

Using eID with in-paddock weighing for easy-care Merinos



Enterprise snapshot

Owners	Goode family - Deane and Prue, Henry and Alana, William and Talia
Property name	Barooka
Location	Kingston SE, South Australia and Simpson, Victoria
Size	3,550 ha (Kingston SE), 330 ha (Simpson)
Brief enterprise description	100% self-replacing, dual purpose Merinos comprising 9,000 adult breeding ewes and 2,500 breeding ewe lambs, and 700 cattle. 500 ha of cropping and hay production - lupins, barley and wheat for own use, as well as ryegrass/clover hay. 470 ha of centre pivot irrigation for lucerne and phalaris pastures maintained for lamb production.
Number of employees	4 full time (plus additional family members during busy times)
Average annual rainfall	600 mm (Kingston SE), 990 mm (Simpson)
eID data being used	Pregnancy status and in-paddock live weights, average daily weight gain.

Background

Barooka is owned and managed by the Goode family (figure 1) across two locations at Kingston SE in South Australia and Simpson in Victoria. The enterprise focuses on producing plain bodied, easy-care Merinos with high growth, good fat and eye muscle, and strong fertility rates. In addition to lamb production, the business also prioritises wool traits and achieving high rates of lamb survival.

By selectively breeding for these traits and through management to maintain high and consistent daily weight gain, the Goodes are able to turn off wether lambs from six months to one year old at a carcass weight of 24-25 kg. This approach also enables them to

join their ewe lambs, bringing more fertile sheep into the flock sooner.

On average, the business produces 10,000 to 11,000 lambs each year, while requiring only 2,500 replacement ewes, allowing strong selection pressure for desired traits.

The flock at Barooka have not been mulesed for the past 20 years. Sheep are shorn six monthly, and no flystrike prevention chemicals are used. This case study focuses on the Goode family's use of in-paddock weighing to maximise lamb growth rates.



Figure 1: The Goode family and workers at the 'Barooka' property

What improvements are being sought through the use of eID data?

- High lambing percentage.
- High and consistent growth rates in lambs.
- Accurate data to inform their interactions with agents and processors.

Using eID for in-paddock weight data collection

The Goode family began using Optiweigh Sheep in-paddock weighing units towards the end of 2024. Initial use targeted ewe lambs and their heaviest mob of wether lambs. The unit was left in place to continuously collect and track growth progress with real-time weight data (figures 2 and 3).

The data proved useful for making production gains in those first mobs and prompted expansion of data collection for the Goodes. The units were then moved between more mobs, including wether lambs that are being finished on pasture.

A target weight of 45kg is critical for successful joining of ewe lambs. In-paddock weighing has proven to be an excellent tool to monitor progress towards achieving the desired target weight and adjusting management as needed.

Real time data allows setbacks in weight gain to be identified quickly. It also helps the Goodes to determine the cause and implement a solution more efficiently. The data is very sensitive and can detect the impact of a single day of reduced intake, whether due to stress or missing a feed while in containment.

Prior to adopting in-paddock weighing, inconsistencies were common when weighing lambs before sending to a processor. There could be up to 400g per day difference in liveweight gain between the 7-10 day weighing and the final weighing when loading onto the truck. In some cases, lambs lost weight and often gains were less than expected in the final days.

These losses were attributed to a number of factors including time delays between animals being moved into yards and held off feed while awaiting an agent to complete the weighing process. Stress caused by moving animals into yards, drafting and weighing, and splitting mobs and upsetting the lambs' social group was also a factor. The Optiweigh provided evidence of weight loss for 7-12 days, until lambs were resettled in new mobs. Using in-paddock weighing and reducing the number of times lambs are yarded for weighing has eliminated these stresses and causes of weight loss.

In-paddock weighing has resulted in greater confidence when dealing with stock agents prior to sales. The Goodes can see daily weight gain in real time without causing stress and disruption to the sheep. Since adopting the units, they can provide agents with accurate weight updates in advance and only bring sheep in the night before trucking for final weighing.



Figure 2 and 3: Optiweigh Sheep unit capturing live weight data of lambs in the paddock.

Grazing management is also being influenced by in-paddock weighing. Weight data is sent to a mobile phone app (figure 4), and through monitoring in real time, the Goodes can see when gain starts to tail off. The app uses a graph format that starts to flatten when feed on offer is no longer meeting sheep requirements. Sheep are then moved onto a new paddock with better feed. Following movement of the sheep, the graph of average carcass weight increases. Without in-paddock weighing, maintaining consistent weight gain would be far more difficult.

The Goodes have more mobs to monitor than weigh units at the moment, so scales are moved between paddocks every four to five days to get a reliable weight graph to guide feed and management decisions. The units enable more responsive management while being less invasive.

