to object. We do not do that. Part of our integrated pest management program is to encourage growers, although we are planting what appears to be a single species ----. If you take my farm of 3,000 trees, there are six different varieties within that. The windbreak trees around it, and the general vegetation that surrounds the farm is selected to have a quite significant amount of biodiversity.

The Hon. I. COHEN: Are the pests that you were describing something that naturally attacks the macadamia tree? Given that it is an indigenous species in this area, I wonder what your group's view is on looking at a greater variety in crop production that somewhat is mimicking original circumstances. Therefore there might be production of certain rainforest timers, associated with the macadamia crops. Is that something that your industry has investigated?

Mr FAYLE: If I could answer it this way. For one of our research projects I mentioned that we have a levy to assist research into the examination of the question of germ plasm and the natural condition under which macadamia trees still grow and evolve, and the protection of that germ plasm, because that is Australia's greatest natural advantage in this particular international trade. We have such a natural advantage that we can do our tree breeding based on that broad germ plasm base.

The Hon. I. COHEN: I hope you tell Monsanto that.

Mr FAYLE: The question of whether we would consider doing some other activity on the farm is still very much the individual's choice. If I could quote my own example. On my farm I have a registered timber plantation under the State Government Plantation Act.

The Hon. I. COHEN: It is a joint venture, is it?

Mr FAYLE: No, it is a private one. That plantation has been selected under the Greenhouse Allies Project, with which you may be familiar, to understand the sequestration of carbon and those matters more fully. Now, there have been only a small number of people selected for that from right round the nation, and it just happens that I am one of those. But you will find in our industry quite a diverse group of people who come from not just necessarily a farming background, but people who are interested in all the things that you talk about.

Generally speaking, the end result seems to be that if you want to do this type of commercial operation, and you are trying to produce food on a reasonable scale, and you are trying to do it in a way that is economic, then it is very hard to incorporate the full concepts of the permaculture example, which I think you are perhaps alluding to.

The Hon. I. COHEN: Some variation on that.

Mr FAYLE: With some variation on that. If you can incorporate the same equipment that you need for one enterprise, as you can appreciate, to do any one thing you have what is referred to as an enterprise cost. The enterprise cost includes all the machinery and so on that you need to make that one thing work effectively. Generally speaking, the consumers out there require product that is as cheap as possible, otherwise you cannot sell any of it. That generally drives you down the track of trying to concentrate on one product and trying to do that as best you can.

The Hon. I. COHEN: Have you investigated the market for organic produce?

Mr FAYLE: If I could explain briefly. The Australian Macadamia Society does not actually sell any product. We represent the members within the industry – some 700-odd members. The actual selling of our product, our crop, is handled by individual companies within our industry who are members of our Society. These people generally process the product and sell it, and they are the marketing arm of the industry. We do not have a single desk operation or anything of that nature; it is just an unregulated market.

The individuals are always looking at those sorts of issues, to see whether there is a market niche that can be satisfied, and whether it is economic to do so. Certainly, the evidence at this stage is that it is not economic to grow in an organic way. If I could give some illustration of that point. While we do have this ~~pro~~proactive approach to integrated pest management, and we have a number of research projects examining the life cycle of these different insects and diseases to see if we can find a good way to fix them up, we have nevertheless come to the conclusion that if you are going to grow a product to the required standards that are there in commercial land, the reality is that you have to be prepared eventually, if the situation turns that way, to use a pesticide.

Those who have chosen not to use pesticides – and there are certainly some in the industry, and we do have a number of research projects trying to develop this further – find that they have to reject something in the order of between 40 and 60 per cent of their production as being unsatisfactory and having to be used for perhaps production of oil or something like that. That is quite a big penalty for them. So, while you can achieve quite a lot in the reduction of the use of pesticides, we have in practice [found] that it is very difficult to achieve a complete production by organic means.

The Hon. I. COHEN: Is your industry a heavy user of rodenticide? Have you investigated, or is anyone aware of, the impacts that that has on the immediate farm, to neighbours and in particular to wildlife such as birds of prey and the like?

Mr FAYLE: Thank you for asking that question. It is the subject of a quite recent research project that we have taken through the Queensland University of Technology, funded once again out of our growers' pockets. That research has been to examine alternative ways of managing the rats that are a significant problem for us in our orchards, or have been.

This research was quite comprehensive and involved the trapping and dissection of thousands of bodies of rats to see what they were eating, and where, and tracking them with mechanisms. The outcome of that research – which is now being quite widely adopted – was that we discovered is that the rats that are doing most of the damage, something like 90 per cent of damage, are coming into the orchard from adjacent habitat and that that adjacent habitat tends to be typically scrubby sort of country, with a bit of lantana and rubbish or unkempt neighbouring properties.

So, if we can maintain a piece of relatively clean land, something in the area of 20 metres wide, then the natural instinct of the rat – which is not to expose itself unduly to risk – tends to preclude them coming across that open ground. So we have found that by applying just general clean-up techniques, getting in there with a brush hook and a slasher, and using some herbicide if necessary to control that undergrowth, has in fact produced an outstandingly good result. We have been able to make it more or less unnecessary to use rodenticide.

We were indeed concerned about rodenticides. As you quite rightly might point out, they are quite a nasty product to have out there in the environment. We do have a couple of registered rodenticides for use, so that they can still be used. So we now rely largely upon the use of what is referred to as the multi-feed rat baits, rather than the single feed rat baits, the sort of stuff that is used by the general urbanites who think that you have got to kill the rats with one bite.

The evidence seems to be that if you rely on a multi-feed bait, so that the rat has to come and eat several times, that the rat is able to metabolise the poison that it is getting, and if it is then eaten by a predator bird, for example, the amount of rat poison in the carcass is unlikely to cause death or injury to that secondary animal. So it has been quite a happy story for us. It is in fact illustrative of the approach that we take generally to these sorts of problems. I hope you find it is responsible.

The Hon. I. COHEN: As a farmer, Mr Fayle, if there are changes in the Pesticides Act, who should be responsible for chemical trespass? Are we looking at the owner of the land, the person who applies the chemical, be it a crop dusting pilot, or the agency, such as the Environment Protection Authority, that gives permission to use the chemicals? Would you care to comment on that?

Mr FAYLE: When you use the expression “chemical trespass”, would you like to define that?

The Hon. I. COHEN: Chemical trespass is where any overspray, for whatever reason, may go to another property or affect other people. If that is proven, who should be responsible?

Mr FAYLE: The view of the Society and the industry at large is that we would not wish to defend anybody who is not abiding by the rules. If we find that there is a cowboy out there somewhere who has caused such a problem, then they should be prosecuted, and we would not defend them in any way. The questions of who should do it, and how it should be done, of course are much more complicated things.

I, in fact, have wondered myself, with the introduction of the National Registration Authority and the rules surrounding the registration of product, and the shift from New South

Wales Agriculture to the Environment Protection Authority for the regulation of that, whether the Environment Protection Authority is in fact the right government department to do that.

The Hon. I. COHEN: Who would you suggest?

Mr FAYLE: I do not know that I am sufficiently knowledgeable to make a sensible answer. What I could say is that, if we are really talking about a law and order type of question and the way in which something is enforced – if there is a regulation in existence, then who is going to enforce it? – the Environment Protection Authority, to me anyway, and perhaps I am ignorant in this area – seems to me to be a body that is likely to be much more focussed on one side; it is not likely to be a completely independent body.

I have heard others saying that they do not think the Environment Protection Authority is tough enough. I could not comment on that. We have up here an Environment Protection Authority person who investigates any reports of people doing the wrong thing, and we invite them to come along to field days and to speak to our members and to help educate people. That goes on all the time, and we take quite a responsible position there. But, somehow or other, I think that it is more of a policing type of role than the Environment Protection Authority is able to have.

The Hon. J. R. JOHNSON: What happens to the husks and the shells? Is there a market for them or something?

Mr FAYLE: I suppose we are fairly fortunate in that the nature of the crop does not produce any significant amount of waste. The husk, the outer part of the shell, is stored on the farms, composted on the farms, and generally applied back under the trees as a form of fertiliser. Some of it is sold off the farms to nurseries – for example, for use as an ingredient in potting mixes or in landscaping. The shell is treated in a similar way but, being very hard, it is not very suitable for use back on the farm itself, other than just as an ornamental type of dressing on a garden around the house.

Most of the shell in fact is sold to the local meatworks at Casino, or other similar users. They use it as a furnace fuel source. It has quite a high calorific value. Any reject kernel that is in it is quite high in oil, so that it burns with a very high temperature, and is a very clean burn. There have been a couple of companies that have examined the use of it in composite materials as well, but that has not been possible yet because there is not enough of the stuff. Although it appears a lot to us, the companies that are doing that require many thousands of tonnes, which we do not have.

CHAIRMAN: I thank you very much for your time and for your evidence. We had a number of questions that we intended to ask you to take on notice. I am not sure how many of those you have answered, or answered as completely as you might like. Have a look at those questions, and when you send back the transcript with any corrections you make to it, you might comment on some of those questions that you consider you have not covered already in this hearing. Those questions are:

1. *Has the Australian macadamia Society given any consideration to planning measures that could be introduced to alleviate conflict about pesticide use and application?*

2. *What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass?*
3. *What is the industry's view concerning the feasibility or otherwise of the legislative and policy amendments outlined in the Environment Protection Authority's discussion paper?*
4. *Can you outline your industry's position with respect to section 4.4 of the discussion paper concerning shared liability in the misuse of pesticides?*
5. *Do you have any examples where best management practices in your industry have improved the use and management of pesticides?*

(The witnesses withdrew)

DONALD JOSEPH WANT Representative, Toxin Action Group and National Toxics Network, of 309 East Bonville Road, Bonville, and

ANN THERESE WANT, Private Citizen, of 309 East Bonville Road, Bonville, sworn and examined:

CHAIRMAN: Mrs Want, what is your occupation?

Mrs WANT: Wife and mother.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mrs WANT: As a private citizen.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mrs WANT: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mrs WANT: Yes.

CHAIRMAN: Mr Want, what is your occupation?

Mr WANT: I am a director and engineering manager of a local company.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr WANT: Both as a private citizen and as a representative of the Toxin Action Group and the National Toxics Network.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr WANT: Yes.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr WANT: Yes.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I would have to warn you that Parliament can override the Committee's decision and make your evidence public later. However, it has not done so to date. Would you like to make a short statement before members ask questions?

Mr WANT: Yes, Mr Chairman We have already made a submission dated 26 January 1999. The submission firstly referred to the need to recognise people's rights to breathe clean air

without having to breathe chemical vapours from any neighbouring use of chemicals. A current example is where one farmer has full rights to apply any amount of pesticides at any time, right next door to a local high school. As long as this one farmer applies all the pesticides, or simply assures he does, as per the label instructions, the approximate 450 students and staff have absolutely no recognised rights to stop him to ensure they are not exposed to spray, vapour or blow drift. Such chemical mixtures can travel for kilometres, let alone five metres.

This gross lack of rights has already seen one chemically-sensitive student having to be withdrawn. The coming spray season and the expanding farm activities will potentially have gross effects on the remaining population. No government department can assist the young students or staff to prevent exposures under existing legislation and antiquated exposure risk assessment protocol. There would appear to be no direct assessment nor direct studies done on the possible health effects on exposed people, especially those chemically sensitive, when developing label instructions.

The submission also referred to the huge amount of literature on the existence and acknowledgment of the condition known as multiple chemical sensitivity (MCS). The deliberate total disregard of this condition by our pesticide assessment process, the EPA, Health Departments and Pesticide Act, illustrates a gross deficit of logic and scientific approach. At the very least, one would expect that health professionals would take such literature into account as a precautionary approach rather than rely on the chemical company sponsored studies which always conclude on low toxicity for intended use and have been shown to be flawed in the past. Surely the pesticide must be treated as being guilty until proven innocent, not the other way around.

There are a number of examples where the Health Department has gone to great lengths to counter public concern on various health effects from low level chemical exposure. Deliberate public deceit, misrepresentation of data, and poor treatment and investigation of chemical exposure concerns are numerous from the Health Department. Since the EPA refers exposure concerns to the Health Department and National Registration Authority, then the National Registration Authority refers people to the EPA and Health Department, it seems that the Health Department has taken on the task of combating public concern.

Neither the public nor State government departments seem to be able to be given the full details of what the public is exposed to in any one pesticide which typically consists of many individual chemical types. It is quite an amazing situation then for the EPA to monitor and the Health Department to be able to assure the public of their safety. This, combined with the chemical company issue of deceiving and incorrect information, is a significant example of public deception and lack of rights, for example, trimethylbenzene had been found in three children with unexplained health problems in Coffs Harbour and was confirmed on two separate occasions by the chemical company as not being present in an aerially sprayed pesticide, yet it was found, eventually, to be present in the pesticide analysis.

Furthermore, one can only assume that, since the medical profession has no training and is ill-equipped to diagnose chemical sensitivity, these are the reasons for the unfounded sarcasm and intimidation exhibited to effected people. A definite trend has been noticed in the number of parents of affected children being labelled with psychological conditions such as Munchausen syndrome. This is a convenient scapegoat for the medical and health systems to avoid the complexities of dealing with chemical sensitivity problems yet adds to the affected families dilemma of dealing with affected children and a system which is ~~pro~~proactive in trying to suppress their concerns and can, and has, disintegrated such families.

As a concerned family ourselves, we are currently encountering such treatment from all departments. We have not settled for illogical responses and total avoidance of answers from such departments. As a result we are being treated shockingly and it is obvious that such departments have written us off. One then wonders about the objectiveness of this Committee. Has this Committee perused the vast amount of literature, acknowledgments and findings which establish the varied effects of low level pesticide exposure on humans, or is the Committee going to rely on the advice of the seemingly non-objective self-interest groups within the government departments attempting to suppress such? We are not aware of any experts in this area in the government departments. The few doctors who have tried to learn, study and help the people affected would be the most authoritative.

Although there have been many, many reports to the EPA and health departments over the years of health effects and concerns from pesticide usage, there is no official database nor feedback system to the National Registration Authority which is in place statewide in the EPA or health departments. This has been checked last week after receiving a statement from the Hon. Craig Knowles, MP, Minister for Health, dated 29 June 1999, that there was a system in place!

When the final draft of the National Health Monitoring Program for Agricultural and Veterinary Chemicals was distributed nationwide the health department was specifically singled out after being asked relevant questions regarding health monitoring—"....notably, New South Wales health failed to send a written reply despite repeated approaches." How far does such determined suppression go? There are, and will be, no records kept so there are no records of any people affected, so there are not any problems. Is this what our State government's approach is for continued inaction and suppression?

Document tabled

CHAIRMAN: Ann, did you want to make a statement?

Mrs WANT: No.

The Hon. I. COHEN: Given that Coffs Harbour has had quite a history of pesticide problems over many years, are there any facilities, either government or private, in the Coffs Harbour area that can monitor these issues of low level chemicals in blood streams, et cetera? Where do you have to go to get any real scientific information?

Mr WANT: Before I answer that specific question, might I say that this problem is not only in Coffs Harbour. Coffs Harbour initially hit the spotlight when cleft palates and birth defects hit the media. There was a lot of activity from people then trying to bring up these facts, which were being quietened down. We get reports from all over the north coast as well as from the rest of the State and interstate.

With regard to the monitoring of the children in Coffs Harbour, ~~there~~ has been an attempt by the parents of these children with unexplained health problems to try to go through the established medical system. For example, we ourselves went up and down to a Sydney Children's Hospital for years, trying to get to the bottom of what was happening with two of our five sons, and we came up with nothing.

We then went to what we thought at the time was the extreme of having a look at chemical residues, because of the birth defect worries, and we had to actually send those blood

samples to America to get them analysed at the time – although I do understand that there is some limited testing available here in Australia. In respect of people or organisations monitoring, I do not know of any. At one stage the Health Department had got approximately seven families in Coffs Harbour together who had children with unexplained problems, with significant levels in their blood of pesticides, and the Health Department promised to investigate them all and issue a report on those investigations. The department then went about getting all our records and so forth, but we heard nothing more – despite repeated requests over years for the report.

The Hon. I. COHEN: You were rather scathing of the position that some government departments have taken. Do you have any evidence on that point? Perhaps you could furnish the inquiry, whether orally now or on notice, with that information.

Mr WANT: We can supply many letters from such departments. By the way, in my occupation every day I deal in factual information. I deal in facts and scientific approaches. My background is fluid mechanics. I deal in vapours, liquids and so forth, change of phase. I have written papers on spray vapour and blow drift. I also deal in heat transfer of hydrocarbons, chemicals and so forth. I therefore have a good background behind me to ask relevant and scientific and logical questions of such departments.

The quality of the replies over many years from such departments has been absolutely appalling. I cannot get my questions answered. I keep getting flowery political types of letters back, wiping over all of my concerns, but I cannot get specific answers. But, yes, I can supply such information on notice.

The Hon. I. COHEN: In terms of your neighbour who is using chemicals, could you explain to the Committee what may be adequate in terms of change of practice to alleviate your situation?

Mr WANT: We started out in our particular family situation where our neighbour started applying these pesticides to his crops straight over the fence. We simply asked him for advice, prior to him spraying, so that we could at least vacate our children and prevent them from being exposed. It is all very well to be worried about spray drift, but with the ground application of pesticides the spray drift has been minimal and that has never been our concern with our neighbour. The vapour drift, however, has. It is the vapour drift of the volatile components of each chemical that has always been our problem. It is the solvents and the surfactants, not so much the active ingredients.

For example, Tilt, which already has been talked about today, consists usually of 25 per cent of propiconazole. Propiconazole itself is very non-volatile. However, the solvents and surfactants in Tilt, comprising the remaining 75 per cent of the mix, are extremely volatile, and they will produce vapour drift from the time of application through to days and possibly weeks afterwards, depending on weather conditions and solvent types.

So, simply, we wanted warning prior to application – 24 hours would have been nice – and none was able to be given. The Environment Protection Authority said it had no rights to demand such, and that it could not enforce such a requirement. We also suggested that we come up with alternatives, for whatever the farmer wanted to do, and that we would contribute to any additional costs of such pesticides. The farmer dug his heels in and said, “It’s my right. I can do anything I like.” So we came up against a brick wall there.

We then tried to go through mediation. The farmer would not mediate. We had been going through the Environment Protection Authority and the Department of Health systems and also eventually to the National Registration Authority. We experienced what everybody else seems to experience in this convoluted system between government and the federal agencies: we go to the Health Department, and it says, "Go to the EPA."; we go to the EPA and it says, "Go to the Health Department or the National Registration Authority"; and we go to the National Registration Authority and it says, "Go back to the EPA or the Health Department." No-one will really address the concerns of the assault on our children from such pesticide application. Our children have no rights, and his pumpkins have every right.

The Hon. I. COHEN: If there is a change to the Pesticides Act – and you have painted an interesting scenario of buck-passing all the way along the line – who should be responsible? You are saying that the Environment Protection Authority claims it has no power, but should that agency get more power and at the same time be responsible in case of chemical trespass? Could you describe to the inquiry what you would like to see as the impact of a revamped Act?

Mr WANT: There are several steps that have to be taken. It is not a case of saying that one department should be responsible.

The Hon. I. COHEN: I am looking also at the applicator and the landowner as well, so would you include reference to that in your response.

Mr WANT: Right. In respect of administering rules, I do believe it should be resting with the Environment Protection Authority to administer it. However, it is simply a toothless tiger, without any oomph behind it to do anything in these cases. However, the recognition of health effects, particularly on children and chemically-sensitive people, must be acknowledged first of all in any regulations or by the government. There is now a critical mass of literature and research out there which shows these effects and the existence of chemical sensitivities. To simply keep turning a blind eye to this amount of literature is illogical. So there must be recognition of these people and the effects, and, yes, then a strengthening of the rights and of the Environment Protection Authority then to administer.

Also, the Health Department must come into the equation somehow, because if it is truly a Health Department then health is the number one effect of this sort of exposure. The National Registration Authority says that it does a proper assessment first-up on these chemicals when it first receives the application. It is all very well to make that assessment under conditions in a sterile laboratory, with one chemical or active ingredient at a time - all done by the chemical companies, which have been shown to have falsified previous testings on numerous chemicals – then go ahead and approve that chemical for usage, then have absolutely no feedback system thereafter – unless there has been a tremendous public outcry or something like that from so many people affected.

The Hon. I. COHEN: You have described some pretty horrendous reactions in respect of incidents with children. Is there any evidence that this problem could be from sources other than chemical contact? Could you elaborate on that?

Mrs WANT: We had been aware of the chemical impact for nearly 10 years, and the consistency is there. Andrew is an example. Whenever he is removed from chemical exposure his health has stabilised, and whenever he is subjected to chemical exposure we get

the same symptoms, of headaches, rectal bleeding, nausea and depression. In a chemically-controlled environment, he is fine.

Presently, he is at home in a controlled environment, because we ~~have~~ ~~to~~ withdraw him from school. We did request that the farmer inform us when he was spraying. We explained the effect that it would have on Andrew. The farmer's response was that he has got a business to run, he hasn't got the time to go running to the phone every time he wants to spray, and that the effects on Andrew are our problem, not his. So, can't we try to keep him at school? His health went down, and I have it documented. We have withdrawn him from school, he is now doing distance education for medical reasons, and he is a different child health-wise because he is in a controlled environment.

Every time he is drawn from exposure to chemicals, to pesticides in particular – because he is also affected by other solvent-based products, such as deodorants, chemical cleaning agents, et cetera – his health and wellbeing is completely different and improved. I call it observation and intelligent thought.

The Hon. J. R. JOHNSON:How old is Andrew?

Mrs WANT: He is now 13.

The Hon. J. R. JOHNSON:So he has had this sensitivity for 10 years?

Mrs WANT: We have been aware of it for 10 years. As I said, he had quite a lot of unexplained health problems from the time that he was a young baby.

CHAIRMAN: Is the problem from a farmer neighbour at the school or at the farm?

Mrs WANT: Initially, last year, we had problems with our neighbour. He seems to have accepted our point of view from around Christmas time on and has respected Andrew's needs. But then, in October last year, the school that Andrew was going to, which was surrounded by bushland, was all clear-felled and a banana plantation was put in. So we encountered another problem. What was frustrating there was that the school ---. To accommodate a chemically-sensitive child takes a lot of co-operation, and the school had done everything it could to accommodate Andrew to enable him to go to school. The primary school did the same; they accommodated him quite successfully, and he was able to go through primary school. And the high school has accommodated him quite successfully. But the farmer was being completely uncooperative.

If we had known when he was spraying and what he was spraying, we could then have decided whether to send Andrew to school on those days – which he would not have gone. We would have withdrawn him temporarily and then sent him to school after the problem had passed. But not knowing, we were exposing him, and each exposure further weakens him.

CHAIRMAN: Was the chemical Tilt used on the bananas or on the pumpkins?

Mr WANT: I made reference to Tilt on account of bananas being referred to in the past, and also part of the Health Department's clear-air bill of health type of thing, and press releases that they have been issuing in the past which did concern that particular chemical in Coffs Harbour.

CHAIRMAN: What was the chemical involved with the pumpkins, fungicide or something?

Mr WANT: It was malathion.

The Hon. J. R. JOHNSON: I note the concerns of parents at the Coffs Harbour Christian High School. Have there been any comparisons done with the other high school and the other Catholic school, John Paul II, is it?

Mr WANT: John Paul College.

The Hon. J. R. JOHNSON: Yes, John Paul College, and the primary schools?

Mr WANT: What do you mean – and epidemiological approach on health?

The Hon. J. R. JOHNSON: Yes.

Mr WANT: No, there has not. But, through the literature, you will find – even in a very recent article, I think, from the States ---

Mrs WANT: From Mexico.

Mr WANT: From Mexico, which compared school children from the upper valley to school children in the lower valley, where there was more pesticide usage in the lower valley compared with the upper valley, and there were quite distinct differences in neurological functions and fine motor coordination skills, and so forth. We can table that if you would like us to do that.

The Hon. J. R. JOHNSON: Have you made any inquiries of those schools for comparison purposes?

Mrs WANT: How do parents know, if a child is coming home with a headache, what is causing it? If a child's body is not fighting a virus, why isn't it fighting the virus? Why do we have to resort to antibiotics? Why are they developing secondary infections? What has triggered their asthma that day?

Mr WANT: You are hitting us with what we have been continually hit with as one of the aspects by the authorities. They are saying, "Where is your evidence? Where are your studies?" Then, when we produce the evidence or the studies, or similar ones from overseas, they then say, "You have got no qualifications to make those conclusions, et cetera" and we get written off all the time.

The Hon. J. R. JOHNSON: I was not trying to write you off under any circumstances.

Mr WANT: That is fair enough. But, for example, there is difficulty in a group of parents to ring up another school and say, "What have your health problems been with children?" As you know, chemicals can affect the immune system; it can either over-excite the immune system, which is a definition of allergic response, or it can depress the immune system, which then leaves the body open to normal viruses and bacteria that it would otherwise be able to fight, and therefore that affected person goes to the doctor and the

symptoms are diagnosed and the cause is missed. Chemicals can also affect people neurologically. The symptoms can vary from headaches through to fine motor co-ordination skills, et cetera. It can also affect the endocrine system and the reproductive system. Such a task is enormous.

Mrs WANT: Anecdotally, I am getting a lot of telephone calls from mothers who are concerned about chemical use around the schools. But anecdotal evidence does not seem to stand up with our authorities.

CHAIRMAN: Thank you very much for your time. We will post you a copy of the transcript of your evidence given at this hearing. Would you check through that for accuracy before we release it. But you might have a look at the questions that I will give you. If you feel that you have not answered those in your evidence today, you might add a note to the transcript. Those questions are:

1. *How has the New South Wales Health Department and New South Wales Environment Protection Authority viewed the medical conditions faced by your family?*
2. *How can local and State governments assist people with conditions of multiple chemical sensitivity?*
3. *What outcomes would you wish to see result from the Committee's inquiry process?*

(The witnesses withdrew)

(Luncheon adjournment)

IAN MARTIN CAMPBELL, Representative, New South Wales Banana Industry Committee, of 160 Byangum Road, Murwillumbah, and

NEIL LEONARD TREVERROW, Technical Specialist, New South Wales Agriculture, of 133 Boggumbil Road, Goolmangar, sworn and examined:

CHAIRMAN: Mr Campbell, what is your occupation?

Mr CAMPBELL: I have just retired, Mr Chairman, but I was the Chief Executive of the Banana Industry Committee up until 30 June last.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr CAMPBELL: As a consultant to the New South Wales industry.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr CAMPBELL: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr CAMPBELL: I am.

CHAIRMAN: Mr Treverrow, what is your occupation?

Mr TREVERROW: Technical Specialist, Tropical Fruit, New South Wales Agriculture.

CHAIRMAN: In what capacity are you appearing before the Committee?

Mr TREVERROW: As a technical reference person.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr TREVERROW: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Mr TREVERROW: Yes, I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that the Parliament may override the Committee's decision and make that evidence public. It has not yet done so. Would you like to make a short statement before members of the Committee ask questions?

Mr CAMPBELL: I would like to present a position statement from the New South Wales banana industry, and then make some comment about the terms of reference. I have a full submission with some attached papers that I would like to table.

Documents tabled

Mr CAMPBELL: Use of pesticides in the subtropical banana industry has changed dramatically over the past 10 to 15 years. Though some pesticides are still needed to maintain our pest and disease damage at quality standards that are required by consumers and supermarkets, their use has been largely superseded by crop hygiene, pest and disease monitoring, and strategic pesticide application. This is a clear change of industry best practice since broad-spectrum pesticides such as dieldrin and arsenic were routinely applied during the 1950s, 1960s and early 1970s.

