

Feedback

A photograph of Elke Hocking, a woman with blonde hair, smiling and leaning on a wooden fence. In the background, there are sheep and trees.

Chain reaction

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Is eID for you?

There are many financial and practical factors to consider before investing in on-farm electronic identification (eID) technology.

Electronic identification allows producers to track individual, rather than average, performance across their flock and build a bank of data based on objective measurements, said Sheep CRC Industry Engagement and Training Coordinator Lu Hogan.

"Sheep production systems based on measurement, management and marketing of animals according to individual performance can increase enterprise productivity and returns, improve on-farm management and enhance information along the supply chain," Lu said.

If the technology is used to manage data it can also pay off, with some producers recording a 35% return on investment - or payback in three years.

Achieve Ag Solutions director and consultant Nathan Scott advises producers how to use electronic identification as a tool to increase profitability.

"Electronic identification is not a silver bullet, but it can be part of a suite of management tools," he said.

"It allows producers to understand the variations in individual animal performance to apply selection pressure and can be used as a feedback system for management."



Labour efficiency



Why eID?

eID can be linked to data collected for individual animal management, such as:

- pregnancy status including singles/twins/triplets, early/late births and birth status
- weight gain for lambs and liveweight change in ewes, before, during and after joining
- fleece weight and quality
- animal health history
- genetics and breeding history (including particular sire lines)
- nutrition
- condition score
- paddock-to-paddock movements.

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While he sees eID as a 'no brainer' for recording in the seedstock industry, Nathan said this technology also offered commercial producers a cost-effective way to hone their management skills.

There are many eID options - from wand readers priced at about \$1,000 to \$1,500, through to auto drafting management systems that can cost up to \$30,000.

Added to this is the cost of individual tags, which range in price from state to state, although prices are expected to decrease with increased adoption.

When deciding to purchase eID tags, it's also important to ensure they have passed retention thresholds and are NLIS approved.

Nathan recommends producers keep eID simple to begin with, by recording just a few key things, but be aware that there is scope to expand. For example, eID can be paired with technologies such as Pedigree Matchmaker to match ewes and lambs and identify high-performing ewes or with walk-over-weighing technology to measure weight gains.

He said it was also important to underpin eID with proper security and back-up systems, to preserve the integrity of data so it can be used with confidence.

Future opportunities

Lu said eID technology can be a powerful tool for over-the-hooks marketing, such as

Is it for me?

Nathan asks producers the following questions to help them identify the best set-up for their specific business objectives. This helps producers develop a clear plan of what they want to achieve and avoid buying unnecessary technology and generating data that is not essential to their management goals.

- 1. What are you trying to achieve?** Is it to increase lamb marking percentage? Increase fleece weight or reduce micron? Lift lamb growth rates? This is the most critical question, as you must have a clear goal in mind before considering investment in technologies to help manage data.
- 2. What role will this technology play in achieving those goals?** Will the data be used to identify the most or least productive animals in your flock? Will it guide animal health treatments or supplementation; influence marketing decisions; or simply provide feedback on your management?
- 3. What are your strengths/interests?** Not everyone is excited by data so be realistic about your capabilities and interest in data collection and interpretation. Consider engaging a service provider to analyse data or use contractors who have eID systems in place.
- 4. Will you use the data you are collecting?** There is no point collecting data from eID if it won't be used. The decisions made using data will make money, not the tag itself - the tag is just a catalyst for change.
- 5. What equipment (scales, computer, internet access and suitable yards) do you already have and what equipment would you need to purchase?** Is a complex system required to allow multiple tasks (such as weighing, drafting) in a single pass, or is a simple wand or panel reader sufficient to produce the data you want? What software is best suited to your requirements? Are you capable of operating the software and equipment or would you need further training?

projecting when stock are market-ready. It can be paired with feedback mechanisms from processors to guide on-farm management and improve market compliance.

eID could also play a role in risk mitigation.

"The Sheep CRC is developing a program that combines on-farm data and 'big data' from weather and pasture growth modelling to enable producers to identify and then manage at-risk animals," Lu said.

"For example, this tool would utilise eID to identify animals with low condition score that are at risk from predicted extreme weather events. This would enhance animal wellbeing and productivity, and demonstrate the industry's responsible livestock management credentials."