Sheep readily use the units because they have been 'trained' to seek out the attractant they contain, allowing data to be collected relatively quickly. Their lowest sample rate is 20-30% of lambs in a mob per day with an average of 50%. Whilst in containment, about 99% of animals in the mob are weighed each day, giving an accurate picture of their performance and identifying numbers of shy feeders.

A commercially produced attractant was used initially, but the Goodes changed to using their own blend which they believe works better.

How has eID technology helped the Goodes achieve their livestock goals?

Henry and his Victorian property manager Cory agree that the first thing an in-paddock weighing system will do is show you every problem you didn't know you had. And with that comes a lot of opportunities to identify causes, make fixes and see production gains.

Prior to using the Optiweigh technology, two mobs in adjoining paddocks highlighted its value. Ewe lambs were gaining 280g per day and wethers were only gaining 140g per day, despite being on the same sown feed, sown on the same day. The only difference observed was water quality from two separate dams. Without in-paddock weighing, this issue would not have been identified as quickly.

Following completion of the Lifetime Ewe Management Course, the Goodes family started measuring feed quality and calculating feed rations for ewe lambs that target a certain daily weight gain. While feed sampling and ration calculations provide a strong foundation, the weigh units show what is actually happening in paddock or containment. Henry explains that taking feed samples, testing them and running calculations to formulate rations only gets you 'so far'. Weighing further improves feed efficiency and has enabled the business to spread the calculated feed from 300 'over-achieving' ewe lambs across a much larger number of animals and get a better result.

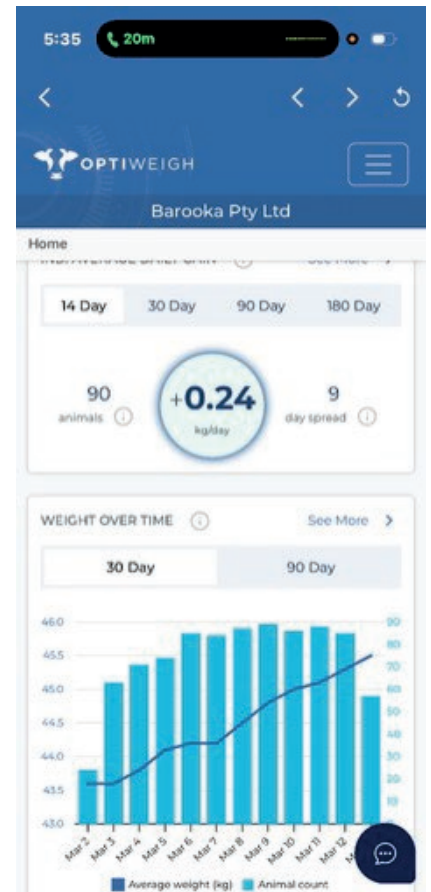
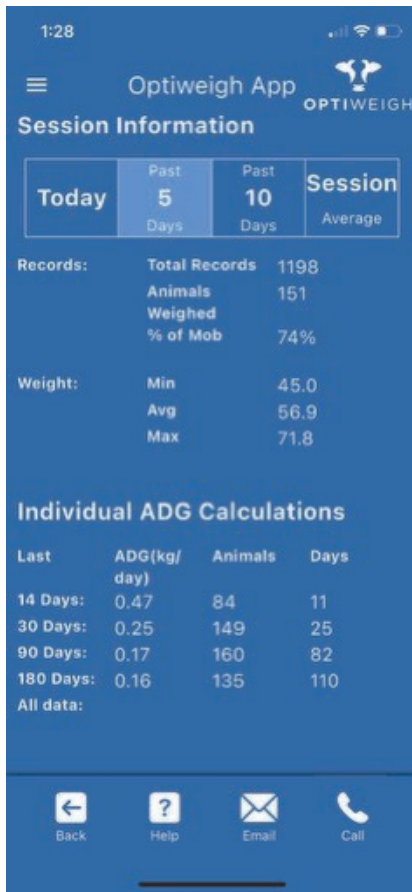


Figure 4: Optiweigh app displaying in-paddock weight data.



Advice for producers

Henry shares his insights for sheep producers interested in using eID with in-paddock weighing system technology:

The weighing units require a yearly subscription and are solar powered. They also use Wi-Fi to transmit data to a phone app. If connectivity is interrupted, data is still recorded and uploaded to the phone app when the signal becomes available.

With every paddock shift, it is important to do a quick 'zeroing of scales' via the app to ensure accurate tare weights after transit. There is also a calibration process that can be completed if weights from the units differ from running stock over a weigh crate in the yards.

Henry also recommends when using in containment pens to make sure dirt doesn't build up under the scales, as this can affect measurements.

More information

This case study is an initiative of eID Advantage Program from the Government of South Australia, supported by Meat and Livestock Australia and AWI Extension SA.

For more information visit pir.sa.gov.au/eid