Integrated pest management and the introduction of new disease-resistant and pest-resistant banana varieties that suit the subtropical environment are now the industry's focus for the future. As early as the 1980s the New South Wales industry demonstrated its commitment to reducing pesticide use by banning the aerial spraying of insecticides. The industry has long supported the training of growers in the responsible use of pesticides.

Perhaps the industry's greatest shortcoming is that it has not successfully communicated its achievements to the wider community. In times when "scare campaigns" are more newsworthy than good-news stories, the subtropical industry, which has limited resources, has had to give priority to reacting to claims of irresponsible pesticide use, rather than publicising its own achievements. This has allowed outdated public perceptions of irresponsible pesticide use to persist. Public education and transparency are the keys to rational debate. The banana industry welcomes this opportunity to make a contribution to this inquiry.

I would now like to touch just briefly on some of the points of reference. ~~First~~ one, of course, is the sustainability of agricultural industries that currently rely on intensive pesticide use. As previously stated, the subtropical banana industry does not rely on intensive pesticide use. The subtropical region enjoys an important comparative advantage over the tropical growing area of north Queensland and other banana-producing countries that produce the Cavendish variety.

The region's cooler climate reduces disease and pest pressure. As well, Cavendish lacks the pest and disease resistant qualities of new varieties that flourish in the subtropics. I will elaborate on that later on. Consequently, the subtropical banana industry requires less intensive control programs than its tropical counterparts: for example, subtropical banana plants need an average of four to five leaf spray applications a year, compared to 22 to 25 a year in north Queensland and up to 45 sprays a year in Latin American countries.

The amount of insecticide now used for control of banana weevil ~~is~~ only 10 per cent of the standard application of the 1970s and 1980s, due to the introduction of the stem injection technique developed through research conducted by New South Wales Agriculture and funded by our industry. The injection technique replaces the former method of spraying the base of the entire plant and surrounding soil with chemical.

New varieties, such as Gold Finger and others that are currently being evaluated, have been selected for their disease and pest resistant characteristics and require very little

application of pesticide compared with Cavendish. The subtropical industry realises it cannot compete with our friends in tropical north Queensland in the production of Cavendish, which is the main variety that we eat. However, Cavendish lacks the pest and disease resistant qualities of the new varieties that are now starting to flourish in the subtropics.

The second point is on the social health, environmental and trade interests of agriculture in the wider community. The subtropical banana industry has recognised and responded to community expectations of food safety and protection of the environment. Development of best practice standards, approved supplier accreditation and the introduction of quality assurance systems such as HASSAP and SQF2000 have been a prime focus for the industry over the past two to three years.

Grower participation and farm chemical user courses have been actively encouraged to protect them, their families, the environment and the wider community. These initiatives have improved the sustainability of the banana industry in the region and have improved future trade prospects, as expectations of consumers in the wider community related to food safety intensify.

Many growers are active members of local landcare groups and have attended Farming for the Future and Property Management workshops. They have worked with the Department of Land and Water Conservation in developing approved land management practices to protect the environment by reducing loss of soil, movement of pesticides from the plantation and fertiliser runoff into waterways.

The third point is the role of pesticide users, local government and State agencies, et cetera. The banana industry has been involved in resolving local conflicts in relation to pesticide use through on-site meetings, public meetings, formal mediation, and to a lesser extent through the media. Usually, the industry's involvement has been in response to a claim of pesticide misuse made directly to the media, rather than to the banana industry, where the issue could have been addressed and perhaps resolved.

Reacting to media reports that highlight highly emotive claims is generally a difficult and unproductive task. The industry would strongly support the establishment of a forum to address the concerns of the community, whilst assisting the industry to respond more effectively.

The fourth point is related to opportunities for industry to address issues through research and development. Developing best management practice and new varieties has been a major focus of research and development and extension activity funded by the industry. Between 1993 and 1998 the industry allocated something like \$1.75 million to the National Banana Health Improvement project, to eradicate disease and develop improved plant health strategies. The recommendations of this project are now being implemented through the Australian banana industry.

Industry funds are matched by the HRDC for domestic projects. The subtropical industry also contributes substantially to international projects funded by the World Bank that aim to secure sustainability in the many countries where bananas are a staple food. In conclusion, Mr Chairman, I would like to say that our industry jealously guards our hard green product. We support this inquiry.

CHAIRMAN: Mr Treverrow, do you want to make a short statement before we ask questions?

Mr TREVERROW: No, Mr Chairman. We have been consulted in the preparation of the submission, rather than preparing a separate one.

The Hon. J. R. JOHNSON: The Committee was given information this morning that banana growers were being encouraged not to plant bananas in certain parts of the north coast. Is that correct?

Mr CAMPBELL: Not to my knowledge. There are a lot of natural problems: suitable land, proximity to the ever-encroaching urbanisation. Those are natural barriers. As I said in my submission, our future lies in the new varieties of bananas. We cannot compete with tropical north Queensland, and Cavendish, the main variety, is very much a tropical variety.

The Hon. J. R. JOHNSON: But they get tropical storms up there that knock all the stools over.

Mr CAMPBELL: That is right, and thank goodness they did this year, otherwise we would have seen the glut to end all gluts. But our future very much lies in these new niche market varieties that we are currently evaluating. Gold Finger is the first of those. I can assure you that there are a number of other varieties that are well in train. Those are varieties that do not suffer the same problem of leaf disease as is suffered by our Cavendish varieties. So we are very much encouraging growers in the subtropics to switch to those varieties.

The Hon. J. R. JOHNSON: Is there any restriction on bringing in suckers from Queensland?

Mr CAMPBELL: Unfortunately, we have a terrible disease called bunchy-top disease. Because of that, there is a quarantine zone covering the Tweed and Brunswick. We cannot bring planting material down from the north because they have a disease called sigatoka disease. So there are very severe restrictions on the movement of plant material.

The Hon. J. R. JOHNSON: Is bunchy-top a reportable disease?

Mr CAMPBELL: Yes, it is, under the Act.

The Hon. J. R. JOHNSON: Are there bunchy-top inspectors still available?

Mr CAMPBELL: The industry did for a number of years employ a gang of inspectors to go around on a regular basis and conduct inspections. We have now contracted that out to the ex-detectors, and that is funded by the New South Wales industry.

The Hon. J. R. JOHNSON: Are bananas still dipped?

Mr CAMPBELL: No. Some dipping is done. Perhaps Neil Treverrow could answer that question better than I.

Mr TREVERROW: At this stage most bananas are not dipped because the previous practice of doing that was to address diseases like squirter disease, associated with preparing

single bananas. Since the trade has moved to hands or clusters, that has taken away the need to do that dipping.

Mr CAMPBELL: If I might add that we now have to comply some very stringent ICA arrangements by which bananas have to be packed in a hard, green state to get our food into the Victorian markets, because of fruit fly. Of course, that does away with the necessity to dip.

The Hon. J. R. JOHNSON: Do we import any bananas?

Mr CAMPBELL: No, we don't. There is a small amount of dried bananas brought into this country. They are fried and dipped in oil, and they are used in dried food. We strongly lobby governments to keep bananas out of Australia because of the exotic diseases that virtually every other country in the world has. I mentioned earlier that we have to aerially spray our bananas down here four to five times a year. Latin American countries have to do it nearly every week of the year. So that is a very good reason to keep them out.

The Hon. J. R. JOHNSON: Is there still ground spraying by fellows with packs on their backs?

Mr CAMPBELL: There is a small amount of ground spraying that goes on, but you can only do that where there is relatively flat land. As you would appreciate, bananas are a tropical fruit, and they are grown in hilly-goat country. You cannot effectively carry out the leaf spraying programs from ground rigs.

The Hon. J. R. JOHNSON: What is the main disease, other than bunchy top, that affects the industry?

Mr CAMPBELL: Here in the subtropics Lady Finger suffers from *Fusarium* wilt, commonly called Panama disease. There is no cure for that, despite the world tossing a lot of dollars at it. Bunchy top and Panama disease, and a few recent incursions of black sigatoka disease in north Queensland.

The Hon. J. R. JOHNSON: When you get Panama disease, how do you deal with the problem?

Mr CAMPBELL: You can't do anything, unfortunately. It is a disease that moves in the soil. Of course, animals, bird life and human traffic moving from an infected plantation to another plantation will introduce the disease. That is why you see a lot of signs around Lady Finger plantations, "Stay at the gate. If you want to come in, contact the farmer and he will bring you in in his own transport."

CHAIRMAN: So, if you get Panama disease, you basically have to close your farm down?

Mr CAMPBELL: Yes. In some plantations it is a little bit slower to infect the neighbouring plants. But, yes, once you have got it, it is a sentence.

CHAIRMAN: Do you have to quarantine the current crop?

Mr CAMPBELL: It has just been made a notifiable disease under the Act. There are all strains of course of fusarium wilt. The most severe is tropical race four, and that affects all varieties of bananas. Once again, that is a disease that some of our neighbouring countries have.

Mr TREVERROW: If I could add a comment, Mr Chairman. While Ian is quite right: with the current varieties the disease is very prevalent, one of the major criteria for selecting new varieties is that they have resistance to fusarium disease, to provide an alternative, such as Gold Finger.

The Hon. J. R. JOHNSON: Is the Banana Growers Federation still the sole marketing agent?

Mr CAMPBELL: The Banana Growers Federation Co-op. No, it is still our biggest co-op in New South Wales, but the BGF now has a lot of clients in north Queensland as well as in New South Wales. There are numerous other marketing agents.

The Hon. J. R. JOHNSON: In Queensland they are not directed to the Committee of Direction?

Mr CAMPBELL: No, not really. All growers reserve the right to consign to whomever they wish.

The Hon. J. R. JOHNSON: Is that a recent change?

Mr CAMPBELL: I think so. As you are probably aware, the Committee of Direction went through some pretty torrid times. The QFEG does not have any wholesaler outlets. There are probably four major wholesalers. One is the Banana Growers Federation, or Banana Marketing Australia, BMA, as they call themselves; there is Chiquita; there is Lamana. There are a number of smaller wholesalers, but they seem to be falling off the line as we go along. Supermarkets have taken strategic positions to set up an arrangement with Pacific wholesalers who meet their SQF2000/HASSAP programs.

CHAIRMAN: They deal direct, not necessarily going through the Sydney markets.

Mr CAMPBELL: Yes. Unfortunately for all fruit and vegetable industries – and it is probably our own fault – supermarkets are sourcing direct from on-farm. It would be fairly easy to forecast the demise of the central marketing system – which, to my mind, would be a terrible thing to happen, but that seems to be the way it is going.

CHAIRMAN: I was Deputy Chairman of the Sydney Marketing Authority before I came to this job.

Mr CAMPBELL: You will understand what I am saying, Mr Chairman.

The Hon. J. R. JOHNSON: Where is the research into bunchy top mainly undertaken?

Mr CAMPBELL: Mainly through the efforts of Professor Jim Dale. We were told at our recent national banana congress – and correct me if I am wrong, Neil – that we have

already got a plant in the laboratory situation that is immune to bunchy top, but it will probably be another five to ten years before it is put out in the field for evaluation.

The Hon. J. R. JOHNSON: Are the banana farms in Western Australia affected by bunchy top?

Mr CAMPBELL: To the best of my knowledge – and I take it you are talking about Carnarvon ---

The Hon. J. R. JOHNSON: Yes.

Mr CAMPBELL: --- they have got their own set of problems, but bunchy top is not one, obviously because of the very stringent movement of planting material. The only material that they would get would be tissue culture material, and obviously it is free of disease.

The Hon. J. R. JOHNSON: Has any progress been made in relation to bunchy top?

Mr CAMPBELL: Yes. I would like to think Professor Jim Dale is within five or ten years of coming up with a plant that is immune to bunchy top.

The Hon. J. R. JOHNSON: Is it of paramount importance that bananas be sprayed?

Mr CAMPBELL: Yes. Obviously, the fruit, to be filled out to its maturity, has to draw its plant food from the leaf, and the more leaves that you have when the bunch is thrown, the faster and better that process takes place. A new variety, Gold Finger, which Neil mentioned, is one variety that does not suffer from the disease, as does Cavendish or Lady Finger.

The Hon. J. R. JOHNSON: Is there any requirement on those working in the industry with pesticides, herbicides, et cetera, to be monitored on a yearly basis, or more frequently, for health reasons?

Mr TREVERROW: As far as I am aware, there is no formal requirement. There are opportunities for growers to do that.

The Hon. J. R. JOHNSON: Is it recommended?

Mr TREVERROW: It is certainly recommended.

Mr CAMPBELL: A very large percentage of our industry have done the chemical users course. When we were employing the inspectors for bunchy top, as a matter of practice we used to have the gangs undertake blood tests each year, just to make sure that there were no problems.

The Hon. J. R. JOHNSON: In relation to farmers, particularly around the Woolgoolga area, who do not speak nor read English, are any arrangements made by the department for the interpretation of the directions on containers of various chemicals be made available in their own language or languages other than English?

Mr CAMPBELL: Not as far as I know on the label instructions. I think with our Indian growers – who make up a fairly large percentage of our industry – if mum and dad can't read, certainly the children can. We also have the local association of Woolgoolga, the chairman and vice-chairman of which are Indian growers. One of my directors, in my previous position of Executive Officer, was also an Indian grower. We hold a number of meetings, and things are put in Punjabi or whatever dialect they speak. So I think they are pretty well informed. I take your point with the older growers, but now most of the banana growers who are surviving are youngsters and they know exactly what is going on.

The Hon. I. COHEN: Mr Campbell, on the monitoring side: does your industry have any information or details or statistics on the health condition of your workers in the industry? Do you have any information that has been compiled at all? You have said quite clearly that there was a massive chemical problem up to a certain point and that then the regime has seen great steps forward. Do you have any information on that?

Mr CAMPBELL: I am sure I said "massive" in the sense of the past. I stated that our reliance on chemicals has dropped dramatically. As far as records of monitoring of growers and workers, no, we don't.

The Hon. I. COHEN: You mentioned that there was a lot of grower participation in what is effectively a system of self-regulation – which, obviously, can be the best way to go if you get industry people on side. But, do you see from your industry's point of view a need for tighter regulation of chemical usage and pesticide usage? Granted, the industry has improved – not just your industry. The pesticides that were used a generation ago is not a regime that we want to compare with, really, but look at the health of the whole of the community. Do you see, from your organisation's point of view, a role for specific regulation that could come about with amendment to the current Pesticides Act?

Mr CAMPBELL: Yes, certainly.

The Hon. I. COHEN: Have you got some details there?

Mr CAMPBELL: We certainly endorse the responsible use of pesticides. In my submission I mentioned that we are spending a lot of research and development dollars to find varieties that reduce reliance on chemicals. But also, of course, we have to produce a product that is acceptable to consumers. We would all like to be totally organic, but the reality is that you cannot grow bananas in commercial quantities totally organically. It is a subject close to my heart.

The Hon. I. COHEN: It is close to mine, too. Have you looked into any alternative pyrethrum-based and neem-based or natural materials that can do the job of chemicals, given that you have stated that there has been a massive reduction of pesticide usage? Is there the opportunity – which, in terms of niche marketing, must be a money spinner – to go into organics under certain circumstances?

Mr TREVERROW: In terms of looking at some of the alternative treatments in various projects on integrated best management that the industry has funded and investigated, there are compounds like neem that use that. A recently concluded nematode management project went through a suite of what are seen as potentially organic style treatments. Those opportunities have been looked at; they have not been ignored. In general, they have not been

highly effective either. I think that, rather, the direction that the industry is heading in is towards a more holistic approach to the growing of the crop and minimising the current use of pesticides. I have not found any of these alternatives which can stand alone.

The other point that I would add is that the industry has been quick to embrace the HASSAP approach to food production quality assurance. Within that, of course, the food safety components of those plans certainly ensure that growers keep accurate records of what their pesticide usages are and that they stand by the usage according to the regulations.

The Hon. I. COHEN: Mr Campbell, you mentioned that there were a lot of emotive complains about this problem that we are all trying to come to grips with – new settlement, different land use patterns, encroaching on traditional banana farming areas. There is still aerial spraying in Middle Pocket, and there has been a lot of complaint from that community. Could you comment on your perspective on that?

Mr CAMPBELL: I was deeply involved in that process some 18 months to two years ago. Middle Pocket was used by certain people who, I suspect, have a hidden agenda. It was very interesting. There was a letter from the community, the people who actually reside in Middle Pocket, that they were sick to death of being used as pawns in an issue that went far beyond Middle Pocket.

I might add too, Mr Chairman, that people tend to forget that banana growers are also part of the community. They have wives and children, and obviously we are not going to endanger our people. We are always seen to be the big bad guys. As an industry, there are fairly strict guidelines for aerial spraying, and if any aerial operator goes outside those guidelines, then we fully support the full wrath of the law.

The Hon. I. COHEN: One problem that has been raised with this Committee is that there are no clear guidelines about aerial spraying near roadways and that aerial spraying, by its nature, has to happen in the morning. There have been reports to this Committee that children on the school bus have been severely affected, yet, as I understand it, aerial spraying is still happening on extremely small plots. I have seen the plot in question at Middle Pocket. It is undulating land, but not overly steep for ground spraying.

I understand there is still aerial spraying on that site, and that there is still a great deal of concern in the community. How do we resolve that from your industry's point of view? Is it not a reasonable concern, in particular, that the pesticides legislation does not take into account roadways?

Mr CAMPBELL: I think you would be aware also that part of the result of the mediation process was that there was to be no spraying during school bus times. There was an arrangement between the aerial operator and members of the community that they would advise when it was likely that aerial spraying would take place. But you can appreciate that we can only do that in certain hours, and that that can change from hour to hour because of wind movement.

We are always willing to sit down and talk to communities to resolve these matters. Unfortunately, usually we are reacting to some media publicity. I was quite amused to see that the last news that depicted aerial spraying. Now, that was a shot taken many years ago down south. But, of course, it made very good footage for the opponents to aerial spraying.

The Hon. I. COHEN: I have inspected the site. What is the industry's objection, given the controversy surrounding the issue, to doing away with aerial spraying?

Mr CAMPBELL: In this particular plantation?

The Hon. I. COHEN: That particular plantation I think is a case in point, because it is extremely small and there are power lines just beyond it. It must be quite a feat for the crop duster to get out of there safely. I repeat, it is an extremely small plot, on what I consider is not a particularly steeply sloping piece of land, compared with a lot of other banana farms, in Main Arm Valley and such like. Why not do away with aerial spraying in the area? Why not give some support for ground spraying in order to indicate to the community that the industry has the best of intentions and achieve a greater degree of safety?

Mr CAMPBELL: I know the particular plantation that you are referring to. We actually went there and said, "It's a small plantation. Do you really need to do aerial spraying?" But this particular grower has his rights, and unfortunately I have no power to say, "Sorry, you can't have aerial spraying of your plantation." We all have individual rights.

The Hon. I. COHEN: In those circumstances, would you not think it appropriate that a government instrumentality would have the power to assess a circumstance like that – because children on their way to school have rights too?

Mr CAMPBELL: Where do you stop and finish with this? That is the dilemma, I guess, for government.

The Hon. I. COHEN: Would you not agree that taking a precautionary approach to the health of particular children in the community is where you would have to stop?

Mr CAMPBELL: Well, as part of the mediation in the Middle Pocket issue was not spraying during school bus times and not spraying near the bus stop. The kids could walk a few metres away from this bus stop, but one of the families said, "No, that's my kid's right to catch the bus there" and they were not going to shift. Why couldn't we just shift the bus stop? Everything seemed to be slanted to the suggestion that the industry had to make all the changes, but there was no willingness of the opponent to do anything in that situation.

The Hon. I. COHEN: Perhaps the established fact that spray drift can travel for some kilometres and cause chemical trespass would mean that moving the bus stop a hundred metres might be just like moving the deck chairs on the Titanic.

Mr CAMPBELL: That can be easily resolved if the Environment Protection Authority has monitoring stations to measure spray drift.

The Hon. I. COHEN: Does the Environment Protection Authority have monitoring stations at Middle Pocket?

Mr CAMPBELL: All I know is that there has been some publicity given to the Mullumbimby Creek area, and there have been a lot of claims in the media about spray drift there. But, to my knowledge, the Environment Protection Authority has monitored that and there is no spray drift. Unfortunately, that is not reported in the media.

The Hon. I. COHEN: On a related issue, what is your response to the view that people are saying that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass. How do you feel about instituting buffer zones and making them legislatively binding?

Mr CAMPBELL: Buffer zones obviously are a very good thing. The unfortunate thing is that we have inherited a lot of problems. I suppose local government has a lot to answer for too. But, I suppose if they had had a crystal ball they would never have approved residential sites close to existing banana plantations. You have the ridiculous situation now that you can have a plantation, and if the neighbour sells out and that property is subdivided, you can build very close to that plantation.

So, what is the farmer supposed to do? Is he to destroy X number of metres of his plantation to accommodate the law as it stands? I think there is a great responsibility for local government, before it gives approval, to look at existing land uses. The right to farm also comes into the question. We do have to feed ourselves. We tend to forget that.

The Hon. I. COHEN: In terms of these disputes that occur involving an allegation of chemical trespass and amendment of the Pesticides Act that will hopefully result from part of this inquiry, would you care to give the Committee an opinion as to who should be responsible if there is chemical trespass? Are we looking at the owner of the land, the pilot of the aeroplane that is spraying the chemical, or the Environment Protection Authority, which is the consent authority?

Mr CAMPBELL: I think we all have to take responsibility for our actions.

The Hon. I. COHEN: So would you say all three?

Mr CAMPBELL: There are not too many disputes that cannot be resolved by everyone sitting down and talking about the issues. The banana industry has been the first one to want to sit down and talk specifically. Aerial spraying is an emotive issue. We offered to do that very early in the Middle Pocket matter, but the opponents of that would only talk to us if they had the media present.

The Hon. I. COHEN: Were you involved in the mediation regarding that matter?

Mr CAMPBELL: Yes, very much so.

The Hon. I. COHEN: There was some concern that the mediation process went for 12 hours straight and that many people had to leave, so that it was not an adequate mediation process and that the result was not in keeping with what mediation should be all about. Would you care to comment on that?

Mr CAMPBELL: I am sorry, but I cannot agree with that. I think all the stakeholders were there. One person, who seemed to be driving the inquiry there, left the meeting. It was only after this particular person left the meeting that we came to what I believe was a consensus on how to get around the problem. We are always keen to sit down and resolve these problems.

The Hon. I. COHEN: Would you have an ongoing, regular meeting process at all regarding mediation with people?

Mr CAMPBELL: No, we don't. But we are always willing, as I said, to sit down and discuss a problem. What really gets me is that if there is a problem the first we know about it is when we turn the TV on at night.

CHAIRMAN: Thank you very much for coming and giving the Committee the benefit of your evidence. We will send you a copy of the transcript of your evidence in the next couple of weeks. You might check that for accuracy. At the same time it will contain a number of questions, which I will give you a copy of now, and I would ask you to respond to those questions if you feel that you have not responded adequately or at all in your evidence today. Those questions are:

1. *What is the industry's view concerning the feasibility or otherwise of the legislative and policy amendments outlined in the Environment Protection Authority's discussion paper?*
2. *What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass?*
3. *Can you outline your industry's position with respect to section 4.4 of the discussion paper concerning shared liability in the misuse of pesticides?*
4. *What steps has the Society taken to promote the reduction of pesticide use by producers? Does the Society support the introduction of genetically modified crops to combat the pesticide problem?*
5. *Do you have any examples where best management practices in your industry have improved the use of management of pesticides?*

(The witnesses withdrew)

JOHN ROLAND BEARD Director, Northern Rivers Institute of Health and Research, P.O. Box 498, Lismore, affirmed and examined:

CHAIRMAN: Professor Beard, what is your occupation?

Prof. BEARD: Medical practitioner.

CHAIRMAN: In what capacity are you appearing before the Committee?

Prof. BEARD: As an individual.

CHAIRMAN: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Prof. BEARD: I did.

CHAIRMAN: Are you conversant with the terms of reference of this inquiry?

Prof. BEARD: I am.

CHAIRMAN: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that Parliament has the right to override the decision of the Committee not to publish evidence taken in camera and may decide to make that evidence public. I might add that it has not done so as yet.

The Hon. J. R. JOHNSON: Professor Beard, you are appearing not as a departmental officer but as an individual.

Prof. BEARD: I actually asked Annie how I had been subpoenaed, because I was not sure. I am happy to give evidence as a representative of the department. However, obviously, my own views may be different from those of the department, and therefore it is probably easier if I give evidence as an individual.

CHAIRMAN: Some of the questions related to the department, so perhaps it would be advisable to have your evidence as a representative of the department.

Prof. BEARD: I am happy to do that.

CHAIRMAN: Do you have any comments that you would like to make by way of an opening statement?

Prof. BEARD: No, I do not have an opening statement. However, I thought I could give the Committee some of my background, which might be helpful in framing what questions you would like to ask me. I am a medical practitioner with post-graduate training in public health, including toxicology and specialist qualifications in public health medicine. I am

also currently studying for a PhD with the University of Sydney on the effect of high combined pesticide exposure on a group of agricultural workers.

Other projects that I have been involved include the investigation of a cluster of birth defects in Coffs Harbour and a smaller investigation, involving 15 children with diverse clinical systems which were thought by their parents possibly to be related to pesticides; two air monitoring surveys looking at pesticides in ambient air in Coffs Harbour; and a small study looking at the drift of Roundup after aerial application by helicopter.

I have worked on DIPMAC, the Cattle Tick Dip Site Management Committee, and I was involved in setting the soil criteria for DDT. I have also just completed a study on DDT and its relationship with bone mineral density. My PhD, as I said, is a study of a large group of workers, over 50 years, looking at their health outcomes in terms of cancers and deaths, and also involving a literature search of all the epidemiological data relating to pesticides.

CHAIRMAN: Over the years chemicals that have come on the market have been considered by the agents who sell them as “Totally harmless. You can drink this.” I well recall my former Federal member actually drinking a schooner of 2,4-D up on the north coast here somewhere at a National Party conference, saying that there was nothing wrong with it.

Prof. BEARD: Where is he now?

The Hon. J. R. JOHNSON: Ex!

CHAIRMAN: Obviously that was being a bit game on his part. You mentioned Roundup. When Roundup, glyphosate, came out years ago they said, “It’s totally harmless.” Now, suddenly, the instructions start to change. Have you got any comments, seeing that you have done a study on Roundup?

Prof. BEARD: I did not do a study on the health impacts of Roundup. In fact, that is something that I know very little about. But, in general, I would have to say I have been very surprised how little we know about the health impact of pesticides. And the more I read, the less I think we know, especially from a human health perspective. There are some quite extensive studies looking at the impact of very high doses of pesticides in rats, but the implication of those in humans is quite debatable. The other evidence is very poor.

CHAIRMAN: It is strange that years ago you would drench cattle with a particular drench that had a withholding period of one day. A few years later the same chemical used in the same drench would have a withholding period of seven days. I notice it is now 60 days. Obviously, this is the same chemical. It seems apparent that a lot of the chemicals that come on the market have not had enough research done on them. Whose job is that?

Prof. BEARD: I think that is a very good question. The problem is that, really, to get to a position where you can make a judgment, you would have to do so much research it would be impossible to get any chemical on the market, in my estimate.

CHAIRMAN: That is a problem that somebody mentioned, not this morning: that some of the new chemicals coming out have less effect on the environment but that it is too difficult to get those new chemicals registered, so that people keep using the older chemicals, which are a lot more dangerous.

Prof. BEARD: That is true. Unfortunately, from a human perspective, you cannot trial them on humans, so you fall back to testing them on rats and rabbits.