Adoption

Lu said eID had been in the research and development pipeline since about 2002, and commercial products have been around for about 10 years.

In the Sheep CRC's last survey on the subject (in 2013), 10% of Australian sheep producers were using eIDs and an additional 20% were interested in the technology.

Lu said the indicators showed that adoption of the technology had been growing steadily since then.

MLA is a major co-funder of the Sheep CRC.



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Resources

- MLA publication – *On-farm application and value of Electronic Identification (EID) for the sheep industry in Australia*: www.mla.com.au/EID
- Victorian Department of Agriculture: www.agriculture.vic.gov.au and search for 'eID reader'
- Search 'eID' on the Sheep CRC website to find producer courses and a decision making guide: www.sheepcrc.com.au

Tagging for top performers

Gordon Brown readily confesses he is no computer whiz yet, but has found using the latest technology is delivering large benefits in the sheep enterprise he manages.

Dedicated to his composite sheep breeding program, Gordon combines some of the latest electronic identification tools, such as eID tags and Pedigree Matchmaker, with his meticulous hand-written records to hone his commercial enterprise's performance. →



Labour efficiency



Snapshot

Gordon Brown,
Manager,
'Shelburn',
Geelong, Victoria.



Property:
1,215ha

Enterprise:
Prime lamb
production for
export and
cropping

Livestock:
2,500 composite
ewes

Pasture:
Third native
grasses, two-thirds
improved with
mixes of lucerne,
clover, tall fescue
and cocksfoot

Soil:
Light, sandy red
gum country to
treeless volcanic
basalt

Rainfall:
500mm

"I've been using eID tags for three years with the aim of identifying our top producers, those ewes that produce the most kilograms of lamb per hectare," he said.

"I come from a Merino background where it is much easier to visually assess and select the animals you want in your flock.

"However, with prime lamb production it's far more difficult, particularly comparing the performance of twins and triplets with singles.

"If I can identify those mothers who are really productive in terms of producing kg/ha, I can form a select flock with traits I want to keep and replicate."

Last year Gordon's best ewe mob recorded 214% scanned in lamb for 185% weaned lambs.

"If I could have my pick, I'd have a ewe that can do a good job of raising twins every time," he said.

The 'Shelburn' flock lambs during the tough July-August period, the weaners are then feedlotted on grain grown on the property and grown out for export at about 27-28kg dressed.

Walk by scanning

Gordon's lambs are tagged with eIDs at marking, returned to their mothers and the Pedigree MatchMaker is put in the paddock near a fenced-off watering point and a lick which acts as an attractant.

As the ewes and lambs pass the Pedigree MatchMaker several times (see photo page 15) over two to three weeks, it records which animals are walking past and then the ewe-lamb tag relationship is assessed to assign dam pedigree.

Gordon's farm consultant, Nathan Scott of Achieve Ag Solutions, then downloads the data and completes the ewe-lamb tag association analysis so that Gordon can use this information.

Gordon also uses a Tru-Test scanner, scale and three-way drafting machine to not only segregate his ewes on performance but to record weights at weaning, monthly during the pre-joining period, and then at least two weeks prior to rams being taken out to ensure the ewes are gaining weight.

"I probably overdo it but I like to record this information because if I have problems later on such as disappointing conception rates, this information might help explain why and help me better manage similar situations in the future," he said.

Gordon has recently invested in a hand-held scanner, which means he can conveniently record any replacement eID tag numbers without having to get the animal back to the yards

"Missing tags is not a big problem but can occasionally occur in lambs," he said.

The next frontier for 'Shelburn' is to receive eID-linked automated feedback from processors on carcase attributes such as hot carcase weight and fat scores.

"It will be pretty exciting to receive information on what the consumers are demanding and how well our best pedigree lines deliver on that," Gordon said.

"It will have a huge influence on our genetic and animal selection as well as on-farm management in the future."



Gordon Brown

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Gordon Brown (left) with his technology adviser Nathan Scott



Pedigree MatchMaker is a walk-by system with associated software that uses animal data to estimate association between dams and their lambs and ultimately provides an accurate pedigree match.



To find out more visit:
www.sheepcsrc.org.au/goto/pedigree-matchmaker