

Economic Benefits of Virtual Fencing

In response to supplementary questions to the Prevention of Cruelty of Animals Amendment Bill (Virtual Stock Fencing) Bill 2024, NSW Farmers notes that the expected economic benefits of using virtual fencing depend highly on the kind of farming enterprise, the intensity of stocking and rotation, and other factors. However, some indicative savings can be extrapolated by comparing the costs of traditional post and wire, and virtual fencing for the typical beef and dairy producer.

The average beef cattle production farm in NSW is 420 head within 1,380Ha. The cost of installing 14.9km of internal fencing to maintain a low-intensity rotation system is approximately \$104,020. Annualised over a 10-year period, this amounts to \$10,402 per year in fencing costs. Assuming two rotations a week, taking an hour each, valued at the Pastoral Award rate as an indicator of the value of time saved (\$29.19/hour), amounts to additional labour cost savings of \$3,035 per year (\$13,437 per year total). By comparison, the cost of setting up and purchasing the equipment for a virtual fencing system for that number of cattle is approximately \$42,800. Annualised over an 8-year period, this amounts to \$5,350 per year in costs.

In addition, the example beef cattle farm can transition from a relatively low-intensity rotation system to a higher-intensity rotation, subdividing the property into more effective paddocks, and grazing them for a shorter period of time in each one. Shorter grazing periods have the additional benefit of increasing the nutritional benefit to cows, and leaving sections of grass ungrazed for greater periods of time, which can increase the maximum stocking density for the entire farm.

The average dairy production farm in NSW is 290 head within 350Ha. Because dairy farmers tend to operate a comparatively smaller area, they make greater use of movable electric wire fences that allow a herd to be moved on a daily basis or even more often. Single-wire electrical systems may be relatively cheap, depending on the make-up of the farm. However, the time taken to manually move the fence each day is labour-intensive and detracts from other farm activities. Assuming it takes a farmer 1 hour a day to move a virtual fence, a Dairy farmer can be expected to spend \$10,654 per year in labour costs rotating cows in a milking herd. If virtual fencing technology is also used to facilitate mustering cows twice daily for milking, labour costs savings can increase by an additional \$31,960 per year. By comparison, the cost of setting up and purchasing the equipment for a virtual fencing system for 290 cows is approximately \$31,100. Annualised over an 8-year period, this amounts to \$3,888 per year in costs.

In addition to the wages paid, there are significant on-costs and superannuation savings that can be made, especially if the farm uses labour that is not that of the owner-manager. As well, other costs savings, such as those related to fuel have not been accounted for here. Finally, there are a range of other benefits, market and non-market,

including workplace health and safety improvements, improved animal health and wellbeing, biosecurity risk improvements, improvements to environmental management in keeping stock off sensitive land, and emergency management during floods and fires.