The Hon. I. COHEN: Professor Beard, has the Health Department recognised the condition of multiple chemical sensitivity?

Prof. BEARD: I don't think the department as such has a position on it. There is a lot of debate in scientific literature as to whether it exists; and, if it exists, exactly what form it takes and what it may relate to. I would say that most of the evidence is probably suggesting that there is a condition but, in terms of the exact nature of the origins and implications, that is still very much up in the air. I don't think the department would disagree with that.

The Hon. I. COHEN: There is quite a deal of public debate on its existence. In fact, there is quite a deal of public debate on its existence being dismissed, would you not agree?

Prof. BEARD: Yes. And I am not dismissing its existence, and I do not think the department would.

The Hon. I. COHEN: Does the department act upon complaints about say children suffering from this form of chemical sensitivity?

Prof. BEARD: The problem is: How do you act on something when you are not quite sure whether it exists and, if it exists, what causes it? I mean, how do you actually respond? The department, in general, does apply the precautionary principle. If there was enough evidence to suggest that there might be a problem, I think it would take whatever the appropriate action is.

The Hon. I. COHEN: If a parent came by the department with a claim of chemical injury, what action would the department take? Is there a set agenda or program?

Prof. BEARD: No, there is no set protocol for response. I think we would look at the history that was given in respect of the child, and look at whether there is a history of possible exposures that could relate to that. If there were some that appeared to be inappropriate, we would take action in terms of responding to those. So, for example, in a hypothetical setting, if a child was playing in a playground every day and that playground was sprayed with pesticides every day that the child was there, we would probably take some action to recommend that something be done. But we would not necessarily accept that it was the pesticides that were causing the problem. We would just be applying the precautionary principle.

The Hon. I. COHEN: In Coffs Harbour schools I understand that contiguous to the school grounds of one particular school – and I do not know the name of it offhand – a banana farm was developed.

CHAIRMAN: On three sides of the school grounds.

The Hon. I. COHEN: Yes, on three sides. What position would the Health Department take in those circumstances? Are you doing any monitoring or any studies of a situation like that?

Prof. BEARD: My area of jurisdiction ends at Grafton, so I no longer make the decisions for Coffs Harbour.

The Hon. I. COHEN: Are you aware of what I am talking about?

Prof. BEARD: No, I am not specifically aware of the school that you are talking about. However, I think the real issue there is a planning one. We would certainly, in the first place, be arguing very strongly with local government that it needs to be making appropriate planning decisions.

The Hon. J. R. JOHNSON: When you say "We", do you mean we as in "the department"?

Prof. BEARD: Yes, meaning the department. In fact, whether I speak for the department or the Northern Rivers Area Health Service, there is a distinction. The Northern Rivers Area Health Service has a board, and I am accountable to that board. I am also, though, appointed as a medical officer of health with links to the department. Most responses on environmental health issues are done locally by area health services. So, when I say "we", I am talking about the area health service. However, we would do that in discussion with the department. So, when I say "we", it is probably quite important that I make that distinction.

The Hon. I. COHEN: Am I hearing that you were not in any way involved with an air monitoring program that occurred in Coffs Harbour?

Prof. BEARD: Yes, I was.

The Hon. I. COHEN: You were involved with that?

Prof. BEARD: Yes.

The Hon. I. COHEN: So you are aware of that situation.

Prof. BEARD: It was not in response to that particular issue that you were discussing.

The Hon. I. COHEN: I see.

Prof. BEARD: It was more in relation to the broad question.

The Hon. I. COHEN: The air monitoring in Coffs Harbour was for propiconazole, was it?

Prof. BEARD: Yes, Tilt.

The Hon. I. COHEN: The monitoring was undertaken for that chemical, however it did not monitor for surfactants and solvents. Have surfactants and solvents been proven to

be of significant impact, particularly in relation to spray drift, where the surfactants and solvents can be very mobile, as I understand it?

Prof. BEARD: The study was not specifically for Tilt; it was for all pesticides, and it was only looking for the active ingredients of those substances. We did it in two parts: one was looking at the volatile component in air, and another looking at the aerosol particulate, which would be more likely from spray drift. We only looked at the active ingredient.

The problem with looking for the other ingredients is that they are extremely common in use in industry and in general. In fact, if you look at propiconazole, the proprietary formulation, when I went through it the other ingredients were so common that, first of all, it would have been very difficult to test for because I did not know the sampling protocol; but, even if I had, it would have been impossible for us to distinguish whether it was coming from the pesticide, or from a car, or from an industry. It is so widespread in the environment.

The Hon. I. COHEN: Are you saying that such a study was of little consequence?

Prof. BEARD: No, not at all. In fact, I thought it was of quite some significance. It identified two pesticides in common use detectable in ambient air between 5 and 15 per cent of the time, one being heptachlor and other being chlorpyrifos. Both of those were used generally domestically. In fact, we found a significant association between their use and application by domestic pesticide, termite sprayers. And, when we detected it in outdoor air, we actually thought that that was quite significant; that, generally, people would be exposed to something that they may have had nothing to do with. But, from our study, we could not find any agricultural link, although some of the chlorpyrifos that we detected may also have come from banana use.

The Hon. I. COHEN: I understand that birth defects peaked in about 1984 in the Coffs Harbour area.

Prof. BEARD: Yes.

The Hon. I. COHEN: Obviously, that was a major problem. I understand also that the product Tilt had xylene in it at that time. Has there been any subsequent investigation or action against the chemical companies involved in the manufacture and distribution of that product, which was changed at about that time?

Prof. BEARD: I am not aware of any action with respect to the companies, but the cluster of birth defects was investigated several times, looking at possible associations – some with pesticides and some with things like arboviral disease. We ourselves undertook what is called a case control study in the early 1990s, looking at parents of children with birth defects and those without them and asking them for their history of exposure. The trouble with doing those sorts of studies is that it is very rarely that you have enough numbers for them to be able to detect if there is a link; and, secondly, you are relying on people's recall, and that is not a very good estimate of exposure.

The Hon. I. COHEN: Perhaps not. Do you have any figures at all that correlate exposure to birth defects? Or are you saying it cannot be proved?

Prof. BEARD: In the different studies there was no link that could be found between the aerial application of pesticides and birth defects. In our own study, we found two significant associations with what people recalled as their exposure: one was the domestic indoor use of pesticides, in other words aerosols; and the other was marijuana smoking in the fathers. We did not take that paper further because we believed both of those reports reflected what is called “recall bias” in that the parents of children with a birth defect are more likely to report things that they worry about that they feel may have been linked, so that does not give you an accurate picture in terms of the outcome.

The Hon. I. COHEN: In regard to the children of Coffs Harbour and that area, has there been a measure of the chemical residues in their blood? Is there any facility that allows that, particularly in that area where this has been such a problem?

Prof. BEARD: No. I understand that a lot of them have done that privately. The problem with testing blood or other biological monitoring for pesticides is to know how to interpret the results. For example, if we took blood from all the people in this room, we would probably find DDT in over 50 per cent of us at detectable levels. But what does that mean in terms of health? It goes back to what I said at the very beginning: unfortunately, the evidence that we have about whether pesticides cause health problems or not is so poor that we cannot say. So there would be the same problem with those children. If we had the results back from testing of 10 or 15 children, we would not have a benchmark against which to measure them.

The Hon. I. COHEN: But you knew at the beginning of the assessment the number of children. You knew that that was the limit of the number of children, and that it was not a big sample. Did you inform the parents involved that you were going to investigate the matter, knowing that that was a limited sample that was available?

Prof. BEARD: There are two different studies that I think you are talking about. With the birth defects study, we started off with 70 cases, which would have given us the power, if we had been able to trace them. But we had a lot of trouble tracing them, so the power dropped. But, obviously, we informed all of those parents. There was another, very small study of children that had ill-defined clinical symptoms. We did that smaller study, and that was not ever going to be of epidemiological significance because of the numbers.

The Hon. I. COHEN: As to Munchausen syndrome, I understand, from a number of parents that I have spoken to, that there is a lack of confidence in the assessments of some medical people that there was a bad reflection on their parenting regarding what they saw as chemical effects on their children; it was assessed as being psychological and the fault of the parents. Would you care to comment on that from a Health Department point of view? Was that taken into account? Was that used very frequently in terms of chemical complaints?

Prof. BEARD: I have never heard that used, either as a term or as a notion. I think our view was that parents complaining were legitimately concerned about the health of their children. We, as a department – because we were a department at that time – were concerned to find out whether there was a possible cause. Unfortunately, the tools at our disposal were not good enough to say categorically either yea or nay.

The Hon. I. COHEN: On the issue of birth defects, I understand that there was a study of miscarriages of defects as well as terminations, yet the study was complicated in that

the people who were pregnant and had ultrasounds were sent to Sydney. So, in actual fact, we do not get a very accurate record of terminations in the locale and of problems that might have been induced by chemical exposure. Would you care to comment on that?

Prof. BEARD: Up until, I think, the early 1990s there was not a consistent notification system for birth defects. What you are saying is true: parents who had a birth defect identified by ultrasound or by blood test or amniocentesis might have a termination and that would not be identified as a birth defect. So you might end up with lower rates than you would expect. After 1991 there was a more comprehensive birth defects notification system in place, and again it was changed a few years later. I understand that it does now take account of those things.

In terms of the birth defects study, that would not have made a difference because we were comparing the people that we identified with birth defects against a group of controls; we were not looking at the rates of birth defects. As I understand it, now the rates of birth defects, under this better notification system, in Coffs Harbour appear to be nearer or almost the same as the State average.

The Hon. I. COHEN: Is that because we are dealing with a relatively chemically-free environment, or is that because there is active intervention, assessment and the potential for terminations to occur?

Prof. BEARD: I do not think it is either. My judgment of what happened in Coffs Harbour is that in the early 1980s there was a true cluster of cleft lip. What caused that, nobody knows. It is possible that it could be related to pesticides; it is possible that it could be related to a number of other things. We will never know, because it is impossible to determine. That raised a lot of awareness about the issue of birth defects in Coffs Harbour, and probably the level of notification increased because people were more aware of it. So we had an artificial increase over a period of years across a whole range of birth defects.

Then, when the notification system became standardised across New South Wales, that effect was withdrawn, and we came down to a level that was the same as for the rest of the State. In that time the propiconazole, the chemical that was introduced at the same time as the original cluster – which is something worthy of note – has continued in use. The only changes that I can see are: one, I believe the reservoirs of Coffs Harbour were uncovered in that early period, and they have now been covered; and, two, there may have been a change in the formulation, as you mentioned before.

CHAIRMAN: You mentioned that, during the monitoring process in Coffs Harbour, two of the chemicals that turned up were heptachlor epoxide and pyrifos. Do you have any comment on how those pesticide applicators should operate in residential situations? In other words, should they put out signs and give other forms of notification to neighbours in a residential area?

Prof. BEARD: The other issue is that it is not only to neighbours but to people who will then live inside the house for the next six months, because the levels inside are probably ten times the levels that we are detecting outside, if you look at overseas studies.

CHAIRMAN: You may want to take that question on notice.

Prof. BEARD: No, that is fine. Having said that it was detectable, when we compared that against the standard of international health criteria, even the maximum levels that we detected would not be levels that would cause health effects, using the available evidence. You then come down to the more philosophical or moral question of whether people should be informed if it is being used next to them. No, I would not care to comment on that.

The Hon. J. R. JOHNSON: Professor Beard, you indicated that you were monitoring a large group of workers. Was that through Occupational Health and Safety, employer or trade union involvement?

Prof. BEARD: It stemmed out of the DIPMAC Committee. It is basically looking at the health outcomes of the staff of the Department of Agriculture involved in cattle tick dipping operations. That has been in co-operation of the Department of Agriculture and also the Public Service Association, which represented the staff.

The Hon. J. R. JOHNSON: I think the courts decided something on that during the week.

Prof. BEARD: I don't know about this week, but they certainly decided a couple of months ago, yes.

The Hon. J. R. JOHNSON: I thought I read it in yesterday's *Northern Star*. Do you know of any of the trade unions that are involved in monitoring, or that have raised issues regarding staff being monitored?

Prof. BEARD: Certainly the Public Service Association is one of the groups that raised the issue of whether this cohort of workers we are looking at should be monitored. Monitoring the workforce has multiple problems. First of all, you need numbers. You need enough people working in a field to make it a worthwhile monitoring for research purposes. And, if you are monitoring for occupational health and safety surveillance, you come up against the benchmark problem that you don't know what the results mean. The focus, because of that, has been on trying to minimise exposure, rather than trying to rely on monitoring to give an indication. But there are monitoring programs, as I am sure you are aware, for organophosphates that are periodically being done by different occupational health and safety agencies.

The Hon. J. R. JOHNSON: Of recent times, in the western part of the State in cotton areas, the Committee has heard all sorts of evidence and all sorts of claims. What astonishes is that there is no reporting mechanism on the health of the citizenry as well as the workers. Perhaps it is too hard, or it can't be done, or there is no past history to go on. A newspaper clipping was presented to the Committee indicating that a chemist of longstanding in an area under cotton had noted that sales or the rate of use of puffers for asthmatics had gone sky-high. Can you see any worth, in an area that is not now under cotton but is going to be under cotton, in surveys being done now, in say Condobolin – where it is projected that cotton will be grown – prior to the cotton being grown, prior to the spraying (aerial and ground) and that that the position be monitored over a period, and you have some results pre-cotton, pre-pesticides versus post-pesticides? Would such surveys have any merit?

Prof. BEARD: There are a number of problems. The first one would be ethical, in that you would be using humans essentially for research. I mean, I think if we believe there is a problem with chemicals, we should not be using them, rather than conducting research on humans.

The second problem is: What do we measure? Over a short period of time, the symptoms can be so subjective. If people are aware that a chemical is being introduced into their environment, they may believe that they have got more of those symptoms, and so it would be difficult to measure. If you could identify some hard outcomes. For example, for asthma, you might be able to do peak flows; so that you can measure people's lung function, rather than people reporting that they had more test problems.

There might be some use in doing that. But properly conducted epidemiological research in places where chemicals are already in use could also be of benefit, without some of the ethical problems. One of the problems with doing that is the lack of information. You have already highlighted the fact that for some health conditions we do not have trend data, or we do not have ongoing data as to whether there are more or less of them. We do have that for some things, but some of the more subtle health effects are not available.

The one thing that we do not have, though, and the thing that is almost always difficult to identify, is exposure. Coming back to your question about occupational health, it is one thing to want to do a study into workers, but it is another thing to do it if you do not have any exposure history. For example, the speakers before me referred to pesticides and said that if there was a register of people who used pesticides and what chemicals they used, it would then be relatively easy to do long-term follow-ups of their health, and similarly with people working in specific occupational trades that might use pesticides.

I think those, probably in the short term, give more likelihood of finding something, because many of the outcomes that we are looking at might have a lag period of 10 or 20 years between exposure and outcome.

The Hon. J. R. JOHNSON: In your opening statement you indicated a rather impressive array of projects that you have been interested in. Are there any other projects relating to health on which you have concluded your research?

Prof. BEARD: In relation to pesticides?

The Hon. J. R. JOHNSON: Yes.

Prof. BEARD: No.

The Hon. J. R. JOHNSON: Are there any that are ongoing?

Prof. BEARD: The study of cattle tick dipping staff is an ongoing study.

The Hon. J. R. JOHNSON: Are there other industries in your area that cause you concern because of the use of various chemicals and/or pesticides?

Prof. BEARD: Industries other than the banana industry?

The Hon. J. R. JOHNSON: Yes.

Prof. BEARD: I think the focus here has been on the banana industry because of aerial application of pesticides, whereas in fact a lot of pesticides are used in a whole range of agricultural industries where that use is not so obvious. Depending on their volatility, the possible exposure of the community actually may be greater than it is from aerial application. So, yes, there is a broad range up here on the north coast because we have such rapid growth. We have also a growing macadamia industry, and often urban growth and agricultural growth collide at an interface. I get quite a few people contacting me for advice about that.

The Hon. J. R. JOHNSON: The avocado industry and the sugar cane industry?

Prof. BEARD: I am not with the Department of Agriculture and I am not quite sure how chemicals are used, but there do not seem to be as many complaints or issues raised around sugar cane. Avocados, to my knowledge, are generally grown in conjunction with other crops.

The Hon. I. COHEN: You mentioned your research on dip sites. What biological monitoring has been carried out of dip site residents over say the past five years?

Prof. BEARD: Probably none over the past five years, but in the early 1990s, as I am sure you are aware, there were about 40 residents who were identified as being adjacent to old cattle tick tips, and all of those were offered biological monitoring.

The Hon. I. COHEN: Do you have any data on that?

Prof. BEARD: Yes. It is a long time now, and off the top of my head ---

The Hon. I. COHEN: You might take that question on notice and provide the Committee with some written data.

Prof. BEARD: Yes.

The Hon. I. COHEN: What government legislation or policy measures can you suggest that may reduce the impact of pesticides on persons, property or the environment? Do you have any suggestions for the Committee?

Prof. BEARD: Yes. As I said before, it would be useful to have better records of who is using pesticides. I also think that significant users of pesticides probably should be required to have undergone some form of training before they use those pesticides. I think the whole question of buffer zones is one that should be explored more, but I do not think a lot is known about them. A lot of volatile substances can drift for a long way. There is also the question: Is a buffer zone just distance, or can you use, for example, a small treed area? I have heard some people say, especially with aerosol particles, that the leaves can trap the particles and prevent the drift. I think that would be worthy of some more research and then an appropriate response.

CHAIRMAN: Would you take on notice the question asked by the Hon. Ian Cohen. I have a number of questions that I would like you to take on notice, some of which you have answered at least in some way. We will send you a copy of the transcript, and when you

receive it would you check that you missed anything in your evidence that you would like to deal more fully with, and then send that written response to the Committee. You might take on notice that in the Orange and Wellington areas the Department of Health, or whatever it was called at the time, used to have a monitoring process of the apple growers and vegetable growers.

Prof. BEARD: WorkCover.

CHAIRMAN: Do you do that?

Prof. BEARD: No. It used to be, I think, the Occupational Health Division of the Department of Health and it has been transferred to WorkCover, and I do not think that program is ongoing. I am not sure. I am afraid I do not think I will be able to answer that, even on notice.

CHAIRMAN: Thank you very much for coming along and giving the Committee your time. The questions on notice are:

1. *Can you outline your organisation's experiences with respect to the impacts of pesticide odour on human health?*
2. *What are the major health concerns for rural communities associated with pesticide application in your area?*
3. *Are rural communities that are subjected to large-scale agricultural pesticide application statistically more susceptible to health problems?*
4. *What approaches have been taken by health departments in other States or overseas to protect the health of the community from pesticides?*
5. *How does your organisation go about liaising with local government and the New South Wales Environment Protection Authority with respect to pesticide-related health issues in the area?*
6. *What type of information does the Health Department provide to the National Registration Authority, and vice versa?*

(The witness withdrew)

(The Committee adjourned)

REPORT OF PROCEEDINGS BEFORE

STANDING COMMITTEE ON STATE DEVELOPMENT

**INQUIRY INTO THE USE AND MANAGEMENT OF PESTICIDES
IN NEW SOUTH WALES**

At Sydney on Thursday 5 August 1999

The Committee met at 9.30 a.m.

PRESENT

The Hon. A. B. Kelly (Chairman)

The Hon. I. Cohen

The Hon. J. R. Johnson

The Hon. I. M. Macdonald

KATHRYNE TERESA HUGHES, 493 Wollombi Road, St Albans, sworn and examined:

CHAIR: In what capacity are you appearing before the Committee?

Dr HUGHES: As a private citizen.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Dr HUGHES: I did.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Dr HUGHES: I am.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present to the Committee should be seen or heard only by members of the Committee then the Committee would be willing to accede to a request to keep the material confidential and resolve into camera. I have to warn you, though, that Parliament has the right to override our decision and make all evidence public. However, it has not done so previously. I welcome members of the media and members of the public to this hearing and advise that under Standing Order 252 of the Legislative Council evidence given before the Committee and any documents presented to the Committee that have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any member of such Committee or by an other person. A copy of those guidelines should be on the table at the back of the room.

Motion by the Hon. I Cohen agreed to:

That in accordance with the resolution of the Legislative Council of 11 October 1994 the Committee authorises the sound broadcasting and television broadcasting of the proceedings held today.

CHAIR: If you would like to make an opening statement we will then go around the table and ask you questions. If you have any documents you wish to table we will pass a motion to do that.

Dr HUGHES: Thank you very much for inviting me to give evidence at this inquiry. I would like to speak on four points: the technical issues associated with pesticide assessment and regulation; the economic implications of irresponsible pesticide use; the social implications of irresponsible pesticide use; and the environmental impacts of pesticide use, whether or not it is responsible application or irresponsible application. I understand that the Committee has an interest in both urban use of pesticides and rural use of pesticides. Very briefly, in relation to the urban environment I would urge members to consider the following: There are far too many pesticide products available to the untrained consumer—thee or I in the garden. The widespread use of herbicide products containing the active constituent glyphosate should be of concern to Committee members. It is commonly known as RoundUp and manufactured by Monsanto.

There are other products containing glyphosate that are also of concern. I raise this issue because it is popularly understood in the media and through local government that glyphosate

is the safe one and that we do not have to worry about the frogs because one of the additives has been fixed up. You understand, of course, that pesticide products contain the active constituent and then the surfactants, additives and adjuvants, et cetera. There is further information available on that which I do not have with me to table. However, if I am permitted, I will send a fact sheet on the herbicide glyphosate to the Committee so that the factual information can be understood.

CHAIR: Yesterday I asked a few witnesses questions on it. We would be very interested in that information. Something I should say at the start rather than at the end is that you may like to take some questions on notice. Within a couple of weeks we will send you a copy of the transcript of today's proceedings for correction. You might like to take the opportunity to send some other information.

Dr HUGHES: The main thing is to focus on application techniques. Second is the use of the organophosphate chloropyrophos in urban pest control. Some of you may know that it replaced the four organochlorine pesticides that were registered for use. However, please note that there is probably still widespread misapplication of that because the pest control industry is only in the first stage of reform. That reform stage started about 15 years ago in Sydney with our campaigns at the Total Environment Centre. I have to tell you that I was a member of the Total Environment Centre and an activist there for 12 years on the toxic chemicals committee. Chloropyrophos is also widely used for bugs et cetera. It is used in the urban environment. There is the herbicide RoundUp. There is the issue of the untrained user, particularly in The Hills district, through which I travel to and fro from my home. There is a juxtaposition of five-acre rural blocks with lots and lots of development as well. Many people buy very big quantities of chemicals, spray them once, and put them in the shed. If I were a firefighter, as my uncle was in Sydney for 40 years, I would be very concerned about fires in garages in suburban Sydney, because so many people have massive stocks of old pesticides that they just do not use any more.

I am sure you would have heard a lot of detail from rural people. My concern is not so much with the human health impact, which I think is devastating, but with the impact of the residue risk to the environment. The critical pesticide endosulfan is a real problem. That is an organochlorin pesticide. So if you ever hear anyone or your Minister saying organochlorines are now banned you must correct them, because although a group of organochlorine pesticides have been banned there are still numerous organochlorine pesticides available, including 2, 4-D, endosulfan and herbicides such as atrazine. It is a different sort of organochlorine but it is still an organochlorine and has a property to build up in the environment or to accumulate in the environment. I will not go into too much detail about pesticide use in the rural environment. What I would like to do is table my book *Quick Poison Slow Poison: Pesticide Risk in the Lucky Country*, which was written in 1994. I have written in the front of this book, "Tabled at the Inquiry into the Use and Management of Pesticides in New South Wales, Standing Committee on State Development, 5th August by the author, Kate Hughes, formerly known as Kate Short".

If you think, "That was interesting. What did she say?" read the contents and read the technical chapters on measuring pesticide exposure and pesticide assessment and pesticide risk. Do not worry about the sorry tales of how many people have been affected by pesticides but have a look at the technical arguments. I mentioned a lot of companies and a lot of products in this book and I never received one letter from a lawyer. I have spoken at hundreds of conferences and meetings all over Australia over 15 years. I have never once had a legal inquiry. I have had many sabres rattled at me but that does not scare me. I always felt that the

pesticide industry was never forced to tell the truth about the true nature of their compounds, particularly how they operate in the environment. I am just letting you know that that book was well received. It is still sold. It is used in teaching and I still like it when I read it. But it does have a strong technical base. As I said, I was not challenged on anything.

CHAIR: As I was coming down to the meeting my research assistant mentioned that he had read that book and it was very interesting. I am pleased that you have tabled it.

Motion by the Hon. I. Cohen agreed to:

That the book be tabled.

Dr HUGHES: I would also like to draw your attention to another publication, which I will not table as it was not written by me. It is called *Cottoning on: Stories of Australian Cotton Growing* by Siobhan McHugh. It has some very interesting points about the use of pesticides in cotton as well as an understanding about where the industry is coming from. It is very humanely written. It tries to put things in context. Nevertheless, it tells some very harrowing tales.

CHAIR: One of other witnesses has already tabled that book.

Dr HUGHES: Excellent. I think the main point for the Committee on the technical issues is the standards for exposure. It is also in my book. The argument that it is all in the dose and that there is only a small amount of residue in food or water is something that you really need to think about because the information on pesticide toxicity changes virtually every six months as the World Health Organisation or some august body comes out with yet another list of pesticides that are under review because when they were first assessed they had to do only, like, two rat tests and three hen tests and virtually no environmental tests. So the standards of exposure are all under continual review. The main point for the Committee—this is very important for the insurance industry, for the GIO et cetera—is the status of analytical standards. You remember the case of Helix that cost \$10 million or \$100 million. There was a big court case here. The GIO was involved.

That case involved the cotton industry and Shell Australia, which made Helix. The compound was found in beef but it was not found in beef soon enough to stop residue problems because they did not know how to measure for it. This is called a problem with analytical standards. The only thing to remember as a lay person is that there are 440 registered pesticides—the active constituents, such as glyphosate, atrazine, 2, 4-D—and only about 70 of those can be routinely analysed in laboratories. So if you are a farmer and you have been using a new pesticide such as Helix and you say to your local agronomic adviser, "I think I had better get my meat tested. I oversprayed the other day—or Joe Blow did—I got some drift on this pen of cattle here. I had better have the cattle tested for this compound." He might get the answer, "Sorry, mate, they haven't got an off-the-shelf standard for measuring this one. It will cost you \$5,000 for three tests because they have to develop the method."

I was not the only one to have noticed this. It is in the book. The most critical document for you to read is a government document by the Commonwealth curator of standards. I do not have the name in front of me. It was done after the Helix debacle and, I think, prior to the court case. I will table that for the Committee. It is about the problem with analytical methods for pesticides and the fact that most of them you cannot detect unless you are willing to pay a big up-front fee to develop the method. If I was a farmer or a person who covered insurance in the

meat industry or anything to do with food and that fact was in front of me and I had read that report by the curator of standards, which is now about four years old, I would be very worried. I hope the Committee can establish whether the recommendations of that report by the curator of standards were followed through. I am confident that they were not, because many of the pesticides are so old that they have only about another five years before they are taken off the market. Since they cannot be easily monitored and it is very costly to monitor them they will just stay. Yet they could cause us \$100 million or \$150 million worth of damage because two residues turn up in the Japanese market. This is coming from my background as an economic rationalist. I am a very rational person and I understand economics and the economic rationalists have got it wrong because they never understand the real resource base of the country.

CHAIR: The economic irrationalists.

