NSW Legislative Assembly

Supplementary Questions - Prevention of Cruelty to Animals Amendment (Virtual Stock Fencing) Bill 2024

Gallager eShepherd

1.1 What data or feedback does Gallagher eShepherd collect from its users to monitor animal welfare and/or improve its devices?

Customer feedback is collected through regular check ins with customers. Following the installation and onboarding of customers our Customer Success team schedules weekly meetings with customers for the first month to understand any welfare or usability issues that customers have. Following that there are formal catch ups with customers on a 3 monthly basis for the first year of the install. This enables us to understand any issues that come up throughout the calendar year as different seasons can trigger different issues.

Our product management team also carries out extensive customer insight work on a regular basis to understand jobs to be done, pains and gains from a customer perspective and then this information is collated and fed back into the product development pipeline to ensure continuous improvement of the devices.

We also have a group of Commercial Beta Customers that we do final testing of any changes to our devices. Within this group of customers are farmers and ranchers who run many different farming systems and in many different geographies. We get regular feedback from these customers on any animal welfare issues and improvements we need to make to our devices and system.

eShepherd takes a proactive approach to animal welfare. The eShepherd neckbands identify the following data and often it is the eShepherd Data and Analytics team or Customer Success team that detect anomalies from our daily reporting and request that farmers go and check an animal and provide feedback;

- Pulse counts: Success ratios are calculated from the audio and pulse counts collected from the neckbands to identify how well animals are trained. This is available on the web app for the customer to see at all times.
- Animal Down alert: eShepherd alerts the customer when a neckband has been stationary for more than 2.5 hours in a 24 hour window.
- The location history of the animals is available to the customer for review, allowing the user to determine where the animals have moved, but also how far an animal has moved.
- Escaped animal alerts are sent to the farmer allowing them to ensure animals are not in harms way when escaped, and to return them to the mob.

Gallagher eShepherd collects the following information from the data received;

- Virtual fence effectiveness/containment and alerts customers where anomalies are seen.

- Pulse voltage and current to determine if the pulse is delivered appropriate (low current tells us that the pulse is not effective, leading to inconsistency in what the animals feel. This was an issue in the previous design of the neckband and we monitor this to ensure it does not repeat.
- Low power mode data is also collected to monitor power autonomy of the neckbands. When a neckband enters low power mode the unit will cease to virtually fence animals, allowing the animal to leave the virtual paddock. Communication with the neckband is maintained in the instance, so the user can still see animal movement.

1.2 Has Gallagher eShepherd received any reports of animal welfare issues with virtual stock fencing devices from its users, and what action do you take when you receive a report?

- We have not received reports of adverse events due to the virtual fencing operation of the eShepherd neckbands. However, our process when receiving feedback regarding the neckbands, which would include animal welfare concerns, is to escalate the feedback to the Product Leadership Team for review and determine the best course of action.
- We have received a report of rubbing from an earlier version of the top strap of the neckband. We worked alongside the customer to diagnose the issue with veterinary assistance (bacterial issue) and redesigned the top strap to be more suitable for their climatic conditions. From there, we worked alongside a customer in a similar region in the Northern Hemisphere to determine if this was a global problem and tested our solution.
- We have received several reports from customers of small lumps forming under the jaw of the a very small number of animals where the neckband bumps the jaw during movement. In this instance, we immediately ask that the customer remove the neckband until the swelling subsides and to check that the neckbands are not fitted too loose. We also ask that they send us an image of the animal and the fit of the neckband. Loose fitment is known to cause issues and is covered in our onboarding information pack. In the future we are expecting to be able to diagnose fitment that is too loose or too tight;

1.3 A recent United Kingdom government report identified potential risks of different dynamic grazing and herding methods, such as back fencing or virtual herding. In your experience, are there methods of moving or fencing animals with virtual fencing that pose risks to animal welfare? What regulations or guidance could be put in place to mitigate these risks?

- In our experience to date, eShepherd has noted that, once trained, animals are able to safely navigate complex virtual paddocks (e.g. multiple corners, virtual fencing on all sides, challenging terrain) without issue.
- Currently, eShepherd utilises a passive movement system by instructing our customers to utilise access to fresh feed as the best way to move animals to a new area of pasture. eShepherd opens up a larger area of pasture and only closes the old area off when animals have moved into the new area. We only

use cues to tell animals where they cannot go – not where they can go and use the positive reinforcement of fresh pasture to move animals.

- Back fencing may be a useful method for moving animals to new areas where feed pressure is not applicable, however this would need to be done slowly and at a herd level. Individual back fencing may lead to confusion among the herd as to where the virtual fence is. It was noted in the independent report from the United Kingdom (*Virtual fencing as a means of containment and movement: Adaptive multi-paddock (AMP) grazing; paragraphs 6 & 7*), and anecdotally in research conducted by us, that the herd appear to rely on one or more individuals to identify when a virtual fence has moved. This becomes important when the idea of back fencing is raised, given it has the capacity to provide audio cues, and pulses, to animals that do not go near the virtual fence often and rely on the exploratory animals in the group.
- In our experience providing cues to individually herd animals, reduces the freedom of that animal and has the potential for animals to get confused if they hear cues from another animal in close proximity. Passive herding where an animal is only given a cue to tell it where it cannot go and then the herd dynamic encourages animals to move in the right direction in a stress free way towards the new grazing area creates high animal welfare outcomes even as compared to traditional methods of using dogs, people and vehicles to herd animals.