



Sheep CRC Practical Wisdom Notes

Document ID:	SheepCRC_25_18
Title:	Effective use of electronic identification for precision sheep management
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Key words:	sheep; eid; precision sheep management;

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It should be cited as:

Nathan Sott (2014) – Practical Wisdom Note: *Effective use of electronic identification for precision sheep management*

Effective use of electronic identification for precision sheep management

By Nathan Scott, Mike Stephens and Associates

Key points

- Commercial producers have the opportunity to greatly improve flock performance by using precision sheep management.
- Electronic identification is now a viable tool for commercial sheep producers for use in identification and management of individual animals.
- Special skills and equipment can either be learned and bought or gained by using a contractor.

Introduction

Performance monitoring is an area in which commercial producers have significant room for improvement. The old saying 'you can't improve what you don't measure' is certainly true and as a result there are opportunities slipping through the fingers of commercial producers every year.

Historically, commercial sheep operations have relied on mob-based management, despite managers knowing that significant variation in performance exists within a mob. Their difficulty has been in finding practical and reliable methods to identify, measure and manage large commercial numbers of individuals that would allow them to remove the passengers and capitalise on the elite performers.

While this has always been possible with visual tags, electronic identification (EID) makes it easier, faster, more accurate, and therefore, more likely to actually happen. Also, the equipment used in conjunction with EID is now cheaper with greater capability, as well as more reliable and robust.

Precision sheep management is the term used to identify and manage individuals or selected groups of animals to take advantage of the large variation between animals in a flock.

What information is generally collected with EID?

Common uses of EID for any commercial flocks are:

- pregnancy scanning: wet or dry, litter size, time of lambing (early or late), as well as year-to-year data for individuals;
- sire allocation to ewes;
- dam pedigree for lambs (Pedigree MatchMaker);
- individual ewe condition scores and/or weights;
- reproductive performance at weaning (wet, dry, lambled and lost);
- rapid drafting;
- fleece weight and fibre diameter (and associated measures such as CV), resulting in fleece value (wool production system);
- calculation of kilograms of lamb weaned per ewe using a weaning weight of individual lambs



Figure 1. Ray Haigh using EID equipment.

together with pedigree information (lamb production system);

- individual lamb growth rates (lamb production system).

Non-performance based data can also be easily collected and managed, such as:

- treatment records;
- roll call (counting/recording animals present).

What equipment is used?

The equipment required varies significantly between enterprises and the type of data that is to be recorded. Producers should have a clear goal in mind before considering the equipment that is required. EID, equipment and software are just tools use in the process of achieving the desired outcome.

The basic equipment used is a handheld or panel reader to capture the individual number from the electronic tag, linked with some form of data recorder or software system to collect and store tag numbers and other collected data.

Other equipment includes:

- weigh scales and scanning devices that can be linked with readers/recorders;
- bar code readers and printers to identify samples, such as wool;
- auto-drafters that can read tags then open draft gates based on the individual animal information.

A common misconception is that an auto-drafter is essential; this is simply not true. They are great pieces of equipment, but their existence will be justified on throughput and efficient use of labour. They are far from an essential item in many sheep operations.

There have been great advances in equipment and software over the past few years; these are the most significant:

- One-piece EID tags that are much easier to use when tagging larger numbers of animals.
- Handheld readers that can display information in real time, allowing information (such as a drafting decision) to be preloaded and then displayed for the animal in front of you. Almost all handheld readers on the market now offer this capability.
- A very low power-use 12 volt panel EID reader and recorder, the Pedigreescan developed by Sapien Technology. This is an all-in-one unit with incredibly simple plug and play operation once connected to a 12 volt battery. No solar panels or frequent swapping of batteries is needed, making Pedigree MatchMaker (identifying dam pedigree of lambs in the paddock before weaning) a viable option for commercial producers.
- Rapid reading and recording of tags as sheep run through a race: the Shearwell Race Reader does fast, accurate, hands-free recording.
- Rapid development of software due to competition between providers. Sapien Technology and Practical Systems have gone head-to-head resulting in new capability.
- Auto-drafters have developed significantly with competition between equipment companies driving product improvement.

Buy equipment or use a contractor?

- The sheep producer buys the electronic ID tags, but other equipment is optional. Using contractors, producers have the opportunity to buy an outcome rather than buy equipment.
- Many EID tasks are undertaken infrequently; justifying the expense of equipment sitting idle for extended periods can be difficult.
- Equipment and software can be superseded by new developments; a contractor can justify upgrading these more frequently.
- Some EID recording can be combined with other tasks; for instance, some pregnancy scanners can now automatically record pregnancy status against EID tags for the producer.
- The tasks and equipment are often complex in nature and require some level of technical ability; contractors with these skills are a great option for many producers.
- Data managers can administer the data for the producers; many producers have no interest in trying to manage data, and some just simply shouldn't try. It is a specialised task that can be done very efficiently by a data manager with the producer receiving the information they need, when they need it.

Contractors generally work on an hourly rate basis, although there is likely to be significant variation in both price and method of charging.

Take home messages

- Decide what you want to achieve before worrying about how you are going to collect the data.
- Collecting and using the data is just part of the process; the outcome is the most important.
- Equipment is cheaper and better than ever.
- An auto-drafter is not needed to use EID.
- You don't have to own any or all of the equipment; you can use a contractor.
- You don't have to manage your own data; you can use a data manager.

Further information

- <http://www.sheepcrc.org.au>
- www.sheepid.com.au