Dr HUGHES: We should take the name back and not allow people who are irrational and who only look at the short-term economics, not the long term, to use it. The Helix case and the report of the Curator of Standards is very important. That is a Government report. I apologise for not drawing your attention to it but I am a bit busy at the moment. On the economic side I mention residue risk as a result of inadequate testing procedures or a lack of availability of testing procedures for all registered pesticides, which is a law in the United States of America for obvious reasons. I mention also the government liability.

One issue to look at is pesticide use in schools, hospitals and anywhere where the New South Wales Government has a contract for pest control. You should check the companies carefully and be confident when they say they are using the least hazardous pesticide and the best application techniques. Never take their word for it—always get someone independent to check. I am particularly worried about pesticide use in schools. I hope that another person will raise this issue during your inquiry because it is too big for me to put in mind. My experience is that young women I have been working with, who are mothers in local schools, for example, Kurrajong East, have major concerns about the cavalier attitude to the use of pesticide. They must fight tooth and nail to say that pesticides should not be used in the classroom. Yet one in four children have asthma.

I will not get into a discussion about whether pesticides are related to the exaggeration or causation of asthma because one group of specialists will say yes, another group will say maybe and another group will say no. I look at the fundamental chemistry, the fundamental biology and new literature. There is little doubt that people with asthma avoid exposure to pesticides at all costs. If they breathe the pesticide they may have a fatal or significant asthma attack. The fact that pesticide use in schools is off the agenda in terms of why one in four kids has asthma continues to amaze me and is very disappointing. In terms of the social impacts, I will not go into the issue of cancer. It will always be controversial because so many things cause cancer. What is interesting is that in the current cancer equation cigarettes, asbestos, alcohol, stress and lifestyle equal the potential for cancer. I am amazed that chemicals not included as well.

I was always happy with my presentation on cancer risk in the book. I invite you to have a look at the book to get one point of view. Interestingly, people are always talking about suicide in the country, especially young men. I live at St Albans, which is in the country although it is close to the city. Suicide is discussed by women. I have given talks throughout Australia, particular in rural New South Wales, rural Victoria and rural Queensland. After the talks when I am back in someone's home or at the hall with a cup of tea the women always raise two issues. The first issue is reproductive risk: my husband cannot; I cannot; we have had

four miscarriages in a row; and there are many children who are just not quite right. These children do not have a birth defect but the brains are not turned on.

The second issue is the rate of suicide among young men. I am not suggesting for one moment that there is a link between suicide and pesticides. What I am saying is that many pesticides used in agriculture are neurotoxic, are known to be neurotoxic and are assessed as neurotoxic. That means that they affect behaviour, learning and emotions. The use of these chemicals is widespread, and the applicators are blue-collar young men from the country who have limited education. They are big risk takers because they are likely to have excessive exposure to these chemicals. It is important not to rule out a possible causal role for exposure to pesticides in the depression and suicide levels in the country.

I was a witness in a court case involving a murder by a young man of his best friend. I will not mention the name. I was called as a witness on the grounds that although the young man took full responsibility for having shot his friend he seemed to have a history of pesticide use and huge behavioural changes that were very unusual for him, according to the community, for a year prior to the murder. Everyone who knew the lad who died was surprised about what had happened. That is how I gave my evidence. That is no proof but it is important for people to understand that. I turn now to the impact on biodiversity and the health of inland rivers. I remember hearing a talk given by an environmentalist from a major environmental organisation. He outlined the main risks to the Murray-Darling, which included too much salinity, too much water taken out, weirs, locks, channels, everything you can think of. At No. 10 was snags in the river. There was no mention of pesticides.

I went up to the speaker afterwards—I will not tell you who it was, but he was from the Australian Conservation Foundation—and said to him that with all the technical information available about water soluble pollutants or pesticides that go to sediment and stay in the sediment for years pesticides should be given a ranking and attention should be paid to it. Pesticides are never spoken about, even by green groups. If it is not on their agenda they do not own the issue and, therefore, it gets left off. Pesticides in the waterways is a big issue. Reports commissioned by government, with funding through the Land and Water Research and Development Corporation and the Cotton Research Development Corporation, show that in 1994 there were critical levels of endosulfan in the rivers and that no amount of research would fix the problem. The only way to go is to tell the cotton farmers that they either use endosulfan responsibly or it will be taken off the market, which means that they must reduce use and spend money on application. Of course, that has not happened.

Once again that was one of those reports that says, "Last chance", "Going, going, gone", "Red light on", and "We have factual evidence that there are critical levels in the rivers and in the sediment. Do something". Five years later nothing has been done. I can guarantee that in a couple of years you will probably see me or someone else on television bringing up all the documents for the past 10 years and saying that it was pointed out on all these occasions, and no-one did anything because there is so much money in cotton. Cotton is a transitory crop. We should be growing hemp and other fibre products. We should be diversifying from wool and cotton to other more sustainable fibres. As for the impact on biodiversity and the birds and trees, my husband says that we are desert building. Pesticides have a lot to do with that.

The Hon. J. R. JOHNSON: Have you had any critical analysis of your book by any government department?

Dr HUGHES: I believe I would have, and I would have kept all the reviews of my book

in a file. I would be happy to table them. I had a critical analysis by Professor Ben Salinger, who did not like the writing style. He said it was too energetic. I got a good review from the Pesticides and Allied Chemical Industry of Australia—that is the pesticides representative group—and it published my response in its newsletter.

The Hon. J. R. JOHNSON: What would be your advice to the cotton industry in terms of application of chemicals?

Dr HUGHES: I would advise going back to some of the very good recommendations made in the 1994 executive report of the Land and Water Resources Corporation and the report of the Cotton Development Corporation, which referred to critical levels. I could advise many things such as give cotton growers five more years and then tell them to go or tell them to start moving to other fibres and to diversify. That would be my personal advice. The cotton industry should become the fibre industry group. Cotton growers would still be able to move their capital around and make investments, but they should start growing other crops. In terms of something that is achievable, the New South Wales Government should implement some of the recommendations that have been made. Be fearless in your approach to regulating the critical pesticide endosulfan because it is an organochlorine that is widespread in the rivers. It is probably associated with all sorts of hormonal cancers but I do not want to muddy the waters with that.

Make sure that you draw a very clear line between people who represent the cotton industry—I do not have a problem with people making a living—and their influence on government boards and on government research corporations because there is a problem with suppression of information and field results. That is something that always happens in life. You should look at the power structure and how the cotton industry controls information. In terms of what the Government can do, it should look at the good recommendations and get cotton growers to spend more money on pesticide application, the buffer zone issue, the residue risk issue and restrictions on use.

The Hon. J. R. JOHNSON: Do you have any evidence that the recommendations in the two reports you mentioned are being ignored, implemented or partially implemented?

Dr HUGHES: No, sir, I do not and the reason is this. After I finished the book I did one more year's campaigning at my own expense and then I went off to make a living doing other things so I am not up to date, except that my reading of it would be that the easy ones are probably halfway implemented on the education side and that the really meaningful ones about finding out how much pesticide we use, making really good efforts to restrict its use and supporting bureaucracies that have to administer it would not have been adequately addressed. It is a resource issue, as we all know.

The Hon. J. R. JOHNSON: With schools, are you talking about the control of weeds, vermin and termites?

Dr HUGHES: I am referring to weed control, termite control and management and control of pests like cockroaches and interior, non-structural pests, just nuisance pests, yes—all three actually. Schools vary in their willingness to say, "We will not spray a schedule six organophosphate in the classroom where six-year-old kids will sit on the carpet." It is just a mother statement from me because I am a mother. It is just a precautionary principle. You do not do that. Issues can arise with the reapplication for termite inspections, and with global budgeting schools become very worried about their assets. All teachers are so busy at any rate that they just say, "Get the bloke in. He was good." They have not really got time to go into it,

and once again it is a resource issue.

As a taxpayer I have real concerns because if it ever happened to any child of mine or in my extended family, I would sue because I know that the Minister for Education, Mr Aquilina, has already been informed of these issues. The Total Environment Centre had a conference on toxic schools five years ago and the Minister made certain commitments about a chemical audit of schools which was not followed through. It was a forum that we had on the toxic playground and I think it was like the Metcalfe auditorium. The Total Environment Centre has the papers and Mr Aquilina did make undertakings but it certainly has not been gone through. It is a liability for the State of New South Wales so let us avoid it.

The Hon. I. COHEN: Could you give an opinion on the perception of the concept of multiple chemical sensitivity to the very low levels of chemical exposure. Have there been discussions in terms of the acceptance and signs of it?

Dr HUGHES: That is a very important question and it is really problematic for governments because once again the analogy between cigarette smoking and asbestos exposure has a 30-year lead time between when the evidence first comes to light that there is a problem and when governments are confident to legislate to protect people from either passive smoking or exposure to asbestos or, in this case, to protect people from exposure to a whole range of chemicals, including pesticides. On this issue of what we call low level, high stakes—low level exposure, high level health stakes—if you happen to be the wrong sort of person, in other words, you are genetically predisposed, you have a bad diet or you have copped a really big dose of pesticides early and you have been sensitised to pesticides, it is a real problem.

I have had a lot of contact with people who have chemical sensitivity. I must say that I am not a physician, I have a PhD in politics, so please be clear that I am not a medical doctor. I must not speak too long on this, but there is a group called the Australian Chemical Trauma Alliance, a group of poor old battlers who have tried to raise the issue and provide some protective net for people who have chemical sensitivity. They have worked with a number of doctors both in Australia and overseas to raise awareness about the issue and also to try to educate mainstream physicians about the mechanisms of toxicity. This is the real guts of the question you are asking me. Are these middle-class hysterics who have nothing better to do than to worry about a bit of pesticide fumes? Are they vexatious litigants who want to sue people because they feel sick after a spray? Are they overreacting because they have fear of toxics or are they genuine? They could be all four but most likely they are genuine people who are the real canaries.

Numerous books have been written on this such as *Chemical Crisis* by Diane Crumpler and *Children of a Toxic Harvest* by Eve Hillary published under Eve Kaufmann. I edited that book. Also, there is *The Street That Died Young* and numerous other books. The mechanism of toxicity, in other words, how can low levels of chemicals coming into your body either by breathing them, eating them in food or absorbing them through the skin, possibly affect people who are big, robust, et cetera. This is the difficulty. I believe that the literature now—not 10 years ago when we first started dealing with these people, hearing about them and trying to exercise help and compassion—is sufficient so that any physician or specialist who denies that there is a physiological change in people's bodies as a result of exposure to low level mixtures of chemicals could be seen to be professionally negligent.

There is sufficient information in the peer review literature on chemical sensitivity. I am also lucky enough to be a visiting lecturer in biological sciences at Newcastle through my friend

and colleague Dr Hugh Dunstan, who has a PhD in biochemistry. Hugh Dunstan and a group of doctors, including medical doctors and research doctors, have got the most genuine human motives about demonstrating the mechanisms of toxicity for these chemicals and what it does inside the body. They have demonstrated this very well. Also, Dr William Ray, an American, is the best in the English-speaking world and he has written three volumes on chemical sensitivity. He is world famous. To those doctors in Sydney—and I will mention Dr Norman Swan from the ABC, and various others—who have said that they are all charlatans, I think they are very irresponsible and I wonder at their motives.

The Hon. I. COHEN: You referred earlier to the cotton industry. In terms of who has responsibility when there is chemical trespass, should we be looking at the EPA, the grower, or the aerial sprayer, and do you see any changes to the Pesticides Act to resolve that situation?

Dr HUGHES: The EPA of course, the buffer zone issue and the declaration of buffer zones for site specific conditions. Sometimes you might only need 100 whereas other times you might need 500, or if you are an organic grower you might need 20. In other words, "Don't come near me. I am growing organics." That could be in the legislation. It is silly to put a blanket on it and say it has to be 150 metres or it must be two miles. With all this regulation on toxics it must be site specific. That will help resolve it for all stakeholders, for the grower who has to grow his crop. As to who is responsible, obviously both the grower who wants it to be sprayed and the aerial pilot. That issue needs to be strengthened because one must be a maverick to be an aerial sprayer and have nerves like steel. They call the guys up there things like "ice".

I have been on the tarmac many times. Those guys have to have a certain mentality because they have to fly eight feet above the ground at 300 miles an hour. Aerial sprayers have a different approach to risk and they do not see the point. I think that has to be brought home strongly in legislation. Make no mistake: all pesticides drift. I think the legislation should be strengthened, not with more legislation but with better legislation and that is up to the parliamentary draftsmen. I think that the chemical trespass issue is really important. Unfortunately I have not had time to be involved in the case in Dubbo and others, although I have been invited. I just cannot. Cotton is an industrial industry and Ben Selinger actually said that in the film on cotton.

The Hon. I. COHEN: We have often heard that chemical residues have had to be sent to the United States to be tested. You mentioned that legislation in the United States has provided that facility. Is it possible to have that technology for all types of chemical testing in Australia?

Dr HUGHES: Yes.

The Hon. I. COHEN: And would legislation be the way to go in terms of demanding that?

Dr HUGHES: Yes. Legislation would be a very appropriate way to go and one should legislate for any pesticide that is assessed by the Commonwealth and registered through the State Act. There must be a commercially available method for testing the pesticide available on the market at the time that the pesticide goes on the market. So that as soon as I can use it, I can also ring up a laboratory and say "Test me for it". That is the way to go. It is quick and clean and should be a requirement for a country that boasts a clean, green image.

The Hon. I. COHEN: Is there any technological problem in having that testing in

Australia?

Dr HUGHES: No, it is just that it is expensive and that is why industry will always argue, "It will cripple us."

CHAIR: I would like to ask you some questions on notice. When you receive the transcript, if you believe you have not answered them, will you please do so. What is your response to the view that pesticides are required by agricultural industries to sustain economically viable production levels? Do you hold any reservations regarding coregulation and the role of industry in leading the way in reducing the risks and adverse affects associated with pesticides? What mix of regulatory and non-regulatory instruments are required to achieve the most effective management of pesticides?

(The witness withdrew)

COLIN JOHN SHARPE, Scientific and Regulatory Affairs Director, Avcare, 58 Halloran Drive, Jerrabomberra,

CLAUDE ALEXANDER GAUCHAT, Executive Director, Avcare, 59 Latimer Road, Bellevue Hill, and

VERNON FREDERICK KEIGHLEY, Manager, Agsafe Limited, 41 Nullagine Street, Fisher, Australian Capital Territory, sworn and examined:

CHAIR: Mr Sharpe, In what capacity are you appearing before the Committee?

Mr SHARPE: Representing the agricultural and veterinary chemical industry.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr SHARPE: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr SHARPE: I am.

CHAIR: Mr Gauchat, in what capacity are you appearing before the Committee?

Mr GAUCHAT: As the executive director of the industry association.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr GAUCHAT: I did.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr GAUCHAT: I am.

CHAIR: Mr Keighley, in what capacity are you appearing before the Committee?

Mr KEIGHLEY: I manage the Agsafe accreditation program.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr KEIGHLEY: I did.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr KEIGHLEY: I am.

CHAIR: If at any stage during your evidence any of you consider that certain evidence

or documents you wish to present to the Committee should be seen or heard only by members of the Committee, the Committee would be willing to accede to your request and resolve into a confidential and in-camera hearing. I must warn you that the Parliament may override a Committee decision and then make that evidence public at a later stage. However, at this stage that has not happened. Perhaps one of you may wish to make a short statement and we will then proceed with questions. If there are any questions you want to take on notice, please indicate that to the Committee. You will be provided with questions on notice in any event.

Mr GAUCHAT: We appreciate the opportunity to appear before this standing committee. Pesticides are a necessary and fundamental management tool for farmers and other users, but must be employed with adequately safe measures and product knowledge. Avcare insists that the use of pesticides must minimise the potential risks to human health and the environment as well as trade. Furthermore, Avcare has played a leading role in pioneering the concept of co-regulation with its Agsafe program. Agsafe is a fully owned subsidiary of Avcare, both of which operate at arms length from each other. Agsafe was started by our industry in 1987 and today enjoys a good reputation based on a successful performance in raising the level of professionalism within the industry. Most importantly, Agsafe has an ACCC authorisation that gives it teeth to impose trade sanctions for non-compliance.

Based on this positive industry experience Avcare, together with the National Farmers Federation, Veterinary and Manufacturers Distributors Association, and the Australian Local Government Association [ALGA] have recently launched another co-regulatory program by the name of drumMUSTER. This program focuses on the safe disposal of empty, clean one-way chemical containers and to date has been implemented by two councils. Agsafe has been asked to administer and manage the drumMUSTER program given its experience and interaction with the retail end of business. As you probably already know, drumMUSTER is closely linked with another important waste management initiative under the names of ChemCollect and Chemclear, which are described in Avcare's submission.

All three programs will facilitate fundamental and lasting changes in the way pesticides and resulting container waste will be managed in Australia. Avcare feels strongly about the role of co-regulation in achieving a modern and responsive pesticides Act in New South Wales. Co-regulatory programs with adequate teeth can make a significant and lasting contribution towards our more sustainable agricultural sector. I shall close by tabling several documents on Avcare and Agsafe for the Committee's reference.

CHAIR: The Committee heard of drumMUSTER in its first hearings in Sydney and through a number of places. It certainly sounds an excellent idea if it can be made to work effectively. Being near a river I have problems with chemical drums on farms in that every time we experience floods. Unfortunately, in years gone by farmers used to just drop chemical drums somewhere in that creek and with a big rain 20 or so drums would be washed into the river, usually on my property. Therefore, I am particularly pleased that something is being done about that.

The problem the Committee heard in Dubbo was that the Orana group of councils, which comprises approximately 14 councils, had a particular problem. That group investigated going into the drumMUSTER, but then faced a particular problem and decided not to proceed because it was difficult to dispose of the chemicals. They were getting drums that were not properly cleaned. In other words, they had not been triple-rinsed. A collection of drums were sent to be cleaned as per the arrangements with DrumMUSTER, but somebody, just one person or group, had not properly cleaned their drums and so they were rejected. The group

decided not to proceed with it because of problems in ensuring that people would do the right thing. Have you any way of ensuring that the system works, because it would be a shame if it did not work just because of one or two recalcitrant members?

Mr GAUCHAT: The success of DrumMUSTER depends on farmers actually understanding the concepts and complying with the proper rinsing procedures. It is up to the program to inform farmers on how to rinse containers and present them in a safe way. Another success factor is inspection. We must make sure of proper inspection at each collection site so that no dirty containers actually escape the net. We are working hard to accomplish that communication program with farmers. To date awareness amongst the farming community is high as well as the expectation by that community that it will have a collection point in the local shire.

CHAIR: Many registered chemicals are put on the list as available and farmers might order them, but they are not produced by chemical companies. Sometimes a more destructive chemical is used because those same chemicals are not available. Do chemical companies have a responsibility to produce chemical pesticides that are said to be available? Prefar Alinap has been on the market for about five years but is not able to be bought.

Mr GAUCHAT: I am not quite sure what the question is. Certainly if manufacturers provide a chemical for the market, they have to go through the registration process.

CHAIR: And each year they put on the price list that this chemical is available but they do not produce it.

Mr GAUCHAT: They do not actually deliver it to the market?

CHAIR: No. It does not even come into Australia.

Mr GAUCHAT: Are you saying that the manufacturer is advertising the existence of this particular product?

CHAIR: Yes. Any local dealer will look up his schedule of products and will say, "Oh yes, Prefar Alinap. They have increased the price this year. It is available," but you will never get it.

Mr GAUCHAT: It might be a question of shortage of supply rather than the product being advertised with the intention of not supplying it.

CHAIR: That has been happening for five years. Perhaps you could take that question on notice.

The Hon. I. COHEN: You mentioned non-compliance of trading sanctions within the industry. How many occurrences of trading sanctions have occurred and how many events of non-compliance have been brought to your attention and acted upon?

Mr GAUCHAT: As this refers to the Agsafe program I shall ask Vernon Keighley to respond.

Mr KEIGHLEY: From memory I believe we have levied trading sanctions 46 times since the programs started. Currently we have six trading sanctions in place. Having said that, that represents a very small portion of the number of inquiries being made at any one time, and

we have handled somewhere in the order of 2,500 inquiries over the years. But the whole process is not about imposing trading sanctions; the idea is to try to encourage people to comply with industry standard and the mandatory regulation standards and codes.

The Hon. I. COHEN: Is it successful? Is your industry keeping people within those standards? Are you acting safely or is there the need for an alternative mechanism through legislation to actually to improve the pesticide Act through environmental and human exposure?

Mr KEIGHLEY: Within the scope of Agsafe I should mention that we basically cover the storage and handling of agricultural chemicals with the manufacturer through the distribution chain to the point of supply and I believe the Act you are looking at deals with control of use. The feedback is that there has been a tremendous change in attitude and level of compliance within the scope of the accreditation scheme we have had over the years.

The Hon. I. COHEN: Surely supply is married with responsible use. Therefore, does your part of the industry have a responsibility if misuse is occurring?

Mr KEIGHLEY: I think the responsibility of the reseller, if you like, which is the point of sale, is that he must give advice according to the label. In fact, part of the accreditation process is that the person signs a commitment against the code of conduct that he or she will comply.

The Hon. I. COHEN: I understand you have a responsibility to supply the information that labels the product, and if there is a chemical trespass by the landowner or the pilot doing aerial spraying, who is responsible for that chemical trespass?

Mr GAUCHAT: Trespass can be for two reasons: one is an unintended misuse of the product and the second would be an intended misuse. Having said that, the number of cases of trespass are small compared to the proper use of products. The responsibility will have to be shared, depending on the circumstances.

The Hon. I. COHEN: Were you present earlier when I asked Dr Kate Hughes a question about chemical testing regarding responsibility of supplying chemicals in Australia yet having this obvious lack of ability to test for chemical residues of chemicals your industry has made available? Would you care to comment on that?

Mr GAUCHAT: Yes, we heard the response of Dr Hughes. We disagree with her view that chemical tests are not available. Part of the registration process and requirement is that a method be made available for testing of residues in food.

The Hon. I. COHEN: Are you saying that every chemical your industry supplies can be tested, say, through human blood tests in Australia?

Mr GAUCHAT: Every chemical can be tested in food.

The Hon. I. COHEN: What about in blood through human exposure?

Mr GAUCHAT: In respect to blood, we will have to take that on notice. I do not know what the level is. It is certainly not a requirement to provide that information.

Mr SHARPE: We will have to take the question regarding blood on notice. I do not know

what the level is. It is certainly not a requirement to provide that information.

The Hon. I. COHEN: Is it reasonable that every chemical that you are taking responsibility for supplying to the Australian market is tested?

CHAIR: You heard the comment of Kate Hughes that some people who are concerned that they have been sprayed by overspray then go to a doctor to try to find out whether it is in their blood. That is the concern that the Hon. I. Cohen has raised.

The Hon. J. R. JOHNSON: Or in the blood of cattle.

CHAIR: Or whatever, not in food itself.

Mr SHARPE: I understand. Our belief is that there would be a method available because the data that we are required to supply involves the testing of laboratory animals and the blood of those animals is also tested. I will also take that question on notice and come back to the Committee.

The Hon. J. R. JOHNSON: Available in Australia.

The Hon. I. COHEN: I appreciate you taking the question on notice but would you accept that is a reasonable proposition as an industry that chemicals supplied by your industry should be able to be tested in Australia? Is it reasonable that your industry would take responsibility? I understand a number of people in Coffs Harbour who appeared before the inquiry yesterday were prohibited from investigating their problem often because of the terrible expense, thousands of dollars, to send a blood sample to the United States of America. Would you enlarge on your responsibilities given that you supply the pesticides?

Mr SHARPE: That is another question we would prefer to take on notice and canvass the views of our membership.

The Hon. I. COHEN: What is your position regarding the view that the application of pesticides in lower than labelled doses may lead to, in effect, eradication of pests and increase the likelihood of resistance? What is your view of pesticides delivered at the labelled dosage and their impact in the longer term on resistance and less effective eradication of pests?

Mr SHARPE: I believe that from the resistance point of view it is an area that is under continual change. We monitor what is happening and then take steps to prevent it if there is any indication that resistance is building up. We have a number of resistance management programs available that our industries prepared and distributes widely to farmers. We have also been pro-active in that Australia was the first country in the world to actually provide information on the label about resistance management. At the moment it is mandatory for herbicides and fungicides. It has just become mandatory with insecticides and over the next two years those labels will have to include that information as well. Advice is going out to users that if they follow that advice the onset of resistance should be minimised.

The Hon. I. COHEN: Minimised, yet it is a major problem in the industry for growers and right along the manufactured chain. Do you have a responsibility for what could be seen as an inbuilt failure in the system, that supply within the medium or long term can create resistance and, therefore, you will need to introduce other chemicals to find other resolutions?

Mr GAUCHAT: Resistance is an inherent risk with pesticides. It is a question of appreciating that fact and, secondly, of managing that risk. We have examples going way back to the early 1970s when pyrethrins first came onto the market and had that inherent risk as well. It was thought then that the pyrethrins would only last for several years in the market-place, and they are still around. The reason they are still around is that there have been effective risk management programs in various sectors and companies. Australia is simply leading in that area of management. Appreciating that any chemical can become resistant over time as being an inherent risk, it is a question of managing that risk appropriately. The cotton industry has demonstrated its ability to manage those risks of resistance.

CHAIR: Could you supply each of the members of the Committee with copies of the documents that you have presented?

Mr GAUCHAT: Yes we will provide five copies of what we have handed over today.

The Hon. J. R. JOHNSON: In the last week two chemicals, the names of which escape me, whose main application was in the apple and pear industry, have been banned in the United States of America. Since the United States regulatory authorities have determined that those two chemicals, out of about 40 in that banned group, have been banned, has your industry followed suit without the Australian regulatory authorities imposing the same ban?

Mr GAUCHAT: Our industry will obviously look at the NRA to make sure that the situation in the United States of America, and the reasons behind it, is understood. The NRA would be interested to find out why the EPA has taken such a decision. As you know there is an existing chemicals review program undertaken by the NRA which looks at various chemicals and their suitability for the market place. We would be looking at the NRA in the context of the existing chemicals review program to see whether any action should be taken in Australia. The key point is whether the scientific knowledge about the product is up to date and whether the dossier provided on the product still meets the criteria for commercialisation of the product.

The Hon. J. R. JOHNSON: If a product has been taken off the market in any overseas country is it customary for your group to immediately do so also?

Mr GAUCHAT: It is not. It is up to the local regulatory authority to make those decisions.

The Hon. J. R. JOHNSON: Even if the parent companies of affiliates of your group were the ones that brought it to the attention of the regulatory authorities overseas and the regulatory authorities acted on it you would not feel it incumbent on your group to follow suit?

Mr GAUCHAT: If that is the situation then obviously through the company's network such information would be passed down to different countries. Then it is up to the local affiliates to take up the matter with the local regulatory authorities. That would be part of the internal stewardship program. If your question refers to a company making the approach to the regulatory authority to withdraw a product—

The Hon. J. R. JOHNSON: or raising a grave concern—

Mr GAUCHAT: —or a grave concern followed by a promise to supply further scientific evidence, then obviously each affiliate of that company would be informed about that activity

and would have to act according to the company's policies.

The Hon. J. R. JOHNSON: But the company's policy in Australia may be different from the company's policy in the overseas country that has taken the product off the market and has reached a different conclusion.

Mr SHARPE: The reason for the voluntary withdrawal in another country was where there was obviously significant environmental health effects. That decision would be taken on a global basis. There are a number of other reasons why companies remove products from another country which do not necessarily have implications on the effect of the product on health and environment.

The Hon. I. M. MACDONALD: What objections, if any, does your organisation have to proposals outlined in the EPA's discussion paper?

Mr SHARPE: I am not clear where that question is coming from. Are you talking about the EPA discussion paper that was put out some years ago, 1997 or thereabouts?

