Books, Book Reviews, Extracts

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Sheep CRC Update seminars held in eight locations across Australia between February and May 2010 provided a valuable summary of progress achieved by the Sheep CRC and our Participants in our first three years of operation. The Sheep CRC publication '2010 Sheep Focus' captures key messages and results presented in the seminars in a form that provides an easy reference document. It should be cited as:

Sheep CRC/Kevin Atkins – *2010 Sheep Focus – Precision sheep management*

PRECISION SHEEP MANAGEMENT
Exploiting the differences between sheep

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Precision Sheep Management (PSM) is all about gaining benefits from superior animals by managing animals as groups or individuals rather than as a flock. To do this, producers need to identify each animal and take advantage of the variation that exists within all flocks. The benefits that are available will depend on production, identification method and data management systems.

Using a flock management approach, all animals are managed according to the flock average. However, if something is known about the attributes and value of individuals, then the contribution of the better animals can be maximised and the cost of, say, the bottom 25% can be reduced.

There are many opportunities for producers to use measurement on individuals to improve profitability through selection (improving current and future generations), targeted marketing and precision management.

Many of these benefits are incremental and rely on re-using information on multiple occasions.

In order to extract maximum benefits a producer may need to contemplate the cumulative benefits that will arise from a number of changed strategies rather than looking for a single 'big hit'.

The Sheep CRC has developed a range of decision support tools to help producers understand the amount of change that can be expected in their flocks over time, as well as some operational tools that use real flock data.

Electronic technologies and RFID (Radio Frequency Identification) have been applied in conjunction with software to allow producers to effectively obtain information that is otherwise difficult and/ or costly to obtain. Collecting maternal pedigree through a system called Pedigree

ABOVE: A Pedigree MatchMaker system

MatchMaker is one example. This exploits the natural behaviour of ewes and lambs, where lambs tend to closely follow their mother. The sheep are recorded in the order they pass the reader and software identifies mothers based on how often they were followed by a particular lamb.

Another is Walk Over Weighing, a system allowing weights of sheep to be recorded daily over a period of time, without the need to bring sheep to yards.

Autodrafting is another labour saving device and improves recording identification accuracy. It uses collected information to draft according to defined criteria, without manual handling.

Photo: Sheep CRC

ABOVE: Autodrafting—saving labour while increasing accuracy

The Sheep CRC has extensive information about these systems available on its website and continues to conduct training events (workshops and webinars) to help producers understand how to capture benefit from these applications and others, how to set up systems and how to find people who can assist.

Photo: Sheep CRC

ABOVE: Sheep are individuals

PSM Decision Support Tools

- **Merino vs Terminal Flock:** calculates minimum Merino ewes needed for a self-replacing Merino flock
- **Wether Calculator:** calculates optimal proportion of wethers to ewes within a flock
- **OFFM Calculator:** determines profitability of wool clip preparation from fleece measurements
- **Selection Assist**: compares different breeding strategies
- **Ram Value Calculator**: compares the $ value of different rams within a flock
- **Simultaneous Assortment:** sorts ewes for wool production, meat production and culls
- **Pedigree MatchMaker**: identifies the mother of each lamb
- **Walk Over Weighing**: determines weight of individual sheep in the paddock
- **Lamb Growth Predictor**: estimates lamb finishing date or weight at finishing date

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