The Hon. I. M. MACDONALD: About 18 months or two years ago on the proposed new pesticides Act.

Mr SHARPE: Personally I was not involved in preparing the response for that ,but we included the Avcare response in our submission. My reading of our response was that we were concerned that it appeared to be moving towards a very strict regulatory process of enforcement through monitoring of the situation rather than being pro-active and using a co-regulatory type of approach. That was our general understanding of from where those proposals were coming.

The Hon. I. M. MACDONALD: In debate about the usage of chemicals, particularly with aerial spraying, it was said that the buffer zones need to be extended and developed in a stronger way. Could that in some way conflict with best management practice in respect to chemical trespass?

Mr SHARPE: Buffer zones on their own are not going to be effective. They are one of a number of management techniques. We heard Dr Hughes say that they need to vary depending on the situation, and that is correct. They should not be legislated for but they need to be taken into account under best management practice, situation by situation: not only what is the width of the zone but what is the zone; is it bare ground; is it trees; is it a fence; what is it?

The Hon. I. M. MACDONALD: The Committee has encountered that vexed question in this inquiry. Neighbours are very concerned about the activity of the person next door, particularly in respect to aerial spraying. They have said that there should be extensive buffer zones to try to limit the impact upon their own property. Is that something that can be isolated and then legislated or enforced in some way?

Mr SHARPE: No, we do not.

Mr KEIGHLEY: I think it relates also to land use management. As you know, in agriculture, things change over time. If buffer zones are legislated for, it would just make the system very inflexible for agriculture to adapt to and also to incorporate new technologies.

Buffer zones have to be included in best management practices and they will have to be implemented in a way that gives the adequate protection that we are seeking, region by region or locality by locality.

The Hon. I. M. MACDONALD: According to the evidence available to all three of you, are there any chemicals that are currently being used that you have concerns about in terms of potential long-term impacts on human health?

Mr GAUCHAT: That question should be answered in the context of the risks to human health if not used according to the label's instructions. One produce is endosulfan, which has been in the news extensively because of the issues that have been ongoing in the cotton area. We need to make sure that the product is used strictly according to the latest strategies that have been designed by the Ministry of Agriculture [MOA] together with industry to prevent any possible long-term public health effects as well as environmental effects. As an industry body, we are concerned on two fronts. One is that the latest management strategies are properly understood and adhered to by the cotton farmers. The other is that cotton farmers have access to all possible products for managing their pest regime.

The Hon. I. M. MACDONALD: With cotton, there seems to be a problem that is pretty difficult to contain. In the Gunnedah area, for example, the evidence we received was that there was considerable drift due to climatic conditions. Even if there had been a one-kilometre buffer zone, once the chemical is sprayed you could end up with it over the town through inversion and what have you, and a chemical has done so. Do you see specific problems encountered in that industry through aerial spraying in that region?

Mr GAUCHAT: We were involved in the mediation process in Gunnedah and that is a typical example of the issue being debated within the community. Having said that, we also have to look back at the history of the use of, for example, endosulfan. It has been successfully used over many years in the cotton industry but it has also suffered some problems. This is why best management practices are very important and it is also important for the community to discuss and debate and to try to mediate a solution that is acceptable to that particular community.

The Hon. I. M. MACDONALD: The problem as I see it is that even with best practice management in relation to the use of that chemical, it is almost impossible to limit aerial spraying impact wider than the zone or the crop for which it is intended. They have found it in a water supply and what have you many kilometres away from where it would have been used.

Mr GAUCHAT: The national registration authority has followed this compound very closely and it is one that has been looked at through the existing chemicals review program. We believe that the current set of strategies adequately addresses the problem. Having said that, we need to be fully aware of the potential risk of trespassing. Therefore, good co-operation between the consultants, the farmer and the applicator is needed to make sure that all possible risks are eliminated at the time of deciding that this particular product should be used and at the time of the application.

The Hon. I. COHEN: You may wish to take this question on notice and let the committee know the number of chemicals traded in New South Wales through your organisation which are banned in the United States of America and the reason they are banned on the one hand and why they are still traded in New South Wales on the other.

The Hon. J. R. JOHNSON: There is a proposal for the first time to grow cotton in the Condobolin area. We have inspected at least one property where numerous claims were made about the denuding of trees and the health of citizens in the Namoi Valley. Before cotton is planted in the west of the State at Condobolin, in close proximity to the 3,500 people who live in that town—where there is no cotton grown at the present time, where the land is flat and where there is no great growth of trees—what arrangements will your group consider to be appropriate to inform prospective farmers, but more importantly the population, of the risks that may result from aerial spraying or ground spraying? Bear in mind that in one town a letter from a longstanding chemist in the town provided the committee with information that asthma spray sales went sky high after aerial cotton spraying was introduced. What do you believe would be your obligations in the embryonic stages of that program?

Mr GAUCHAT: If I understand your question, it is about introducing a new land use, that is, cotton, where cotton has not been grown before and what measures our industry should take to ensure that the risks are properly identified and properly managed. In response to that question I would say that the cotton industry has a best management practice plan. That particular plan should be looked at for that new area to see whether the risks can be properly managed. There should be some sort of risk assessment for the community that might become involved through that new land use activity and then that should be discussed at community level so there is acceptance of that particular land use in that new area. I think it is a question of understanding the reasons why cotton should be grown in that area, understanding the best management practices that are available to minimise the risk and also understanding any other concerns that the community might have so that, at the end, there is consensus on that new land use activity actually taking place.

The Hon. J. R. JOHNSON: If you go to the area, you will see that land that abuts the town is proposed to be used for cotton. I do not think that there is any other area in New South Wales where cotton is planted in such close proximity to the town's population.

Mr GAUCHAT: If that is the case and if that proximity obviously poses a threat of chemical trespassing, then this would have to be covered through buffer zones in the best management practices program. That is something that will have to be looked at right from the beginning if an area is unsuitably close to a town.

The Hon. J. R. JOHNSON: That is why I am asking the question. What sort of a program would you have in place, if any, for that type of development?

Mr GAUCHAT: We represent the chemical manufacturers and distributors.

The Hon. J. R. JOHNSON: I am aware of that.

Mr GAUCHAT: We would work together with the cotton industry in their best management practices.

The Hon. J. R. JOHNSON: That is their management practices, but I am concerned with the results of the management practices that may go wrong.

Mr GAUCHAT: We would work together with the cotton industry and look at other precedents where this may have happened or where the risk may exist and try to work towards minimising that risk. If the risk is unacceptable then, obviously, we would have to say so.

The Hon. J. R. JOHNSON: But your member companies would still supply the product if the change of land use in the area was agreed to.

Mr GAUCHAT: Our member companies participate in discussions, together with the cotton industry.

The Hon. J. R. JOHNSON: That is with the cotton industry, but not with the people the town.

Mr GAUCHAT: I understand the question. As Avcare, we have participated in the mediation process in Gunnedah.

The Hon. J. R. JOHNSON: But that is after the problem had occurred.

Mr GAUCHAT: Sure. If there is any mechanism for public consultation beforehand, obviously, Avcare would participate.

The Hon. J. R. JOHNSON: You would not feel obliged to start off that communication?

Mr GAUCHAT: That is something that we could consider.

The Hon. J. R. JOHNSON: I would commend it to you.

CHAIR: Thank you very much for your time today. I have approximately 10 questions which I would like you to take on notice. Some of them have already been answered. They will appear in the transcript, including the question that members have asked of others in the inquiry, that is, the labels being written in different languages. Are they commonly written in different languages? Does Avcare have a policy on that? There are particular areas—such as banana-growing areas—that have ethnic groups who sometimes have difficulty reading English. Some of us who have failing eyesight and who are sometimes out on the farm are battling with labels that we cannot read because the print is so small.

The Hon. J. R. JOHNSON: You do not have to have failing eyesight. You need a magnifying glass.

CHAIR: You might take both those questions plus the other questions on notice and let us know whether Avcare has some policy or recommendations that it makes to its 38-member producing groups. The other questions are: Does Avcare support the establishment of a pesticides register at the point of sale? What is Avcare's position on the view that liability for misuse of pesticide involves all handlers in the chemical use chain including chemical manufacturers, chemical distributors, applicators, and land-holders? What improvements, if any, can be made in the area of labelling to minimise the misuse of pesticides? Can you expand upon the view outlined in your submission that opposed the inclusion of "risk of damage" as an offence under the Pesticides Act 1978 as outlined in the EPA's discussion paper? What roles does your organisation see research and development playing in improving the use of pesticides and its effect upon human health and the environment? What initiatives do you think would foster greater research and development?

(The witnesses withdrew)

(Short adjournment)

PETER DOUGLAS MULLINS, Chief Executive Officer, Rural Lands Protection Board State Council, Locked Bag 21, Orange, and

ALISON MICHEAL NOWLAND, Environmental Co-ordinator, Rural Lands Protection Board State Council, Locked Bag 21, Orange, sworn and examined:

CHAIR: In what capacity are you appearing before the Committee?

Mr MULLINS: I represent the rural lands protection boards in New South Wales.

Ms NOWLAND: As a representative of the Rural Lands Protection Board.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr MULLINS: I did.

Ms NOWLAND: I did.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr MULLINS: I am.

Ms NOWLAND: Yes.

CHAIR: If either of you should consider at any stage during your evidence that in the public interest certain evidence or documents that you may wish to present to the Committee should be seen or heard only by members of the Committee, the Committee will be willing to accede to your request and will resolve into confidential or in-camera evidence. However, I must warn you that Parliament can then override the Committee's decision and make all evidence public, but as yet Parliament has not done so. Would you now like to make a short statement, then the Committee will ask questions.

Mr MULLINS: We are here today basically to put before the Committee four issues of concern. However, before I register those I would like the Committee to have some background on who we are, because we are not a well-known organisation in Macquarie Street, as we discovered late last year. The rural lands protection boards are an organisation unique to New South Wales. There are 48 boards covering the State. The organisation is funded by 120,000 landowners in New South Wales. Each of the boards is managed by an elected board of eight directors, all of whom are landowners within that board area. The board system has three main areas of operation. One is animal health and the prevention of exotic and endemic diseases in the animal industries in New South Wales. In that capacity we were involved, as you gathered from earlier discussions with board representatives, with regard to the endosulfan issue earlier this year.

We are also responsible, under the Rural Lands Protection Act, for monitoring and managing the eradication of pest animals in New South Wales. In that capacity we are responsible for controlling and monitoring the use of a range of poisons. Our third main area of operation is that we manage 500,000 hectares of public land in the form of the travelling stock route system, and in that capacity we have to battle an endemic weed problem across the

State and are therefore users of pesticides. That is basically a summary of the board system. Our interest in pesticide use and herbicide use would clearly fit well within the terms of reference for the Committee.

In accepting the Committee's invitation to appear, we registered four areas of concern. Firstly, we wanted to answer any queries that the Committee may have on our management of pesticides, because from time to time there are discussions about the use of pesticides to kill pest animals, particularly rabbits foxes, and the baiting of wild dogs. We wish to share with the Committee our experiences with the endosulfan issue earlier this year in northern New South Wales. We have a perennial interest in the fact that there is no effective system in New South Wales for the collection and disposal of pesticides, and we believe that, as it was a decade ago, it remains a major problem.

CHAIR: Would you mind repeating that?

Mr MULLINS: We believe that the disposal of old pesticides is a major issue that remains fundamentally unaddressed and is quite literally just sitting there.

CHAIR: But you were not involved with that 10 years ago; it was the Department of Agriculture, was it not?

Mr MULLINS: Yes. It is just a concern that we are registering with the Committee. The fourth area is the issue of weeds management, particularly the withdrawal of a pesticide called Frenock. If the Committee wishes, we can give you a long discussion of our concerns about that.

CHAIR: I am not going to declare a pecuniary interest, but I should state that I am a member of the rural lands protection boards and have in the past been a supplier of significant numbers of bags of carrots for 1080 poisoning of rabbits. Frenock is probably something that would be of interest to the Committee because there are a lot of complaints in rural New South Wales that it has been taken off the market or banned but there has been no adequate replacement. Do you have a comment to make about that?

Mr MULLINS: You have summarised the situation perfectly. At the moment we estimate that anywhere between 800,000 and one million hectares of New South Wales is rendered useless by infestation of serrated tussock. There is one, and only one, pesticide that can be used selectively against serrated tussock, and that is Frenock. It was manufactured in Japan. A series of circumstances at both the Japanese end and the Australian end late last year resulted in commercial decisions being taken to cease to produce and to cease to import the product. We are basically left defenceless against that particular weed. From where we sit, there simply has been inadequate attention and urgency paid to, first, the withdrawal and, second, a replacement. The suggestion that we would use RoundUp or glyphosate as a replacement would clearly be untenable. The idea of applying it by air over large areas to control the weed would simply be unacceptable.

The Hon. J. R. JOHNSON: Why?

Mr MULLINS: It is a non-selective herbicide that would simply kill everything it touched, so it would be literally a scorched-earth policy, whereas you can spray Frenock on just about anything and it will only kill serrated tussock and giant Parramatta grass, which is the north coast's major weed invader.

CHAIR: We could probably ask that question of the next witnesses as well. In your comments you also referred to the Department of Agriculture's amnesty and collection some years ago. It is exceedingly valid that there are many chemicals on properties, and of course properties change hands. One of the properties that I bought had eight or 10 old sheds on it. The previous owner of the property might have had the place for about a month and dumped a lot of the old rubbish that he had around the place. As he was leaving he said, "I had better just have a look up here. I bet you don't want this, so I will take it with me." Up on the back of a shelf was some DDT. Had he not mentioned it, I would probably not have found it for another 10 years. It could have been left for 20, 30, 40 or even 50 years. The Department of Agriculture's amnesty or collection process some 10 years ago was helpful for many farmers. I agree with you that it is time it was re-instituted. Which body do you think would be the most effective body to do that?

Mr MULLINS: Anyone but us, would be the immediate response. The prospect of having truckloads of plastic containers dumped—it really is the next step in the chain. Any organisation, and all organisations, could actually suck the unwanted materials in, but it is how you then move them on quickly and where they go.

CHAIR: That was the problem then, was it not: They could not get rid of them. They put them on a couple of ships and never let them berth again?

Mr MULLINS: Yes.

Ms NOWLAND: One of the issues in the original process was that the rural lands protection boards were acting as depots in some areas, and they got stuck with them when the amnesty ended and there was no end point for them. The boards themselves then became the holder of all these illegal chemicals. That is one reason why they may not want to get tied up with it again, unless there is a valid end use or end point for those chemicals.

The Hon. J. R. JOHNSON: Someone will have to get tied up with the chemicals, will they not?

Mr MULLINS: Yes.

The Hon. J. R. JOHNSON: You said that, in the main, the protection boards are made up of landowners. Are they hands-on people, that is, people who use the farms and work the farms?

Mr MULLINS: Yes, they are.

The Hon. J. R. JOHNSON: Why was Frenock taken off the market?

Mr MULLINS: There were three concerns on the part of the Australian importer—and it may well have been the previous witnesses before the Committee—that the product would be coming up for some form of re-registration. That would incur a cost of some millions of dollars, and they were not prepared to run the risk. A judgment was made that there was a risk that the re-registration process may prove difficult. Our understanding is that the company decided, on the basis of its own internal legal advice, not to bother. The Japanese manufacturer produced 70 tonnes of the chemical. It had to turn off its major business for the two or three weeks it took to produce the 70 tonnes. Forty tonnes of that came to Australia and 30 tonnes

was used in Japan. The machinery it was using was pretty old and due for replacement, so they took a commercial decision that it just was not worth continuing. We understand that at the same time questions were being asked by one or more international environmental lobby groups about the production of the chemical, and we understand it is related more to the company's continued involvement in the manufacture of CFCs, not the production of Frenock itself. So it is a very complex issue.

The Hon. J. R. JOHNSON: Is serrated tussock indigenous to Australia?

Ms NOWLAND: No, it is not.

The Hon. J. R. JOHNSON: How do they combat it overseas?

CHAIR: Did it also come from England?

Ms NOWLAND: On my understanding, it came from South America. Because there are native species there that help to combat it, it does not get to the plague proportions that it does in Australia. It is part of a natural system there, and so it does not take over as it does in the Australian environment where that natural system is not in place.

The Hon. J. R. JOHNSON: In the long paddocks that are in your charge, do they thrash and burn instead of poison?

Mr MULLINS: In the management of our TSRs we use of a variety of techniques. Critics would say that the main technique we use is to graze them down to bare earth. We are in the process of identifying, quantifying and protecting the largest known areas of remnant native vegetation outside the parks system in New South Wales. In terms of management, we use a variety of grazing and pesticide controls consistent with what most other land managers would use.

CHAIR: But you are not supposed to graze anyway, are you? They are supposed to be travelling stock reserves.

Mr MULLINS: They eat quickly.

Ms NOWLAND: We are actually allowed to graze the reserves under our legislation.

CHAIR: The reserves, not the roadsides.

Ms NOWLAND: Depending on your definition whether it is the roadside or the separate holding paddock on the end of it. We are allowed to graze those and we issue permits for the length of time they may be grazed. When issuing permits the rangers do take into consideration things such as, for example, spiny burr grass. If it is about to set seed they would not issue a permit for people to walk up and down and spread that burr. Yes, they are allowed to graze them under our Act but they are principally travelling stock reserves for the passage of travelling stock.

The Hon. J. R. JOHNSON: We have taken evidence in towns and from people on the periphery of where we have taken evidence, particularly in relation to the cotton industry. You may have heard about proposals to grow cotton in Condobolin. Would you have any input into that?

Mr MULLINS: In terms of decisions to use private land for particular purposes, no. In terms of land uses that would impact on our TSRs, yes, we would expect some consultation, not necessarily in the initial stages but certainly at a later stage.

The Hon. J. R. JOHNSON: Why not in the initial stages? If there is likely to be a problem, why not get in first?

Mr MULLINS: There is no requirement on the developer of that land, as we understand it, to consult with anyone. But as a result of the endosulfan issue in the last six or eight months we are in the process of advising all neighbours on TSRs that we do not agree to endosulfan being oversprayed on our land. That is as a starting point. But we do have concerns about land uses that may impact particularly on animal health issues and we have an interest in development where it would impact adversely on pest management issues. But I cannot give you examples of those because they would be the rare issues for us.

CHAIR: How do you advise those land-holders? There would be many that would be neighbours of the land that you look after.

Mr MULLINS: It is a matter of ongoing contact basically. It is an informal process, certainly not formal.

CHAIR: Not through your newsletters?

Mr MULLINS: We pump out as much information as we can but where we need to take up specific issues with landowners that is more of an informal exercise where we become aware or are made aware of specific issues.

The Hon. J. R. JOHNSON: What is the major impact of spraying et cetera onto the charges that you have?

Mr MULLINS: Two I suppose. One is the risk of contamination of feed, resulting in contamination of stock using the travelling stock reserves. That potentially gives us some liability. We are grappling with how best to manage that, particularly with endosulfan.

Ms NOWLAND: The other issue for us is that we recognise that some areas of travelling stock reserve are very significant areas of native remnant vegetation and we are trying to manage those to retain that vegetation. When you are getting broad-leaf chemical overspray that is removing the understorey species from there it is undermining the process of retaining them that we are actively promoting.

The Hon. J. R. JOHNSON: What are your major concerns with the chemical industry?

Mr MULLINS: I was thinking through that issue this morning before we came to the meeting. We have just come from our annual rangers conference. They were having a discussion about the responsibilities they have and must exercise when they pass the pesticide we manage across to a landowner. They have a requirement to inform the landowners of their responsibilities in terms of use and to make sure that the landowners understand the label requirements. I do not believe that that same responsibility is placed on other distributors of herbicides and pesticides. In those circumstances it would be perhaps a weakness.

Ms NOWLAND: For example, in discussions this morning we were alerted to the fact that in Victoria and Western Australia the selling on of 1080 is becoming deregulated. So you can go to your local Elders store, for example, and purchase 1080. In New South Wales the licence for 1080 is through New South Wales Agriculture. The people who can supply it are our Rural Lands Protection Board rangers, who are thoroughly trained as authorised control officers. There are also some in National Parks and State Forests. By doing it this way we have a handle on where the 1080 is being used, how much is being used in the State and those sorts of things. We are concerned that if deregulation occurred perhaps that same level of knowledge about where it is being used may not be retained. There is also a potential threat of the loss of 1080 as a productive pesticide agent. If it is thrown around haphazardly without the same level of follow-up there is at the moment we may lose it as a chemical for controlling pest animals in Australia, not just in New South Wales.

CHAIR: When you give 1080 to people do you monitor whether its use is in compliance with the guidelines? Presumably the guidelines say that they have to give neighbours a certain amount of notice. Can you briefly tell us what the guidelines area?

Ms NOWLAND: Yes. All Rural Lands Protection Board officers that hand out the 1080 poison are required to ensure that the land-holder who receives it is aware of the distance restrictions, for example. It cannot be used within 500 metres of another dwelling. You have to have signage up for a month after the 1080 is put out and the date of the initial application of the 1080 so that the neighbours are informed and anyone that drives past or onto your property may also be informed. A full auditing process is carried out not by the authorised control officer but by New South Wales Agriculture. It audits the process to make sure that these things are going on. So there is no potential for the boards themselves to cover their own tracks, because it is being independently audited.

CHAIR: That notification has to be put out on a particular day.

Ms NOWLAND: Prior to laying the 1080 baits you are required to give three days notification to any adjoining land-holder within a one-kilometre radius of the location of the baits.

CHAIR: And how long are you allowed to leave it there?

Ms NOWLAND: Seven days. It depends on the area in the State as well. The Western Division has slightly different rules because of the size of the holdings.

CHAIR: In New South Wales a general letter saying that I want to put 1080 out some time between August and September is not allowed?

Ms NOWLAND: No, it must say that you will be laying the baits on such and such a day. You are supposed to check the baits daily and replace them where necessary and pick them all up and dispose of them appropriately after seven days.

The Hon. J. R. JOHNSON: The disposal of old pesticides concerns me. There are no regulations in New South Wales. Are there in the other States or Territories?

Mr MULLINS: I do not know the answer to that.

The Hon. J. R. JOHNSON: Can you ascertain it?

Mr MULLINS: It may well be a question for the EPA or the NRA. It is not information that we would hold.

The Hon. J. R. JOHNSON: But it is of concern to you?

Mr MULLINS: We are aware of the volume of pesticides and herbicides that are stored in rural New South Wales that are not being used and really cannot be disposed of on the farm safely and we would like to have a process that simply removed those from the farming environment.

The Hon. I. COHEN: Your organisation is a heavy user of pesticides. Does that create problems within your organisation?

Mr MULLINS: No.

The Hon. I. COHEN: Is there any strategy to look at non-chemical methods of dealing with problems? I am referring perhaps more to herbicides rather than animal pests et cetera.

Mr MULLINS: We are developing exactly those strategies. We are required under the RLP Act that was passed in December of last year to produce within every board in the State a management plan that covers our management of TSRs and our management of pests, and to make that plan available for public comment. Boards in turn are required to operate within those plans and to report through State council to the Government at the end of each year on their performance against those plans. So the strategies are coming and they will tie us up very tightly.

The Hon. I. COHEN: Do you have any mechanical or physical weed removal strategies in your organisation that you are looking at?

Mr MULLINS: Increasingly we are looking at using grazing in particular, using variations in grazing pressure and the timing of grazing, to the extent we can manage, to have the stock on the routes at the right time. Those strategies are emerging but they are at a fairly early stage.

The Hon. I. COHEN: What percentage of areas still use stock routes and grazing areas? Ms Nowland mentioned that you have responsibility for environmentally sensitive areas. Could you give a rough indication of what you are managing and how you are managing it?

Mr MULLINS: We have, I think, 100,000 sheep on the stock routes in the Hay board area at the moment. Twelve or 15 months ago, during the last drought, we had massive numbers of stock using the stock routes. The main stock routes running north-south run between about Deniliquin and Moree. The stock routes to the east of that main highway are smaller and are feeder stock routes. The main routes are still used consistently heavily. The feeder routes from the east are used on a much more ad hoc basis.

Ms NOWLAND: Basically, the demand for stock routes is dependent on the season. If there is a lot of feed available on people's properties they do not generally come out onto the stock route. Currently, most people are having a pretty mild winter and they have sufficient feed on their own places. So they are not coming out and using the stock routes. But as Peter said, when it was drier there was definitely a higher demand for people to come out and use them for that purpose. For example, we generated about \$3 million income off the travelling

stock reserves, but we spent about \$3.5 million just trying to maintain them. So they are being used, they are generating income but they are still not generating sufficient income to cover their management costs.

CHAIR: But you would still spend \$3.5 million even if you did not get any income. So where is that money coming from?

Ms NOWLAND: From their use only. From permits that are issued for the use of travelling stock reserves. Those permits might be for stock, they might be for acreage sites. In a few small instances they are also for firewood and native seed collection in accordance with National Parks requirements.

The Hon. I. COHEN: In answer to the Hon. J. R. Johnson's question you said that the composition of the Rural Lands Protection Board was mainly on-the-ground farmers. It is not necessarily the norm but in northern New South Wales in many cases there has been a greater departure from traditional farming methods and the Rural Lands Protection Board has clashed with many people in the community over pesticide usage. Have you had any discussions within your organisation about expanding the breadth of representation on the board in order to adjust to a new circumstances, particularly in relation to chemical use?

Mr MULLINS: The answer is broadly yes but with some fairly severe constraints. We cannot interfere with the democratic election process. However, to the extent that there are changes in the structure of the rural community, particularly the landowning community, we would expect those changes to flow through to the board system. In the past the board system has been fairly stable in terms of membership and representation. At the last election that started to show a radical change. We had contested elections in about one-quarter to one-third of the director positions across the State. We expect and actively encourage that form of competition at each of the elections, which occur once every four years.

CHAIR: Was there a bit of an age shift at the last election?

Mr MULLINS: Yes, and a definite gender shift.

The Hon. I. COHEN: In the context of this inquiry can you comment on the resistance to move from culture to chemicals? Do you think that that is a reasonable statement?

Mr MULLINS: No, I do not think it is a reasonable statement. I do not think we have a resistance to moving away. Aside from herbicides, and pesticides in particular, we have a legislative requirement to tell all landowners that they must get rid of pests. It would be pointless if we did that and landowners had no means by which to comply. We would be taking them to court and prosecuting them for not doing something that they could not do, short of physically strangling the pests.

The Hon. I. COHEN: I am sure many landowners would like to. In terms of getting rid of weeds in northern New South Wales it is a matter of the local branch of the Rural Lands Protection Board issuing a notice; landowners are given a certain amount of leeway and then the board tells them that that if they do not remove the weeds the board will spray under the current regime. Is there a direction that chemicals can be used in such situations? Has that been investigated?

Mr MULLINS: I would love to be able to answer that question. Unfortunately weeds in

New South Wales are the responsibility of local government, not the board system. That is a very sore point at the moment. If we were responsible for weeds we would be taking an educated and sensitive approach to the management of weeds.

The Hon. I. COHEN: Has this changed in recent times?

Mr MULLINS: No.

The Hon. I. COHEN: Is it still the Rural Lands Protection Board that issues the notice?

Mr MULLINS: No, it is local government.

Ms NOWLAND: The board issues notices for pest control only, not for weed control.

CHAIR: So you want to take over noxious weed control.

Mr MULLINS: Did I say that?

CHAIR: I would be surprised if you did.

Mr MULLINS: You might have to check the Hansard transcript.

The Hon. I. COHEN: In terms of legislation do you believe that the self-regulation of the industry is working? Are there any changes that could be made to the Pesticides Act to make it more relevant and effective in terms of controlling the application and storage of pesticides in the community?

Mr MULLINS: There is a difficulty in terms of identifying points of responsibility in the pesticides use chain. On one hand it would seem perfectly reasonable for manufacturers producers or resellers of chemicals to simply say that they have done their bit and then stop. Equally, there seems to be an attitude in the minds of chemical users—and endosulfan comes to mind—that a chemical must be safe because they can buy it; the rules are there but it is all right, and off they go. Then everyone is shocked and surprised when something goes wrong. There would appear to be not necessarily a regulatory breakdown but a communication breakdown in the process. In the case of endosulfan, incorrect assumptions are being made about the level of understanding and the level of capacity to follow directions. How someone can spray a crop nine times on windy days and think that he is complying with the label is pretty much beyond comprehension, but we have had examples of that.

The Hon. I. COHEN: Who should be responsible—the government regulatory authority, the Environment Protection Authority, the landowner or the sprayer of the chemical—in cases of chemical trespass?

Mr MULLINS: In our view whoever causes the problem has legal responsibility for it. If I shoot someone it is not the manufacturer of the gun or the manufacturer of the bullets who is held responsible; I am held responsible because I pulled the trigger. If I misuse a chemical it is my choice to use the chemical and therefore in using it logically I accept responsibility for its use and the consequences of its use.

The Hon. I. COHEN: The landowner or the applicator.

Mr MULLINS: In terms of endosulfan, I asked that question at a rather steamy meeting with Cotton Australia. I discovered that you would have to hire a team of Queen's Counsel and put the aerial applicator, the consultant and the landowner in a room and let them fight it out. They would simply point the finger at each other as to who told who to do what at a given time.

CHAIR: So you would not preclude any of them if they were responsible?

Mr MULLINS: No. I do not know how much information on endosulfan has been given to the Committee. I hope that the boards in the northwest gave you some insights because there are some very strong feelings there. Situations in which a spray drift is detected 14 kilometres from what was believed to be the point of application starts to make a nonsense of any argument that it was just an accident, it just went over the boundary. I would not call it a culture of misuse but it comes fairly close.

The Hon. I. COHEN: In terms of chemicals, do any of your agents resort to aerial spraying? Do you consider that your regime of chemical application is the safest regime? Would that regime be applicable to some of the larger broadacre applications of those chemicals?

Ms NOWLAND: All of our rangers who use pesticides have undertaken the farm chemical user training course so they should be aware of the appropriate use of chemicals. They do not use aerial application on travelling stock reserves because of their concern about spray drift onto neighbouring properties. All of their application is done by ground rigs, and the majority of those are with long hoses that you can walk around and do by hand. That increases the cost of our operation quite considerably but we are trying to be responsible managers for our neighbours.

Mr MULLINS: As a basic principle we would approach our use of herbicides along the lines that we can use them on our side of the fence and no further. That principle should be applied everywhere.

The Hon. J. R. JOHNSON: How many people do you employ in that process?

Mr MULLINS: Across the State we have a staff of 400 across the 48 boards. We employ 120 rangers who at different times may be involved in some aspects of weed management. We also contract or subcontract a lot of that work.

The Hon. J. R. JOHNSON: Is the health of those workers involved in the spray applications monitored?

Mr MULLINS: In a formal sense, no.

The Hon. J. R. JOHNSON: Is it a requirement?

Mr MULLINS: It is not a formal requirement, but I understand it is in local government. Equally, we would contract out the large areas we spray. In the main, the exposure of our staff to herbicides would be ad hoc and infrequent, not constant.

The Hon. J. R. JOHNSON: There is nowhere where it is frequent.

Mr MULLINS: Not as we understand it, no.

CHAIR: I have a few questions on notice for you. Can you describe the impact on the live stock industry for domestic and export markets from the endosulfan and other pesticide residue problems? What is your organisation's view on the feasibility of right to farm legislation? What does your organisation consider is the best mix of regulatory and non-regulatory instruments to achieve effective management of pesticides? Thank you for your enlightening evidence.

(The witnesses withdrew)

JOHN STANLEY KENIRY, Chairman, National Registration Authority for Agricultural and Veterinary Chemicals, 81 Mona Vale Road, Pymble,

ALISON JUDITH TURNER, Chief Executive Officer, National Registration Authority for Agricultural and Veterinary Chemicals, P. O. Box E240, Kingston, Australian Capital Territory, and

GREGORY NOEL HOOPER, Deputy Chief Executive, National Registration Authority for Agricultural and Veterinary Chemicals, P. O. Box E240, Kingston, Australian Capital Territory, sworn and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act?

Dr KENIRY: Yes.

Dr TURNER: Yes.

Mr HOOPER: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Dr KENIRY: Yes, I am.

Dr TURNER: Yes.

Mr HOOPER: I am.

CHAIR: If you should consider at any stage that in the public interest certain documents or evidence you may wish to present to the Committee should be seen or heard only by members of the Committee, the Committee would be willing to accede to your request and hear your evidence in camera. However, I must warn you that Parliament can overturn the Committee's decision and make all evidence public, although it has not done that to date. Dr Keniry may wish to make a short statement and the Committee will then ask questions. I am aware that he is heavily involved in the food industry in Australia and overseas. I am not sure whether recently he has retired but apart from his position here, his background provides an interesting line for comments in relation to chemicals in the food industry.

Dr KENIRY: Mr Chairman, members of the Committee. The National Registration Authority [NRA] welcomes your invitation to appear before the Standing Committee on State Development as part of its inquiry into the use and management of pesticides in New South Wales. It gives us the opportunity to outline the NRA's role in the registration of agricultural chemicals—and specifically pesticides—and to highlight the importance of proper use and management of pesticide products once released for sale. The work of the NRA complements regulatory activity by other agencies, particularly those at State level.

The NRA was established in 1993 to replace State-based schemes and provide Australia with a single and nationally co-ordinated process for the scientific assessment and registration of agricultural and veterinary chemicals. Under the Commonwealth Agricultural and Veterinary Chemicals Code the NRA is required to assess all applications for new chemical products and

modifications to existing products to ensure that they do not pose undue risk to people, the environment, users and trade. Products must also be evaluated for their efficacy and performance. The NRA assesses and approves the label, which becomes a legal document. Registration conditions may specify the use of particular application techniques, precautions or restrictions. The authority's responsibilities end at the point of retail sale, following which control-of-use activity, such as licensing of pest controllers and aerial sprayers, becomes a State responsibility.

The NRA also manages a compliance program which investigates suspected breaches of registration or registration conditions. We also license veterinary product manufacturers on the basis of their conformance to standards of good manufacturing practice and monitor adverse effects of veterinary products among animals. Collectively, these post-registration activities are part of quality assurance efforts to ensure products in the marketplace continue to reflect the standards approved at the time of registration. The business of the NRA involves hazard and risk assessment and risk management. The registration process remains the foundation for pesticide risk assessment and is central to the overall regulation of pesticides. Much of the regulation that is the responsibility of others, for example control of use, is closely linked to the outcomes of registration, particularly the approved label.

Before an agricultural or veterinary chemical product can be sold in Australia it must be assessed and registered by the NRA. Chemical companies are required to provide extensive scientific data to demonstrate that a product will be effective for the uses described on the label, will be safe for humans and non-target species, and will not pose unacceptable risks to the environment or trade with other nations. Residue studies on crops and animals are evaluated to establish maximum residue limit [MRL] and withholding period. Recommendations for using the product are checked to see that they are consistent with the data provided, and labelling is examined to ensure that it is accurate and meets Commonwealth and State legislative requirements.

The NRA needs to be assured that not only will the product work but the application rate and frequency of use are no more than necessary if we are to reduce the pesticide load on the environment and reduce the level of residues in food, particularly where trade concerns may arise. For specialist advice during the assessment process the NRA receives input from three Commonwealth agencies. The Department of Health and Aged Care evaluates toxicology data submitted by applicants to determine if any health risk may be posed to the community. Environment Australia evaluates the environmental implications of products submitted for registration and recommends measures to avoid or minimise adverse environmental effects. The National Occupational Health and Safety Commission [NOHSC] conducts occupational health and safety assessments to ensure that any risks arising out of workers' exposure to agricultural and veterinary chemical products are minimised.

Evaluations of chemicals take between three and 15 months to complete and 95 per cent of all evaluations are completed within statutory time frames, which are generally much shorter than we see in most overseas countries. At some stages of the evaluation process consultation may occur with the States and Territories, other Commonwealth agencies, and a range of expert panels or committees that provide advice to the NRA. This process ensures that appropriate knowledge and experience is incorporated into the assessment process. The quality of the NRA's scientific assessments and the expertise available within the NRA and throughout the NRA's advisory agencies is, I believe, world class. So much so that our assessment reports are increasingly being sought by overseas countries to support their registration decisions or in their review of older chemicals. For example, in the last three years we have received

approximately 150 requests for assessment reports from overseas agencies.

The NRA also plays a leading role in OECD efforts to achieve international harmonisation of registration requirements and promote a regular exchange of scientific assessments between OECD member countries. As further evidence of our increasing international standing is the fact that the NRA secured observer status on the body called VICH, an industry-initiated international committee aimed at harmonising technical requirements for veterinary products. The VICH country membership had been limited to regulatory authorities from the European Commission, the United States of America, Japan, and Australia and New Zealand as observers. However, we are now members. NRA scientific, international and administrative experience is also enhanced through co-operative working relationships and work-sharing opportunities with our sister organisations in Canada, the United States of America and the United Kingdom. NRA staff also hold key positions in international bodies such as various Codex committees, the World Health Organisation, the OECD and the Food and Agriculture Organisation.

In addition to the registration of new products and with regard to the terms of reference of your inquiry, I should stress that AgVet chemical products are not registered forever, nor do they go unchecked. The NRA operates programs that monitor agricultural and veterinary chemicals after registration. These programs have the capacity to bring about regulatory action if registration standards are not maintained or if new information dictates the need to reconsider the conditions of registration. Of particular note are the existing chemical and special review programs, which revisit the registration of AgVet chemicals to ensure that the chemicals continue to meet contemporary efficacy, health, safety, environment and trade standards. As a result of these programs, 24 chemicals have been withdrawn from the market. Others have been severely restricted in their use, with much stricter conditions that users must follow.

The NRA places a high priority on communication with the various stakeholders involved in the national registration scheme. It operates or participates in a number of consultative forums, which include State Government representatives on issues relating to AgVet chemicals and products. These consultative mechanisms have been instrumental in developing key programs and priorities. Increasingly, it is becoming clearly obvious to the NRA that those who use pesticides must be well trained with a high level of competency in some use situations. New pesticide products are becoming more sophisticated, often requiring specific equipment and skill in their handling and use.

Despite all the research that goes into product development and the extensive scientific assessment by the NRA, it is so often the user who, through misuse or ignorance of proper use practices, places at risk the safety of people and the environment and jeopardises our trade through excessive residues. Consequently, the NRA is exploring, in consultation with user organisations and the chemicals industry, the need for a user accreditation program that would allow higher risk products to be made available only to those with the necessary competencies acquired through appropriate training. Furthermore, as more existing chemicals are subject to review, with possible loss or severe restrictions being placed on individual products and uses, it will be of increasing importance that users can demonstrate proper use practices. Product registrants will be more inclined to continue their support for these products—that is, the existing ones—which are often cheaper in price. Their continued availability may also help to meet the needs of growers involved in minor crops, and minor use is an increasingly important issue.

For its part, the NRA will continue to encourage greater dialogue with food and fibre

producers so that these issues can be further explored and understood. The Government will receive over the next few months the inter-government response to the national competition policy review of the legislation underpinning the work of the NRA as well as control-of-use legislation in some States. The outcomes are expected to be known towards the end of 1999. I understand that a review of control-of-use arrangements is a major recommendation flowing from that review. I have only been able to touch briefly on some of our activities and how we believe they have a bearing on the issues that are the subject of your inquiry. However, my colleagues and I would be pleased to answer any of the Committee's questions.

CHAIR: You mentioned three government departments involved in giving advice: the Department of Health and Aged Care, Environment Australia, and the National Occupational Health and Safety Commission. I presume the primary industries department is involved also?

Dr KENIRY: No. I, as Chairman of the NRA, report for the Federal primary industry Minister. So, we are really their statutory body. But they have more to do with the development of policy. The NRA has its abilities under the Act to make decisions, and we do.

Dr TURNER: We sometimes get advice on trade issues from them. We get advice also sometimes from AQIS—Australian Quarantine Inspection Service—when something is being imported because it has to do its own risk assessment before it allows importation in the first place. So, we liaise with them on those technical issues.

CHAIR: Fiji still uses DDT on its vegetables. Hopefully we do not import anything from there. You said the national competition policy may have some effect on the control of use, but what has it got to do with your organisation? Could you expand on that?

Dr KENIRY: Every agency eventually comes under scrutiny of the national competition policy review. Our turn came up about 12 months ago. A committee was set up and, I believe, mainly run by Victoria in setting up terms of reference and so forth. The outcomes are not officially out yet, but Alison or Greg may wish to answer.

Dr TURNER: The committee looked at two groups of legislation. It looked at legislation that sits behind us but also looked at the control of use legislation of several States. I believe New South Wales was not included because it was doing its own review. The recommendations relate to some of what we do but also contained recommendations of control of use, which applies to those States that participated in the review.

Mr HOOPER: The outcomes of the review will be reported through the Standing Committee on Agriculture and Resource Management and the agricultural Ministers through ARMCANZ probably in the next few weeks. It is that body which is co-ordinating the consideration of the recommendations from the review.

CHAIR: Obviously that has some impact on our recommendations. The proposal is that we will report quickly to Parliament. My understanding is that the Government intends to introduce legislation as quickly as possible, but some review processes may be involved.

Mr HOOPER: One recommendation relates to control of use activities, which is State legislation rather than that which the NRA looks after. There are some issues raised about harmonisation of that legislation between States and how that impacts upon control of use, particularly borders between States, and on the downstream controls of chemicals such as that which might flow from the conditions of registration of products that the NRA might impose

on chemicals.

The Hon. J. R. JOHNSON: In the United States of America in the last couple of days two chemical products with wide application in the apple and pear industries have been withdrawn. Am I to understand that that withdrawal in the United States of America would not be automatic in Australia?

Dr TURNER: That is correct. The NRA does risk assessment and the risk of any chemical is not just the active constituency but relates to a range of things, such as how often it is used, where it is used, what it is used for, and what strategies can be used to manage the chemical when it is applied. Some countries have different regulatory requirements. For example, in some countries they are required to look at social aspects of chemical use, which we do not.

In addition, a country's environment can have a big impact. For example, the Netherlands has a lot more water around than in, say, drier areas of Australia. So, it could be that the hazards and risk assessment of a chemical in one country could be quite different in ours. However, if we hear of regulatory activity being taken overseas, we look to the basis behind it. In other words, is the new information available which would cause us to look at our risk assessment and change it? My colleague can speak more specifically about the United States of America.

Mr HOOPER: I can add that the chemical you are referring to was parathion ethyl and I think following our consultation and contact with the United States of America Environmental Protection Agency as of yesterday that it did not entirely ban the product. It certainly has asked that some uses be removed and the industry register to voluntarily remove some. It is to continue for important food commodities such as white potatoes, wheat, rice and onions.

The issues surrounding that were more from an occupational health and safety angle and that is the point Dr Turner just made, conditions in the United States of America may be different from Australia. We have taken into account the draft report from the United States of America EPA when we published in March this year our existing chemical review report on methyl parathion in which the continued registration status of that in Australia was indicated to be somewhat under a cloud unless further information was provided to the NRA over the next few years.

The Hon. J. R. JOHNSON: Years?

Mr HOOPER: Some of the information takes years. If you are undertaking toxicological studies, for example, or even further studies on the environment, some of those studies take two years as they are long-term studies. If you are doing residue studies, for example, they are dependent upon when that chemical is used in that particular season and whether the pest is present in that season. It does take time, sometimes a fairly long period of time, to generate the data that we must assess.

The Hon. J. R. JOHNSON: But in assessing the two products that were removed in the United States of America, for example, if America has been assessing those practical some years and it is most unusual for it to withdraw approval, would we not take cognisance of what the American regulatory authority thought?

Mr HOOPER: We certainly do. We exchange assessment reports. As Dr Keniry said in

his opening statement, we have been asked for more than 150 assessment reports and we in turn have also asked for assessment reports of other countries, which we take into account in our reviews of new chemicals and of older chemicals. On some occasions companies do come to us with the information quite voluntarily and seek to have the product reviewed. At times that has led to the withdrawal of products in Australia.

Dr TURNER: The NRA is required to make its assessments on the basis of science. If another country makes a decision, we would look at what science was behind it and whether it was relevant to us.

The Hon. J. R. JOHNSON: When you authorise the use of a product or register the product, do you start from scratch or do you take into account what the country of origin has evaluated that product to be?

Dr TURNER: When people lodge an application we require them to put in all data that they have which is relevant to seeking registration. If another country had done an assessment of that, we may well look at that too because, as Mr Hooper said, we have very good links with other countries. But that is not an essential part of what the company has to put to us. If we are aware of overseas assessments, we would certainly take them into consideration.

The Hon. J. R. JOHNSON: So you would start from scratch to evaluate it?

Dr TURNER: Yes.

Mr HOOPER: There are many components of the registration package that are very Australia specific, for example, the efficacy, residues, and some aspects of the environment. So, while some information is global, such as the toxicological evaluation, other data is country specific. We require that registrants notify us of what countries they have registered the product in as part of the registration package and we can seek that information if we believe it is necessary. Often, depending on the industry, we would see chemicals before other countries. You might say that we are actually at the leading edge in assessing those for the first time.

The Hon. J. R. JOHNSON: Do you monitor the withdrawal of chemical products overseas and take similar action here or seek information to evaluate what overseas countries have done?

Mr HOOPER: As we have said, we have very close links. We have day-to-day co-operative arrangements with authorities in the United States of America, Canada, New Zealand and the United Kingdom. We receive their reports and we monitor very closely. A lot of this is quickly made available in a public way these days and we obtain those reports on a routine basis. Once we have those reports we need to make an assessment of them in the context of the Australian use and in the overall risk assessment that we are obliged to undertake under our legislation.

Dr KENIRY: We actually have two programs that are relevant to existing chemicals. One is called the existing chemical review program and the other is the special review. In relation to the existing chemical review, when the NRA was set up there was a recognition that the standards that had been used previously for registering chemicals were not acceptable in a contemporary sense. So, an attempt was made to list out the order in which we would review the existing chemicals. I think we have three batches and we have virtually finished the first one and we are under way with the second. What got into category 1 to be done first was done by

consensus consultation with the industry, users, community and so forth. So, we tried to find out which ones people thought were the most urgently in need of a review.

The outcome of those reviews has either been that the chemical's use has been withdrawn or changed or, more commonly, we said the data we have for this chemical is not sufficient for us to satisfy ourselves that there is no impact, so you have to produce more data. We consult with the people who might produce the data and get commitments from them that they will, but we have to agree to a time span. Then we say, "Okay, this chemical can continue to be used until we get this data, which will allow us to make a properly informed decision." If, as happened in the case of parathion ethyl, which is like a cousin of parathion methyl, none of the vendors or others were prepared to do the work to produce the data, we withdrew the registration. So, that one is gone. Parathion methyl is going through a process at present.

The Hon. J. R. JOHNSON: Whilst I believe that everything would concern you in the industry, what are major concerns in the chemical industry?

Dr KENIRY: The major concern I guess is that chemicals are an integral part of modern agriculture, therefore, agriculture expands, in principal chemical use expands. We have to try to make sure that the impact for that chemical usage is consistent with what the law requires us in terms of registering and what the community will expect for contemporary safety standards. Increasingly, trade residues are a major issue, as we saw last year with endosulfan. Our Act says this is what we have to take into account to register these materials. We do that as well as we can.

As I said in my opening statement, our concern increasingly is that we can evaluate chemicals with the best data and be satisfied that if they are used in accordance with what is on the label and data there will not be an adverse impact. What is going wrong frequently is that they are not being used consistently with the label, which is a controlled abuse issue. That is what is leading us to be proactive in trying to get a system to provide better training and accreditation of users and so forth because down the track we are convinced that this is the way it will have to go.

The Hon. J. R. JOHNSON: Have you found one of the reasons is the very small print on some of the products for which you need not only a magnifying glass but also a pair of binoculars to read it? In the main it is in English only, but I have seen products with Japanese writing on them. How many Japanese farmers have we got in Australia?

Dr KENIRY: We have got quite a few, for instance Vietnamese people in the vegetable industry who cannot read English. There is an increasing need to have bilingual information.

The Hon. J. R. JOHNSON: Is that a problem because there is only English on the product or the print is too small? Whilst I have been told that there has been a change to only black print on white paper, I can remember when it was green on brown and if one were colour blind one could not read it.

Dr KENIRY: The question of labels is a vexed one. I will make a comment and then let the people who have been involved with this issue a lot longer than I speak. The first issue is that it is a legal document. This is what the legislation says about how the chemical has to be used. Sometimes it cannot be put in print one inch high because there is not enough space, or a book would have to be sold with every drum and then the book would become separated from the drum and there would be no instructions. Everybody in this industry would be very

happy to find a very simple, comprehensive method of labelling, because it is a legal process after all, and is complete. But up to now nobody in Australia or anywhere in the world has found a way to do it.

Some of the major chemical companies have spent very large sums of money, for example, in Africa, to try to find a way to simplify labels so that they can be read and easily understood by users. Generally the conclusion has been that despite all the money spent there is no real improvement. We accept it is a real problem. Recently when the board travelled around it visited some people north of Adelaide where a lot of Vietnamese people grow vegetables, and where there are real issues. We will have to spend money to find a way to address that issue sensibly. We accept it is a problem and it is under active consideration now, but I am afraid that up to now neither we nor the world chemical industry—nor anybody else—has found the appropriate solution.

Dr TURNER: We get very conflicting views about labels. Some people want to make them simpler so they are easier to read and some people actually want us to put information on them. One cannot really win with labels. At the moment the NRA is considering working with a group to try to simplify some of the language on labels, particularly with a view to them being more easily understood by non-English speaking people. At the moment there is work going on in South Australia. I believe work is being done in western Sydney with the Chinese vegetable growers. The Farm Care Association provided training and is actively trying to encourage the development of chemical training in languages other than English particularly for the reason you specified.

Mr HOOPER: Multilingual labelling has been a difficult issue of concern for many years. I understand in some industries there can be up to 20 different languages and with further dialects it adds complexity to the issue. Unfortunately that raises costs and liability issues because, as was said, the label is a legal document. Sometimes products will not continue if those costs have to be met. At the same time we are sympathetic to the need to get further information out to users. Whether the label is the right vehicle or whether there are other ways of getting sound management practices in the handling and use of chemicals out to growers is something that may also have to be looked at.

CHAIR: Some chemicals are sold under different trade names, such as RoundUp and Zero, which are sold domestically in small containers on which not much information can be provided, but they are both glyphosates.. A 20-litre drum is accompanied by a booklet, but there is no way to put a booklet on a small container of Zero.

Mr HOOPER: Some years ago the NRA produced a different code for the labelling of pesticides for use in the home garden because the type of language that is wanted in a home garden situation is not the language that is necessarily wanted for a product to be used in broad agriculture. Simplifying the language for the home gardener was quite successful in adding to the improved understanding and comprehension of labels used by those who are probably less experienced in the use of chemicals.

The Hon. J. R. JOHNSON: That reminds me of something a man read in a book. A woman reported that her husband had gone mad, he was out with a torch doing the gardening because the book said "plant in the dark".

Dr KENIRY: Rather than focus on the label, probably an accreditation system or better education of users will allow people to be much more adept at reading and finding the most

important information on the label. I do not think we should focus on saying that the solution is to simplify the label because that has been focused on for a long time and no-one has found the solution. We need to get people who can better understand what the really important information is on the label. An accreditation and training system is the way to do it.

The Hon. J. R. JOHNSON: I am concerned that on Saturday mornings and Sunday afternoons schoolchildren sell the product in nurseries but know absolutely nothing about its proper use.

Mr HOOPER: These things could be taken up with an accreditation so that people are required to have a certain degree of competency not only in using but in selling the product. The product would be explained by Avcare through their Agsafe program at least at a professional level by a person with knowledge to pass to the user when selling the products.

The Hon. I. COHEN: Dr Keniry, you mentioned your responsibility to safety for the chemicals that arrive in Australia. There are so many different environments in Australia. How do you guarantee against chemical escape by usage, say in the north of New South Wales where it is very wet and has smaller areas, with problems with neighbours? You mentioned user accreditation, but an earlier witness mentioned a reckless crop-dusting pilot. The Committee has heard many times about problems of misuse. Who is responsible? Are you responsible because you are aware of the types of end use in different areas? Who does the Committee make responsible if we are looking at legislation to protect both the public and the environment?

Dr KENIRY: There are two issues that I understood. The first is whether we can impose different requirements for the use of chemicals in different geographic areas. The answer to that question is yes. The second issue is who is responsible for the control of use. The responsibility for the control of use is clearly a State issue. That is an unfortunate boundary to some extent in the system, but we nominate the conditions under which the chemicals can be used, having satisfied ourselves of the requirements under our Act. Then the control of use after the point of sale is entirely up to State jurisdiction.

The Hon. I. COHEN: Are you concerned that the chemicals to which you are giving a tick for use are actually being abused?

Dr KENIRY: It concerns us to the extent that we are being pro-active in trying to get an accreditation system for users because the bottom line is that we recognise that if we cannot get that system in place then we are going to have to be much harder to satisfy that the chemical can be used safely. We do not have the legislative rights to get involved in control of use but we recognise the end result. That is why we are being pro-active trying to get people interested in an accreditation system.

CHAIR: It is a bit like registering and using a car. Cars certainly kill people if they are used the wrong way.

Dr KENIRY: Exactly.

Dr TURNER: If one wants to use a more complicated vehicle then one needs a higher level of certification to be licensed because one is in charge of something which is more dangerous.

The Hon. I. COHEN: It is a wonderful analogy because in the end we have a huge

number of cars in the market designed by the industry for speed way beyond what might be in the best interests of the whole community. Chemical companies are putting products on the market that are clearly unsafe when one sees the end use. Can we regulate to control that? We have super-cars in the chemical industry. Should we not guarantee adequate testing of the chemicals that you allow to be available in the community? Do you have a role?

Dr KENIRY: We require that information be given in order for a registration to be considered that allows us to satisfy ourselves that if it is used in the way specified on the label it will be safe within the meaning of our Act.

The Hon. I. COHEN: That is not very comforting with problems of chemical trespass and the way chemicals are being used in the community at the present time which the Committee is attempting to resolve. Are there any legislative suggestions that you might make that would help with the safety of applications right across the board?

Dr KENIRY: We took a major step a few months ago with endosulfan with notification requirements and a number of other issues. I am not saying that that should be regarded as a hallmark of what is happening.

The Hon. I. COHEN: Why should it not be?

Dr KENIRY: Because we want to go back in the endosulfan spraying season in December and January and check the effectiveness of the new rules. We said that quite clearly up-front when we made the decision to put restrictions on how many times to spray a season, notification requirements and new rules about when to spray in certain wind conditions with endosulfan.

CHAIR: Effectively you have started to control use?

Dr KENIRY: We always specify the conditions under which it can be used. We are now having discussions with the EPA of New South Wales and the Queensland authorities about how to go back and check that the new rules are delivering the results that we hoped they would.

Mr HOOPER: Increasingly we are facing that problem. One of the opening questions was about the parathions. That is an acutely toxic chemical which we would like people to monitor the feedback as to how successful our registration system is, how successful the labels are and if changes have to be made, we need to make them. Some States through WorkCover authorities or others would undertake some of that work, others would not.

CHAIR: Does the Health department?

Mr HOOPER: Health authorities, or in some cases WorkCover authorities, would do that. In Victoria, for example, the growers in the Goulburn Valley want it as part of the continued use of parathion. We do not get involved in that. It is becoming increasingly essential that we have that in a uniform way across the country with certain chemicals, otherwise we are in a very difficult position trying to make products available nationally in Australia when downstream controls may be at different levels within different areas. This needs to be looked at and the control and use harmonised. There may need to be some form of accreditation of the competencies of users. We say the management of chemicals would be improved if chemicals are monitored once in the market place.

The Hon. I. COHEN: Is it of benefit to your organisation and the health of the community that any chemical to which you have given a tick for use in society is adequately monitored? The Committee has evidence that in Coffs Harbour people have real concerns about effects of low-level pesticides. There needs to be certain scientific sophistication to deal with those concerns and at huge expense to themselves they have to send blood samples to the United States of America to monitor the suspected problem. They are being told by authorities that it may be psychological. Surely you have a responsibility, if you are introducing chemicals which you say are safe, to provide a mechanism to prove their safety. If it is not at your level is it at a national level? Where? How do we do it? Do we include that in legislation in New South Wales in a revised Pesticide Act?

Mr HOOPER: The issue you raise is a real issue. I think we said earlier that we require, for example, analytical methodology to test residues in food. It is a fact that at the time of registration we do not ask for analytical data or analytical methodology to look at how one may screen for exposure to chemicals in the human population, whether that should be done by examining blood, urine or whatever. All I can say is that it is something that we may take on board. We would consult with people from an organisation such as the National Occupation Health and Safety Commission to see whether that is something that needs to be taken up in terms of strengthening our registration system.

The Hon. I. COHEN: I see it as an urgency. I would like to know whether you could take this matter on notice and perhaps get back to the committee in writing with arguments why it should not be taken on board and any impediments you might see: for example, if it is not your role, then whose role it is. I see as the central urgency the breaking of this nexus of lack of scientific information in terms of the community's health. As I see it, we are approaching chemical warfare in terms the effect on the community. In the cotton growing areas of the mid north coast and the far north coast of New South Wales, I feel there is a real sense of urgency.

Dr TURNER: We are happy to do that. We have a community consultative committee which has recently provided the board with a very comprehensive report on health monitoring in Australia. It made some recommendations about the sorts of things that could be done. The board is currently considering that.

The Hon. I. COHEN: Would it be possible for us to get that information? Can that translate into potential legislation in New South Wales in terms of pesticide legislation?

Dr TURNER: We are happy to take that on board.

The Hon. J. R. JOHNSON: The report to which you have referred, is that a private report to you?

Dr KENIRY: Yes. We would be happy to make it available but that is one that we would claim confidentiality for because it has been paid for by the National Registration Authority [NRA] to enable the community consultative committee to give us that advice.

CHAIR: Certainly. The questions that we will ask you to respond to on notice will appear in the transcript. Some may have already been answered. Check that you are happy that you have answered everything and, if not, just add to it. Could I ask for a very quick comment before the conclusion of this part of the hearing on Frenock. My understanding from one of the previous witnesses is that it had not been banned by the NRA but had actually been taken off

the market by the Japanese chemical company. That is correct, is it not?

Dr KENIRY: Yes.

CHAIR: There is a misapprehension in the farming community that the NRA has been sitting on its hands. It has been said that the NRA had banned that chemical but had not authorised another chemical to take its place.

The Hon. I. COHEN: Could you also take on notice a request to provide a list of chemicals banned in the United States—which, I assume, was the place of origin of most of these chemicals—that are available in Australia and the reasons why?

The Hon. J. R. JOHNSON: It is not only the United States of America; it is also the Nordic countries, Switzerland and Germany.

Dr TURNER: There are also chemicals that are banned here but are available in those countries, too.

The Hon. I. COHEN: We are looking at the impact problems on New South Wales farmers and their neighbours using it.

CHAIR: Can I ask for a quick comment on Frenock?

Dr TURNER: Yes. You are quite correct. The NRA took no regulatory action against that. The applicant has asked for the registration to lapse, which it did on 30 June.

CHAIR: And there is nothing on the horizon to replace it?

Dr TURNER: Unfortunately, under our provisions we are not allowed to make public whether we have received applications for new chemicals. We are governed by confidentiality provisions of the legislation.

The Hon. J. R. JOHNSON: Do you know whether the manufacturers of Frenock have put the compound on the market to sell it?

Dr TURNER: My understanding is that the manufacturer which the registrant used ceased to produce that particular product.

The Hon. J. R. JOHNSON: Yes, I am well aware of that. We were told this morning that that was because the equipment got old and they had to shut down the major part of their processing just to manufacture 70 tonnes, 40 tonnes of which came to Australia and 30 tonnes of which went to Japan.

Dr TURNER: I had not heard that it was a by-product of another manufacturing process and that that manufacturing process had ceased.

CHAIR: I ask you the following questions on notice. What processes does the NRA implement to ensure that pesticides approved for registration will not cause significant harm to persons, property or the environment? To what extent is it possible to identify the source of pesticide contamination in animals, water courses or property, and what is the NRA doing to achieve this objective? What mix of regulatory and non-regulatory instruments are required to achieve the most effective management of pesticides? What is the NRA's position regarding

the view that the application of pesticides in lower than labelled doses may lead to ineffective eradication of pest and increase the likelihood of resistance? Given your organisation's role at the national level, are there any areas where the interface between the States and the Commonwealth can be improved in the area of pesticide management? Does the NRA support the precautionary principle with respect to the use of pesticides? What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass? What type of information is provided to the New South Wales Department of Health and vice versa?

(The witnesses withdrew)

(Luncheon adjournment)

BRIAN ALBERT INALL, Pest Management Business Owner, 10 Bancks Crescent, McKellar, Australian Capital Territory, and

MALCOLM TROTTER, Pest Management Business Owner, 393 Rocky Point Road, Sans Souci, sworn and examined:

CHAIR: In what capacity are you appearing before the Committee?

Mr INALL: As Chairman of the New South Wales branch of the Australian Environmental Pest Managers Association.

Mr TROTTER: I am a member of the council of the State branch of the Australian Environmental Pest Managers Association.

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Mr INALL: Yes.

Mr TROTTER: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr INALL: Yes.

Mr TROTTER: Yes.

CHAIR: If either of you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee will be willing to accede to your request and resolve into confidential evidence. However, I must warn you that Parliament reserves the right to overrule the Committee's decision, and could therefore make any evidence public. However, as yet Parliament has not ever done that. Would you like to make a brief statement to the Committee, then members will ask questions.

Mr INALL: The terms of reference refer to the use of all pesticides. We believe that that includes urban pest control. Two issues are of prime concern to us: first, the administration of urban pest control licensing; and second, business impediment. In relation to the administration of pest control licensing, we believe that WorkCover is not the appropriate regulatory authority. We believe that not from the point of view that we are dissatisfied with WorkCover's administration. However, the WorkCover administrative arrangements suggest that probably the reason it should be administered there is that the prime concern relates to the operators of pest control management. We believe that that is not so, and I believe that WorkCover has the evidence to support that. WorkCover cannot ensure public health best practice—it is out of WorkCover's bailiwick—and urban pest control works basically hand in hand with public health or in the pursuit of public health objectives.

In relation to national consistency, all other major States are administered by public health authorities, and we feel that, in pursuit of national consistency, that would be a sensible thing to do. This is why we are recommending that licensing in New South Wales be administered

by public health, to facilitate compliance with public health best practice. With regard to business impediment, there is a forest of regulations administered by various different bodies which we need to be familiar with and to comply with. This becomes an onerous task. If the Government's objective is to ensure that best practice is achieved, clear guidelines which can be readily understood by industry need to be in place. The current plethora of regulations and regulatory bodies almost suggests that it is an objective of providing the most complex challenge possible so that an inadvertent failure to comply will occur. Our recommended solution is that all appropriate or relevant regulations be combined into one guiding document and administered by a single entity.

CHAIR: Mr Trotter, would you like to comment?

Mr TROTTER: I would simply like to add to Mr Inall's comments in relation to the occupational health and safety aspect of WorkCover administering the licensing regulations. Whilst our industry is perceived as being one that is dangerous to itself or dangerous to our practitioners, our field staff, and so on, in support of what Mr Inall said about WorkCover's own file supporting, that is not the case. In fact, WorkCover conducted blood tests on field staff on a regular basis for many years. That was finally discontinued. It was discontinued purely and simply because the cost of sustaining it was not borne out by the results that were found to be the case in terms of pesticides found in blood levels of our field staff or actual pesticide applicators.

CHAIR: Was there not a structural change when WorkCover became a corporate entity, rather than the Department of Industrial Relations? WorkCover used to also carry out tests for farmers in the orchards. I thought it was more to do with the fact that WorkCover changed its structure and simply discontinued the testing throughout—not just in your industry but in all industries. At the time that WorkCover discontinued the testing, many apple growers were found to have chemical contamination.

Mr INALL: That may be so. But I believe that when this matter was actually raised and discussed, the blood tests of the urban pest control operators showed that there were negligible levels of pesticides.

The Hon. I. COHEN: Do you have clear guidelines with regard to the labelling and disposal of pesticide containers in your industry? How does an operator fit in with the flow of containers to be dealt with in an operation such as that?

Mr INALL: It is certainly a difficult situation. The fundamental rules that govern that are specified on the container label. At the moment there is a procedure being undertaken in the agricultural area relating to the drumMUSTER, but it is not yet up to speed in the urban pest control area.

The Hon. I. COHEN: You do not have that procedure?

Mr INALL: We do not, but we are pursuing that. Our association is currently investigating a method whereby we can become part of that drumMUSTER. It tends to be managed at council level, and different councils have different ways of dealing with it. For example, in the Australian Capital Territory, where I come from, there are very clear guidelines and the procedure is in place whereby chemical containers and unused chemicals are disposed of by the urban services people at a special tip. It works very well. Obviously, in an area as big as New South Wales that becomes very difficult. But certainly it is a process that the industry

recognises as being a problem for itself, and we as an association are dealing with it.

The Hon. I. COHEN: Is there a registration process within the industry in relation to drums used? Is there monitoring of the number of containers that a small operator might use? Is there any way of checking that aspect?

Mr TROTTER: Not to my knowledge.

The Hon. I. COHEN: Would you object to that, or would that be seen as a valid component of any legislation that might at least allow for verification of quantities of containers and things of that nature?

Mr INALL: I would need to be satisfied that that procedure was practical. You would have to be careful that you did not put on the industry a task that became very difficult if not impossible to administer and police. I believe there is no point in having regulations if you cannot manage or police them. It is certainly something that could be looked at. But we as an association would want to work with whoever is setting those rules or attempting to put those rules together, to look at it from a practical point of view. There may be other ways of doing it. For example, if chemical products are supplied to pest managers from suppliers—who obviously would have that record anyway, I would think—maybe that is the way to try to keep track of it, at the point where it can be easily kept track of, rather than at the end where it is distributed through many different businesses. In other words, you have one checking point here, but you could have very many checking points if you try to get the end user to do it. It is something that I have not thought about in detail. If we were to go down that track, I would like to see what was being suggested.

The Hon. I. COHEN: Chemical trespass is a major issue in the agricultural sector in terms of usage of chemicals and the problems that are involved. Do you have any problems with chemical trespass in your urban activities?

Mr INALL: Could you explain what you mean by "chemical trespass"?

The Hon. I. COHEN: Chemical trespass is where pesticides cause spray drift, go into the groundwater, or travel outside the target area, which potentially can affect other people, their homes and the environment.

Mr INALL: We do not believe that that is a major problem. It certainly has not been presented to us as a major problem. We are aware of incidents, but to our knowledge those incidents are not major incidents in the urban environment.

The Hon. I. COHEN: With regard to those incidents, who is responsible? Are we talking about the company that applies the pesticides, or the supplier? Do you see a clear indicator as to who is responsible?

Mr INALL: I think it would be very difficult to sheet the responsibility home as a general statement. Different circumstances and different situations would allude to differing responsibilities. In some instances it may well be the applicator. In other instances it may be the applicator doing what he was required to do. I do not know that I can see how, in the application aspect, the manufacturer would be responsible, unless there was some characteristic of the insecticide or pesticide concerned.

The Hon. I. COHEN: It is a combination of all pesticides that have a limited toxicity. Presumably there are clear guidelines as to how a chemical product should be used?

Mr INALL: Yes.

The Hon. I. COHEN: If a chemical is misused, who is responsible?

Mr INALL: If it is misused, again, I do not think you can just make broad statements about it. If it is misused you would have to look at the circumstances under which it was misused. It could be misused by a person using it who was not qualified to use it. If that was the case, why was he using it? Sometimes a business cannot be responsible for someone getting hold of an insecticide that they were not supposed to get hold of and using it, for instance, taking it from some situation that the business had no control over. I do not think that I could support something as general as that. There are too many circumstances—

The Hon. I. COHEN: Does your industry need more regulation?

Mr TROTTER: Our industry has an almost unbelievable level of regulation. The problem with it is that it is fragmented. It is fragmented over different pieces of legislation, different government departments and different sets of regulations. As Brian indicated in his original presentation, it is extremely difficult for a practitioner in our industry to familiarise with and ensure that they maintain current knowledge of all of those guidelines, regulations and pieces of legislation all of the time. This is not so much because of the content; it is because of the way it is fragmented, the way it has been written and the way it is administered.

You will see in the submission that our association put to the Committee a list of legislation, regulations and guidelines that we are subject to. It is our position that it would be far more effective if it were easier to understand, clearer and administered by one central body. A situation can occur that is unfortunate and unacceptable and may involve a breach of legislation regulated by one department. It may have the ability to take punitive action but it may not have the ability to take all the action necessary, for example, to suspend or remove an operating licence because that is not under its legislation. So it can go to a certain degree but it cannot go beyond it. So we believe that there is more than enough legislation there but that it is inconsistent and fragmented. It is extremely difficult to administer and even more difficult to comply with.

The Hon. I. COHEN: You mentioned that workers in the industry have a clean record in terms of personal exposure. If that is the case then there is a high level of OH&S focus in your industry about the sites where pesticides are applied? Do you have data on impacts, for example, at schools or hospitals or any feedback in terms of the effect of pesticide application in those areas, not to the workers but to the people using those establishments, and private homes for that matter?

Mr INALL: I am not aware of that. I can certainly make inquiries at the national level, which is where that information, if it was being recorded, would be recorded. I will undertake to do that. But I do not have that information.

The Hon. I. COHEN: Do you think that that would be of value in terms of your industry regulating itself or in relation to the chemicals that are in popular use at present?

Mr INALL: Again, I would probably tend to say yes but would want to know how you

are going to achieve it.

The Hon. I. COHEN: Perhaps putting it another way, if you have a company that sprays for pests in a school building and someone makes a complaint and there is litigation, who is responsible at present in the way that you are operating? Who is responsible if there is some perceived environmental or medical impact?

Mr INALL: I believe that the situation at the moment is that the applicator and the company would be responsible. Again, the particular circumstances would need to be looked at, because you may well be complying with directions which were legal and legitimate directions. I would need to look at that.

CHAIR: When you say "the applicator" you mean the applicator company or the guys themselves?

Mr INALL: No, the guy who is doing the job, the company that employs him and whoever it is who gave the direction for the work to be done.

CHAIR: The schoolteacher, principal, education department—

Mr INALL: Obviously it has to be someone who is competent to give that direction. In the case of a direction from someone competent, obviously they have a responsibility for the actual task as well.

Mr TROTTER: It would depend on what caused the problem. The scenario that you have put forward is that a complaint has been made due to application of the pesticide. It would depend on what caused the problem. If the problem was caused by it being applied incorrectly or misapplied then certainly the person applying it could be liable. The company would normally be liable unless it could prove justifiably to a court that it had taken all steps it possibly could to ensure that the person knew how to apply it correctly and was also carrying out audits to make sure that the work was fine. So someone has taken it upon himself to misapply it in the face of all of that. Alternatively, if the problem was caused by the material being formulated incorrectly possibly that would be sheeted home to the manufacturer. So again it would depend on the scenario. But that is my understanding of how things stand at this point.

The Hon. I. COHEN: You said before that yours was a highly regulated industry. Were you referring to the level of regulation or the confusion between the various bureaucracies and the State, local and Federal government agencies? Is there confusion there or do you think the industry is too highly regulated?

Mr TROTTER: The confusion primarily. Our association takes the stance that if there is a step that can be taken to make our industry safer or more effective or move it towards best practice we will embrace it. Without exception, it is the complexity and what we believe to be the ineffectiveness of the current regulations because of the fragmentation and the complexity.

The Hon. I. COHEN: So in terms of the New South Wales Pesticides Act you would not have any objection to tighter regulations as long as they were consistent?

Mr TROTTER: If they were based on a real need rather than a perceived one or an emotive base we would have no problem, if there was a benefit to the public and the industry,

hopefully to both, we would have no problem.

The Hon. J. R. JOHNSON: Is your main business pest control in houses, white ants, and in businesses?

CHAIR: Spiders.

The Hon. J. R. JOHNSON: Businesses have vermin, et cetera.

Mr INALL: Urban pest control relates mostly to pest control in the urban environment, both commercially and domestically. Its prime focus, I guess, is public health.

The Hon. J. R. JOHNSON: Are the very large people in your industry such as Flick members of your association?

Mr INALL: Flick is not. Amalgamated certainly is. AEPMA represents the bulk of pest controllers in the industry. We represent the bulk of the people who are actually out there in the field doing pest control. There is a difference between the numbers of companies you represent and the number of people involved.

The Hon. J. R. JOHNSON: Yes, I understand that. The submission says that you represent the interests of some 1,500 trained pest managers. What does that mean? The owners of the company?

Mr INALL: No. That is what I was alluding to. It is—

The Hon. J. R. JOHNSON: No, in the next paragraph you say that you have a branch membership of 500 pest controllers. I am trying to equate them. What is the difference between trained pest managers and around 500 pest controllers?

Mr INALL: Basically the same thing. AEPMA represents—I do not know the exact figure but it is in the order of 230 member companies in New South Wales, which represents 500 actual pest controllers.

Mr TROTTER: They are the technicians in the field.

Mr INALL: Trained technicians.

The Hon. J. R. JOHNSON: Is it an accredited course?

Mr INALL: It most certainly is, yes.

The Hon. J. R. JOHNSON: Can you employ somebody who is not accredited?

Mr INALL: Only if they are under training. If they are applying pesticides they have to be fully trained and licensed or under training, for which they have a trainee's permit.

The Hon. J. R. JOHNSON: And they would be under supervision during that training?

Mr INALL: Yes, there are guidelines laid down for that. That is included in the current legislation.

The Hon. J. R. JOHNSON: In a block of units or townhouses there may be 10 units on a floor. You have been called to render your services to two or three of the units on the floor. The units also have allocated to them a storage space, some on the same floor, but communal storage space and the same in their garage space. There may be no separation or separation every third car space. When you go in do you notify the other occupants of that floor or the other owners of part of the space? You have been employed by only one of them but their place for storage has two other people's goods in it—blankets and pillows, children's toys and the usual things that are stored in those storage spaces. Do you notify the others?

Mr INALL: I do not know that that is specified in any sort of legislation that anyone—

The Hon. J. R. JOHNSON: No, I am not asking you that.

Mr INALL: No, but I am going to answer though.

The Hon. J. R. JOHNSON: What would you do?

Mr INALL: If it was in a body corporate situation I would do the work through the body corporate and it would send out letters, et cetera. If there are any communal areas or combined usage areas you most certainly would not touch those without making sure that at least the people who shared it were notified and were involved. It really would depend on what you were going there to do. You do not just go and spray the whole lot because someone wants cockroaches in their kitchen fixed. I do not know whether that answers the question.

The Hon. J. R. JOHNSON: You do not notify them; it is up to the body corporate to do it.

Mr INALL: That is how I would approach the problem. The body corporate has the facility to notify the other tenants. In some circumstances we would require the person we are doing the work for to notify people. In some cases it is probably not so difficult for us to notify all the people in a block of units. However, in some situations it is almost impossible.

The Hon. J. R. JOHNSON: It is certainly difficult in a block of units because of airconditioning and reverse cycle.

Mr INALL: That is true, and that is why you go through a body corporate organisation. We are talking about who is in the best position to notify the people who will be affected, and that relates to the body corporate. In relation to airconditioning, et cetera, there are standard situation in which the airconditioning is turned off. The question assumes that each time you do a pest control job in a unit in a block of units you will use a pesticide that produces fumes. That is becoming fairly much old hat now. Space spraying is being superseded rapidly with things like gels. Only minute quantities are used and they produce no fume effects.

The Hon. J. R. JOHNSON: Do you know whether parents are notified before you go into a school?

Mr INALL: They most certainly are, but again it is a matter of how the job is approached. No pest control in a school would be done without going through the principal and having a memorandum sent to all parents. I could not imagine that not happening.

the Hon. J. R. JOHNSON: Are you contracted by the school or by the department? Does the department contact you and ask you to do a school in Springwood, Glenbrook, Lithgow, Orange or Tamworth?

Mr TROTTER: By the school, individually.

The Hon. J. R. JOHNSON: By the school, and then the school notifies the parents.

Mr TROTTER: That has certainly been my experience.

The Hon. J. R. JOHNSON: Do you require it? Do you tell a school that it is advisable to notify the parents?

Mr INALL: I am from the Australia Capital Territory so I am not completely familiar—

The Hon. J. R. JOHNSON: You have schools in the Australian Capital Territory.

Mr INALL: Yes, but the Australian Capital Territory has specifications for the conduct of pest control in schools.

The Hon. J. R. JOHNSON: You might have that but that does not answer my question. Are the parents notified? Do you believe that it is part of your contract to advise a teacher when you will be in the classroom and that he or she should ensure that the parents know?

Mr INALL: Absolutely. There is no hassle with that. Indeed, that is the only practical way to do it. Obviously people in the school community need to know that pest control is being conducted in the school, irrespective of what it is. That can only be done practically through the school administration, which has a list of the people who attend.

The Hon. J. R. JOHNSON: I know that. Do you say to the school that is employing you, "Will you advise"?

Mr INALL: I personally require it.

CHAIR: You might feel that way but I think the Hon. J. R. Johnson is trying to find out whether your organisation has guidelines that all your operators do that.

Mr TROTTER: That was going to be my question. Are you asking us personally or are you asking us in relation—

The Hon. J. R. JOHNSON: You are here representing your body, not you personally.

CHAIR: Do you have guidelines or do you suggest to your operators that before they spray they get either the school principal or the chairman of the body corporate to say, "I have advised the relevant people"?

Mr INALL: No, our association does not because I believe it is contained in the regulations.

The Hon. J. R. JOHNSON: Your clients would not have the regulations.

Mr INALL: No. There is a code of practice for the conduct of pest control in schools in New South Wales and in the Australian Capital Territory.

The Hon. J. R. JOHNSON: In your submission you state that the organisation believes that the penalties applied should reflect the circumstances of the offence, for example, the size of the company and whether it is a first offence. If the offence was of such a magnitude, I could not care less whether the size of the company was one or 500; the circumstance would be taken into consideration by the presiding judicial officer. I have not grasped why you think the size of the company or whether it is a first offender should be dealt with leniently, depending on the magnitude of the case.

Mr TROTTER: In relation to the first offender component, we tend to believe that someone who re-offends should be dealt with more harshly. You could argue that something may have occurred inadvertently, albeit with a large result. We believe that it is difficult for someone to argue that something happens inadvertently repeatedly. Certainly, the first offence component has that in mind.

The Hon. J. R. JOHNSON: But it all depends on the magnitude of the first offence.

Mr INALL: Certainly, magnitude has a lot to do with it as well. However, our argument is that a practitioner in our industry who offended repeatedly should be dealt with more harshly than someone who had offended once and not again.

The Hon. J. R. JOHNSON: In terms of the treatment of termites, recently one university found a fungus that will kill off or neuter termites, which would be of immense advantage to the industry worldwide? Do you have any additional information about that?

Mr INALL: I am very familiar with metharisium, which is the fungus you are talking about. It is a natural predator of termites and the CSIRO has been researching it for a number of years. I have been involved in some of the work that has been done on it. There are problems with it. There are problems of repellency and problems relating to the effectiveness of the carriers of the metharisium fungus. The fungus does its job very well but the problem is getting it where it needs to be to be effective. We have been waiting for many years for something like metharisium to come onto the market.

The Hon. J. R. JOHNSON: But you expect it to be on the market. It has arrived, has it?

Mr TROTTER: From time to time we get questions about metharisium. To the best of my knowledge CSIRO has been working on this for more than 15 years. It is not new.

The Hon. J. R. JOHNSON: But CSIRO has made an announcement within the past three or four weeks.

Mr TROTTER: Yes. I suspect that that might have been the result of a news release on what was perhaps a quiet news day. To the best of our knowledge there has not been any significant change in that status. If there had been a change our industry would be delighted and would embrace it.

Mr INALL: Absolutely.

The Hon. J. R. JOHNSON: Have you seen a transcript of the Australian Broadcasting news item on 13 July?

Mr INALL: I saw that in Canberra. Our problem is that we have been hearing about the imminent release of metharisium commercially for a long time. It will be excellent when it gets here. I have every reason to believe that it will get here, but we will believe it when we see it. It has been a long time coming.

CHAIR: I have some questions on notice for you. Can you expand upon the concerns outlined in your submission regarding implications for using pesticides at rates lower than the recommended levels? Are there any areas of education and training that need to be addressed to ensure misuse of pesticides is minimised? Are there any improvements that could be made in the area of workplace safety for pesticide applicators such as protective clothing? Do you support the registration of chemical users at the point of sale as a means of documenting and licensing all users? Are there any improvements that could be made in the area of labelling of pesticides and disposing of pesticide containers that may minimise damage to persons, property or the environment? What is the chemical normally used for spraying cockroaches?

Mr TROTTER: A range of materials are registered for cockroaches. In any area where it is intended to apply material the first thing to do is to select a material that is registered for the pest in that area.

The Hon. J. R. JOHNSON: There are plenty of materials registered but not many of them work.

Mr TROTTER: That is a different question. In relation to a building like this, following the principles of integrated pest managements, we recommend that all our members use the least toxic material and the smallest amount applied to the smallest amount of areas to achieve the necessary result. Of course, an overriding factor is health and safety.

The Hon. J. R. JOHNSON: Does that not chase the pest out of one room and into the next?

Mr TROTTER: If it is repellent it might; if it is not repellent it will not.

CHAIR: These days it would be preferable to use a bait or something like that, rather than a spray.

Mr TROTTER: Yes, a gel bait. In areas that do not lend themselves to baiting, such as sealed voids, you might use an insecticidal dust, a talc-based dust, with one of the pyrethroids like permethrin which has extremely low levels of toxicity. You can control its spread. It is going into a given area; it will not move from that area.

CHAIR: What about rats in the city?

Mr TROTTER: That is a big question which would take some answering. In this building?

CHAIR: No, just in the street.

Mr TROTTER: Controlling rats in this city to any degree at all would be a huge

undertaking. It would have to start with a very detailed study. I would not like to try to anticipate what that would show without actually doing the research.

The Hon. J. R. JOHNSON: Since the slabs were put down in Martin Place and outside this building that seems to have provided a home for rats.

Mr INALL: That would be true because they burrow.

CHAIR: They burrow?

The Hon. J. R. JOHNSON: There is no need for them to burrow. They seem to have created the environment for rats.

Mr TROTTER: They may well have done.

Mr INALL: Probably the greatest contributing factor to pest infestation in urban areas is construction design. The design and construction of houses lend themselves to providing pests with a terrific habitat. Pest management is not only the application of pesticides or baits and gels; it is also correcting deficiencies in construction, for example, cable ducting when pipes have been put through walls without those things being plugged, and guttering. If more thought had gone into the construction and architecture possums would not get into roofs, birds would not nest in eaves and things like that.

The Hon. I. COHEN: Does your industry have any information or anything like a preventive measure manual?

Mr TROTTER: There is no manual as such. The association produces some material on risk reduction. There are steps people can take to reduce risk but they are not formalised in a manual. A number of our members produce fragmented pieces of material but we do not have a manual that covers the lot.

Mr INALL: We have a web site which is fairly new. The purpose of that is to provide as much information about that as can be provided generally to the public.

(The witnesses withdrew)

JILLIAN CRANNY, Representative, North Coast Environment Council, National Toxics Network and Toxin Action Group (North Coast), P. O. Box 410, Dorrigo, sworn and examined:

CHAIR: Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

Ms CRANNY: Yes.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Ms CRANNY: Yes.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present to the Committee should be seen or heard only by the Committee, the Committee would be willing to accede to your request and will hear the evidence in camera. I must warn you that Parliament can override that decision but it has not done so to date. Would you like to give a brief presentation and the Committee will then ask you questions?

Ms CRANNY: I would. I prepared a few overheads but I think it might be a bit inconvenient. There are only three short pages.

CHAIR: Would you like to table those?

Ms CRANNY: Yes. I have several documents I would like to table.

Motion by the Hon. I. Cohen agreed to:

That the documents be tabled.

Ms CRANNY: The first is the Australian National Pesticide Risk Reduction Workshop and many of the questions in this are mine. I was at the proceedings conducted in April 1997 and the document has just been published.

CHAIR: Who conducted that?

Ms CRANNY: The Federal Bureau of Resource Sciences organised it and many stakeholders from the State departments of New South Wales were present. The other important large report I would like to table is a report submitted by Aquatech to the Environment Protection Group. It covers "Monitoring of the Environmental Effects of Agricultural and Veterinary Chemicals in Australia". It is a preliminary investigation report resulting from a direction given by the Government in 1990. It was developed by 1997 and is very important because it overviews all monitoring data in Australia on agvet chemicals.

I would also like to table a policy issues paper that I prepared on behalf of the National Registration Authority Community Consultative Committee of which I have been a member for the last 3½ years. I come to the end of my term in December this year. The committee authorised me to produce a policy paper that covered all of the salient policy concerns of our committee on agvet issues because we were concerned that our committee was being locked

out of policy input at the Federal and State level on agvet issues despite a standing committee resolution in 1993 by SCARM that community input should be encouraged into chemical issues at a policy level. I was finally endorsed by the committee to produce this report, which was meant to go to AVCPC, the agvet chemical policy committee. But instead Ray Jefferies came over and it was not presented to the AVCPC although I am still unsure as to why.

CHAIR: What is SCARM?

Ms CRANNY: It is the Standing Committee on Agricultural Resource Management. Another paper I wish to table was put forward by Greenpeace and tabled at the Austrian Convention on Endocrine Disruption entitled "A Precautionary Approach to the Regulation of Endocrine Disrupting Substances". I table this document because it lists agricultural chemicals that are considered endocrine disrupters. Because of the interest in labelling shown earlier and our committee's concern that labelling review and reform is not occurring adequately or often enough, I will also table a paper presented by one of the new members of our committee, Wayne Cornish who represents the South Australian Farmers Federation on chemical labelling which I think would be useful for this inquiry. I have underlined the document—it was not done by the original author, Wayne—and put exclamations marks because I am concerned with what he has mentioned in the document regarding proposed Chemclear, where they are clearing out unwanted chemicals.

He stated that he thinks it is unlikely that the chemical industry scheme, Chemclear, will accept unused chemicals that cannot be identified. I raised those issues at the NRA regarding what chemicals are covered by Chemclear and I am very concerned that the head of the Farmers Association is saying that Chemclear will not take chemicals that cannot be identified. That is not the case. Chemclear was designed to clear out unwanted, unlabelled, unregistered, out-of-date chemicals, not just in country areas but in urban areas as well. I am still waiting for confirmation regarding exactly what will be cleared.

I table a few media clippings from the local community where I have been living because sprays have concerned the Bellinger shire for over a decade now. In the mid 1990s quite a few local environment groups threatened to take local council to court over boom spraying vast kilometres of roadside. This resulted in a mediated outcome. We did not go to court but instead a roadside management plan was developed. The EPA did a roadside monitoring testing of Frenock and RoundUp and the Department of Agriculture set up a three-year trial on weeds. I also conducted a roadside weed trial over a two-year period. Weeds are a big concern in my community but we are very concerned to see best management practice adopted, integrated weed management encouraged and a chemical reduction commitment made. Our council has now done that. I also table an internal draft letter to the NRA regarding some of the concerns of the committee touching on training of people, chemical expertise and whether or not discussion on labelling has been effective for.

CHAIR: It is actually on AWU letterhead, is it not?

Ms CRANNY: It is on the letterhead of the Australian Workers Union because it comes from Dr Yossi Berger, who is the head of that unit. He works with me on the committee and the two of us have set up a communications subcommittee because we felt frustrated that quite a lot of the directives that were being put out were not being actioned quickly enough or at all. For example, we wanted to let all the landcare groups across Australia know that our community consultative committee existed. I have been on it 3½ years and that has not even gone out, so I took on that job in the last couple of weeks. I had the contact details of our

committee included in the *Landcare* magazine to let them know that it exists. It sums up some of the frustrations we have faced over 3½ years. Also, I will table the talk I hope to give. There are also the three overheads that sum up my talk.

Documents tabled.

CHAIR: Do you have copies for each member of the Committee?

Ms CRANNY: No. I have looked at the terms of reference of the Committee and I will stick to those areas that the Committee has been briefed to cover. Specifically, I am concerned that right at the start we have to look at the sustainability of our agricultural industries which rely on intensive pesticide use and I will be hoping to clearly show that it is increasingly not economically or ecologically sustainable for agricultural industries to rely on intensive pesticide use. Economically they will be facing increasing litigation problems, high insurance and the inevitability that they will have actions taken against them by a neighbour, several or possibly even class actions should off-target drift continue to cause problems. The Aquatech report supports much of what I am saying and I shall quote straight from the report:

Currently Australia cannot demonstrate to the rest of the world that its use of agvet chemicals has minimal environmental impact and is consistent with the best world practice.

The reason we cannot show the rest of the world that is that we do not have a national environmental monitoring program or a national health monitoring program. They are all over the place in every State. Some have some monitoring, and I will not go into detail because the Aquatech report is an expert paper on it. The main concern of the community and the environment movement is that unless we have these monitoring programs in place, there is no proof that the registration requirements that are being enforced at the NRA level down to the control of use are adequate in preventing environmental or human impact.

Because of the rapid changes in science and technology in this field I am concerned that legislation and regulations are being left behind and I would urge this Committee to take a precautionary approach, hence the need to table the Greenpeace paper, which is very comprehensive regarding quite a few areas that have experienced this rapid growth in science and technology. Endocrine disrupting chemicals and genetically modified organisms are the two main areas of concern regarding the pace of technology and the inability or slowness of regulation to catch up. Therefore, I strongly urge the Committee to take this precautionary approach that is a requirement of ecologically sustainable development principles and specifically to consider future generations when we make our decisions. We should leave the environment at least as good as we find it, if not better, and that is meant to be a legislative requirement now.

Regarding genetically modified organisms, we do see that the health Ministers have made a commitment to require a certain degree of labelling. But until those threshold limits are given to the community to make comment on it is a little early to see that that would satisfy the networks that I represent. I am very concerned specifically on genetic herbicide-tolerant crops. I have been receiving mail-outs from the Genetic Manipulation Advisory Committee [GMAC] since it was set up and right from its first few annual reports it promised it would develop a national strategy for the commercial release of herbicide-tolerant crops before any commercial release occurred.

GMAC has never consulted with or involved any community-endorsed environment

groups to have input. Hence, after more than five or six years of large-scale trials of commercial seed stock of herbicide-tolerant crops have been allowed and promoted through GMAC without the national strategy promised by it. The community is not only let down but is potentially at risk. We hear the story that genetic engineering is there to be a panacea of some sort to feed the starving world. While I do not oppose all genetic manipulation for science and research in medicine, I get quite concerned about the arguments on herbicide-tolerant crops. It is obvious that a herbicide-tolerant crop is more likely to result in much larger amounts of herbicide being applied because the crop will no longer suffer. There will be much larger potential for off-target drift and contamination of the environment and neighbours. Hence the argument that it is going to be used to reduce pesticide use is very shallow.

On the local government scene it is of concern that the new legislation has put more responsibility back onto local government. With regard to the testing of pesticides local councils are very much inadequately resourced to undertake comprehensive or even adequate pesticide monitoring. There are no clear protocols established. I believe that the Australian drinking water guidelines suggest that pesticide monitoring by local councils be done annually, if at all. That is not acceptable in this day and age. "Annually, if at all" with no set standard protocols for the data that is collected to be fed into our future national database is wasteful of government money. Multiple chemical sensitivity is on the rise. I am saddened and angered to think that some of the concerned parents of suffering children are being labelled as suffering from neuroses or, even worse, Munchausen's syndrome, which the Committee has probably heard about lately. It seems that we are being exposed to it in the media, maybe as a conditioning process, so that we can accept it. I am concerned that the Health department may soon be saying we are approaching epidemic proportions of that syndrome in New South Wales.

Home and garden chemicals may well be a major source of exposure and I certainly hope they will be covered in this review. I raised the issue of indoor air quality more than 10 years ago with the Department of Health. I was on environmental health committees on the north coast with Dr Beard in charge. We raised concerns regarding birth defects in Coffs Harbour possibly linked to aerial-sprayed pesticides. Soon after that period of time Dr Beard chose to cancel all environmental health committees. He told us that we would now be informed on a need-to-know basis. It is unacceptable that I have had no recourse to any other action with health since, except when dealing with them up at the middle pocket mediation. I went to help the groups up there and again we discussed the need for health to be involved in monitoring. I support the proposed amendments of the Total Environment Centre to the Pesticides Act. I commend John Pollack and the toxic chemicals committee on his very impressive work on chemical addition and synergism.

I am also very concerned about the community's right-to-know legislation. I understand that the Public Interest Advocacy Centre drafted such legislation for New South Wales more than five years ago. I believe that legislation was not enacted and I am concerned as to why because I raise these concerns of the community all the time. What are the inert? What are the surfactants? What are the non-active ingredients in a product? The community has a right to know. I have 18 pages downloaded from the Internet on the EPA USA super fund sites and how much they value the community being involved in consultation on those sites. I am very disappointed that Australia, especially at the State and national level, does not value community input. In fact, we for many a year we have been blocked out of it on policy. I have also pushed for pesticide reduction in local councils. I designed a pesticide reduction program aiming to see councils set targets. They all told me, "Unless we have to we will never do this." Quite a few have now developed some positive initiatives in pesticide reform.

The Nambucca Shire Council, Bellingen Shire Council and Coffs Harbour City Council are in the neck of the woods on which we focus and have all got some very good policies on pesticides. Nambucca initiated a buffer zone policy between rural and urban areas and said, "If you are going to start spraying, you have to prove that you have got a vegetated buffer strip between where you are putting the chemicals and where our urban population is because we know that that will reduce spray drift. We will put a bond in place to make sure that those people plant those trees and they will not get their money back until we come out and check that the trees are growing and looking good." There are lots of good initiatives happening at the local level. These initiatives are not being equitably shared amongst other local councils. I am often on the phone with many people telling them of the small progress we have made in trying to help them and their local communities gain the same kinds of progress. We find that when a council has a change of councillors, half of the good progressive policies get thrown out and a new battle begins.

That is why we feel we need to have equity across the local government areas with progress not being allowed to slip back. We are also concerned about inadequate remediation of old cattle tick dip sites heavily contaminated with organochlorins, persistent organic pollutants, about which we have made an international commitment to do something. I have records of the level of remediation that has occurred at these cattle tick dip sites. Usually there is none except that the signs and fences have been taken down. The toxic site has been left there and very seldom has it been adequately remediated. Remediation sometimes means just taking the toxic soil and dumping it at the local tip without signposting and without a management plan. It is unacceptable. We are also concerned about the health investigation levels set for the sensitive use of DDT in the soil. It is proposed to be at 200 parts per million compared to America's sensitive soil level at two parts per million. We are also concerned about the time delays and inadequate responses from government departments, specifically agriculture, health and to a lesser extent the EPA.

The Hon. J. R. JOHNSON: On items of magnitude?

Ms CRANNY: There is just so much. It is hard for me to try to sum up 12 years worth of action on this and the legacy of problems with each department. But that is why I said, "to a lesser extent the EPA", because it has inherited a lot of bad problems left by the Department of Agriculture. I do not think the EPA has been adequately resourced to be able to handle it. I have seen some good intent from the EPA at our local level. It has involved the community and it helped us to be involved in the roadside monitoring program for Frenock and RoundUp about which we were concerned. Again, the cost of analysing and monitoring becomes important. The EPA will be able to elaborate on the projected cost of \$5,000 blowing out to more than \$15,000 because Frenock is so expensive to test. Many laboratories were not even set up to test it. We had quotes ranging from \$700 to \$2,000 per test compared with the standard of \$70 for other chemicals. These problems have to be faced if we are going to encourage large-scale use of a particular chemical. I put the pressure on the NRA to set up a database of analytical methods so that it become a requirement of registration to have an analytical method. Maybe the cost of it is relevant, too.

My last main concern is that of aerial spraying. In 1987 the Commonwealth committee on agricultural chemicals found that there were lots of things that needed to be improved—insurance equipment, pilot training, buffer zones, neighbour notification. It was suggested that they be progressed at the national level. Nothing happened until the 1993 Senate inquiry into agriculture and veterinary chemicals made recommendation 39. It said that we

must demonstrate progress on this issue, the development of national guidelines on aerial spraying. If the recommendations in relation to aerial spraying are not implemented fully it called for the banning or phasing out of aerial spraying of agricultural chemicals to be supported. I call on this Committee to enact that recommendation. It specifically talks about timeliness. I have lots of letters from the NRA saying that progress on the development of national aerial spraying guidelines is very slow. How much longer do we have to wait? I sum up by saying that through a lack of political will to set reduction targets is why innovations in organic and integrated pest management have been starved of support and funding. I call on this Committee to uphold those ESD principles and specifically the precautionary principle and intergenerational equity.

The Hon. J. R. JOHNSON: Does your group operate out of the Bellinger Valley?

Ms CRANNY: I live in Dorrigo, which is up on the plateau, but the north coast environment council covers about 40 environmental groups up and down the north coast. The toxin action group loosely covers that mid-north coast area.

The Hon. J. R. JOHNSON: I am not detracting from it, but was the cleft palate deficiency that was noticeable in children in the Coffs Harbour district only evident for a short while?

Ms CRANNY: It was considered a cluster of birth defects. At that stage cleft palate was considered a minor abnormality. It is not to say it is not still occurring.

The Hon. J. R. JOHNSON: Then it dissipated?

Ms CRANNY: Statistics can be used to prove both sides.

The Hon. J. R. JOHNSON: Yes or no.

Ms CRANNY: Dissipated, no, I believe we still do have cleft palate deformities occurring but whether it is statistically significant or higher than in other areas, again I would say statistics can be used both ways, depending on where you draw your boundaries and how you dilute the sets.

The Hon. J. R. JOHNSON: What is the major concern of the group?

Ms CRANNY: The major concern is the lack of political will to really want to achieve use—

The Hon. J. R. JOHNSON: Leave the political will to us. What is the major concern?

Ms CRANNY: The major concern is the increasing use, not decreasing use. A major concern is that there is no really good incentives for farmers to possibly take a little less income for a while, while they turn to a transition towards organic. We feel there is not a fair assessment of agriculture and veterinary chemicals at the top. We do not think the precautionary principle is being applied at the NRA with regard to review of the existing chemical review program, for example. It has looked at atrazine and endosulfan already and they are still out there. The NRA still did not require mandatory monitoring of atrazine despite it having contaminated groundwater in Australia more than any other agricultural chemical. Other chemicals such as the triazines are on this endocrine disrupter list. Atrazine is banned in

other countries because it contaminated groundwater so readily and yet we still have it being promoted and used by State Forests in plantation establishments by simazine, the sister of atrazine in the triazine family.

Specifically, in these notes that I have tabled, I have talked to a head environmental health officer of the mid North Coast area health unit who said that the data collection of both health and environmental monitoring is so inefficient in the government that if it was a private company it would be sacked. She said it is so inefficient, ineffective and wasteful of resources that she did not believe that it would be changed in her lifetime. I showed some dismay at that and said, "What about litigation? Would that not speed things up?" She said, "Yes, that is the only way that the Government will speed up—if it is continually facing litigation because of its slowness or ineffectiveness in acting on these concerns." I have been raising these concerns on behalf of the community for some time.

The Hon. J. R. JOHNSON: If I were to ask you to draw up a bill tomorrow for presentation to the Parliament, where would you start?

Ms CRANNY: I would start by getting a lawyer sitting next to me and I would go thoroughly through the complexity of it.

The Hon. J. R. JOHNSON: Just tell us what you would do, not what the lawyer would do.

Ms CRANNY: Okay. I would certainly try to address the issues that have been put off and fobbed off as too hard—for example, labelling, training and regular assessment of training programs. I have tabled a letter from Yossi stating that he has seen thousands of people who have been trained and they are still doing it wrongly. We need to have feedback mechanisms to be able to check if what is being said is actually happening and to be able to test the competency of these people, not just book them into a one-day course that gives them the right to have access to very lethal weapons. I would certainly be happy to work on the legislation because I have been so much involved in this for over a decade. I have studied human bioscience and education at university and I believe that I have the ability to give something back to the community, if only I was given the opportunity to be taken seriously and to have those concerns acted upon.

The Hon. J. R. JOHNSON: Do you think you have spread yourself too thinly?

Ms CRANNY: I have not. I get involved in a lot of community liaison consultation and all the expenses usually come out of my pocket. Seldom do I even get my petrol money paid to represent the community whereas there a megafunds put up by the agricultural chemical companies to go to these forums to have a whole tent with the company's name plastered all over it. I will do an eight-hour drive both ways just so that there is a community representative there. Yes, I spread myself thinly because there are not many resources given to the community for capacity building as occurs in the USA where community is actually valued to the point of giving people an adequate income to do better. The US values it.

The Hon. I. COHEN: You mentioned the ongoing issue of roadside spraying. What is the current situation? Is there a community solution? Where are chemicals being put in the regime?

Ms CRANNY: That is a very good issue because in the Dorriggo shire we have a

committee that tries to keep everyone happy. We try to keep the farmers on the plateau happy who are very concerned about giant Parramatta grass getting onto their farms. The council has three different types of policies on methods of application for herbicides in the shire. Because the farmers on the plateau are more conservative and they do not mind spraying, they allow it to continue. Down in the valley where there are very concerned citizens in Kalang they involved the ombudsman in the late eighties. They have had a no-spray zone maintained for over a decade. The councils know that they will be blockaded on the roads, they will have a media onslaught and everything thrown at them if they try to spray up at Kalang Gully whereas in the other valleys they have a middle-of-the-road compromise. They say that they want visibility and to control the weeds but they also want minimum off-target spread of contamination, so they have rope-wick applicators and wick wiping. That is how I think it can work within a community and still be able to come up with different outcomes that respect what people find acceptable.

CHAIR: Is it done by hand with the rope wick?

Ms CRANNY: No, they have a machine—a weed-wick applicator. It is a bit like a brush cutter. There are two spinning discs.

The Hon. I. COHEN: The blades are like power saw blades.

Ms CRANNY: Yes. The machine can be set to a particular height and not wipe out all the good vegetation. We have had professors of ecology speak to our whole community to educate them about integrated weed management. Professor Wal Waley from the University of New England educated the councillors to realise that the blanket boom-spraying of the roadside was counterproductive because it led to erosion and the killing-off of good species that would hold together the side of the road and not be a visibility problem. I think that Coff's Harbour has gone the same way with specific rope-wick applications set at a particular height so that it does not kill off the good vegetation that is wanted and is set to a height that just kills off the Parramatta grass.

CHAIR: If you want to be a bit smarter you mount it on the front of a forklift. It is 10 feet wide and it can be lifted up and down while in operation.

Ms CRANNY: In other countries such as Germany, they have scalping, where they do not use weed herbicides at all. They scalp the topsoil to make it an inhospitable environment for weeds. There are lots of methods. I have written a chapter and I have worked on the ACT weed website fairly recently as a consultant. I have written a great deal on integrated weed management and all the multitude of alternatives to chemicals that are available. Integrated weed management is not about saying that there is no place for chemicals. It is about putting them in their place, that is, at the bottom of the tool box where they belong and as a last resort.

CHAIR: It would result in a huge cost saving because it would cut chemical costs.

Ms CRANNY: Yes.

The Hon. I. COHEN: On a national level, how adequate is National Registration Authority [NRA] assessment? How well is the NRA doing its job?

Ms CRANNY: That is a big question. I do not think that it is adequate if the turnaround time for the existing chemical review program is a guide. It has had three tiers of review. No

doubt the authority is trying to do a thorough job and that is why it is taking so long, but I am still very concerned that it has allowed chemicals such as atrazine and endosulfan to be at large despite knowing that they are causing off-target damage and are much more likely than any other chemical to continue to cause off-target damage.

The Hon. I. COHEN: If atrazine in the water table constitutes an unholy relationship and if one were to test for atrazine, which is freely available in New South Wales, where would one have to send the blood samples and how would one gain some idea of the cost?

Ms CRANNY: I would not know, I am sorry. I am concerned, though, that there are studies showing that chemicals found in groundwater at very low levels of concentration show a presence. I have referred to this study in my paper so it has already been mentioned. Warren Porter from Wisconsin University is a professor of zoology and environmental toxicology and is concerned that quite often chemicals that are assessed by the NRA in isolation are assessed by one active constituent at a time. The NRA will also look at a total product, meaning its surfactants and additives in that one product, but it does not look at a chemical being used and being followed with another chemical and then followed by another chemical. The NRA does not have a cumulative assessment regime and this is what many overseas studies are saying.

The new study points to inadequate testing of pesticides because it looks at the fact that an aldicarb, an atrazine and a nitrate when put together result in a chemical synergy or an enhancement of toxicity which is not being assessed at the registration stage. That is why I say that the NRA is not adequate. It does not factor in precaution in its regime and also it relies on Environment Australia or other bodies such as the Occupational Health and Safety Commission to make its decision. What if those other bodies have not stood up and said, "No, sorry. From an environmental impact point of view, we do not want this chemical registered"? How often has that happened? Not often enough, I believe—especially when we look at how many chemicals that have been banned overseas are still being used here. They have been banned over there for environmental reasons.

Arguments suggesting that because there is so much water in the Netherlands and not so much water over here it will therefore not apply here are not scientific and are not adequate. We want to see the precautionary approach taken. If you are serious about intergenerational equity you will not say, "How much of this chemical can we have in our groundwater before it is a health problem?" You will say, "We do not want any chemical in our groundwater because there might be a health problem and we want to take precautions to make sure our future generations of children are not left a legacy of contaminants in the groundwater just because at the time we did not know about adequate scientific evidence to say that it was harmful."

The Hon. I. COHEN: Yesterday I asked Dr Beard from the Health Department about the Munchausen situation. He was not aware of that. Can you comment on that?

Ms CRANNY: I am aware of it. I watched it on television. I am being exposed to it every second day by the media. I am concerned.

The Hon. I. COHEN: It has been discussed around the Coffs Harbour area with issues surrounding parents who have been affected.

Ms CRANNY: There are parents who have been labelled with that term by the Health Department. There are people who no doubt are neurotic and may be causing problems for

their children, but labelling parents with the severity of the syndrome is a very strong allegation. Imagine how a parent feels when wrongly diagnosed with this syndrome. They feel not only that they have sick children but also that they have a sick Department of Health which sees the parents as the problem. Blaming the victim is what it is called, and I have just about had enough of it. This is a very serious issue and to be shooting the messenger time and time again is just not on. Most people come to me when they are very sick and they say, "Thank you for fighting our fight." I am happy that I am healthy and well enough to be able to fight for them because most of them are too sick to be able to do the kind of work that I do in trying to fight for them.

The Hon. I. COHEN: In terms of multiple chemical sensitivity, is this something that is accepted now by the Health Department and by the medical profession in your local area, given that the Coffs Harbour area has been very much the centre of debate on the impact of chemicals on children?

Ms CRANNY: I do not think so. I think that it would be appropriate for you to send some questions on notice to Health Department staff to find out exactly how they feel about these conditions and to what degree they are prepared to support acknowledging the increase in multiple chemical sensitivity, ME and a whole range of symptoms of different disorders. Some may be the same. The problem is that inadequate testing is occurring by general practitioners who are inadequately trained to recognise the symptoms, often because the symptoms are chronic resulting from very small exposures over 20 or 30 years of pesticide use. The cause is not easy to recognise.

There was an international conference on this. I heard from a doctor in America that a testing procedure called the Cheney protocol had been established. Australian doctors were being encouraged to be better trained in this protocol and in how to assess whether a patient may be suffering from multiple chemical sensitivity. A series of tests could be done and that would scientifically provide evidence to show that there is dysfunction in a particular gland or whatever it was. Unfortunately the AMA or the medical profession as a whole has not embraced that, and I think that is probably because of the cost factor.

The Hon. I. COHEN: Does that need specialised equipment?

Ms CRANNY: It is not so much specialised equipment but it is expensive to order a barrage of tests on people to ascertain if something is a problem or not. I think it is the cost factor which is the reason why it is not embraced in Australia.

CHAIR: We will ask you to take questions on notice. You alluded to Chemclear, which is obviously a Federal proposal.

Ms CRANNY: It will involve all the States in handling in all unwanted chemicals. It is a three-phase program comprising industry, the farmers and government. They have all agreed to meet one section of the cost each. The farmers have picked up the tab for drumMUSTER which is the program of recycling old drums. They have a set levy that the farmers have agreed to pay and that is the farmers' contribution. The Commonwealth Government has agreed to pick up the very expensive tab of handling the disposal of all the chemicals that are handed in. Avcare and industry have signed a commitment to prevent the generation of future waste and will handle that should it arise.

CHAIR: Who administers that? This is the first time we have heard that the Federal

Government has agreed to pick up a tab.

Ms CRANNY: It is part of the Clean Cities Program. I think there are millions of dollars provided but there is a cap on the funding.

CHAIR: Is that being operated by the Department of Primary Industries?

Ms CRANNY: It is not a bottomless coffer.

CHAIR: I will give you a copy of the questions we want you to take on notice. You may well have completely answered them already. When you receive the transcript, make sure that you believe that you have adequately answered these questions. If you have not, just send supplementary answers.

Ms CRANNY: I would be happy to do that.

CHAIR: I ask you the following questions on notice: What is your view with respect to the need or otherwise for buffer zones? Can you outline any areas of pesticide management undertaken in other States that may be useful for consideration by New South Wales? Are there any areas of improvement in the area of pesticide labelling that may assist the effective management of pesticides? How important is town planning to minimise incidences of local conflict between incompatible land uses? Given your organisation's role at the national level, are there any areas where the interface between the States and the Commonwealth can be improved in the area of pesticide management? What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass?

(The witness withdrew)

(The Committee adjourned at 3.35 p.m.)

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