

2006/S01



Producer Research Report

Flock Rebuilding – Pregnancy Scanning and Ewe Management

Lower Eyre Sheep Production Group



The project

The project was setup in order for producers in the Eyre Peninsular fire affected area to learn more about the reproductive performance of their flocks and management options by using pregnancy scanning to identify dry ewes, ewes with singles and ewes with twins, and thereby rebuild the sheep flocks in the Eyre Peninsula fire area.

Objectives

1. Learn more about the reproductive performance of flocks and management options by using pregnancy scanning to identify dry ewes, ewes with singles and ewes with twins;
2. Improve producer understanding of the nutritional requirement of the ewe and how to condition score, thereby increasing ewe survival by improving nutrition for ewes with multiple lambs;
3. Increase lambing percentage from the average of 80% to 100% and reduce lamb wastage from scanning to marking;
4. Separate the dry/single/twin ewes and feed according to their nutritional requirements. Calculate the extra cost of the supplementary feed or feed saved;
5. Determine whether pregnancy scanning can increase productivity and is economically viable;
6. Increase gross margin for a self-replacing merino flock stocked at 8 DSE per hectare from \$195 per hectare to \$223 per hectare by increasing weaning percentage from 80% to 100%; and
7. Rebuild the sheep flocks on farms in the Eyre Peninsula fire area.

What was done

Producers in the group arranged for their ewes to be scanned in February and April. Individual farmers chose to either wet or dry scan for multiples depending on their management plans, then manage ewes according to pregnancy status. Supplementary feeding was given according to pregnancy status.

Ewes were condition scored at scanning, before lambing and at marking. Results were collated and discussed at the Sheep Production Group Meeting in March. A condition scoring workshop was also provided for producer participants.

Lambs were marked in June and August.

In October, results were presented at the Sheep Group Meeting, where sheep weighing/electronic drafting equipment was demonstrated and individual farm reports were also delivered.

The Lower Eyre Sheep Production Group was started at the end of 2005 to support local sheep producers affected by the bushfire in January 2005.

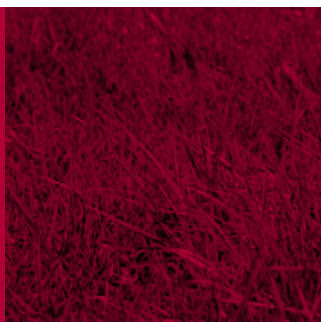
The project aimed to educate producers about the reproductive performance of flocks and management options by using pregnancy scanning to identify dry ewes, ewes with singles and ewes with twins.

It enabled producers in the group to assess the new technology and work out ways of best implementing the practice by sharing management ideas. Discussing the results has also been a valuable learning exercise and producers have been able to benchmark their results with other producers in their district.

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Key Points

- Ram joining percentage ranged from 0.5-2.75%, averaging 1.93%.
- Ewes were in condition score 3-4 from mating to lambing.
- 13% of the ewes scanned were dry.
- There was a 3% ewe death rate from scanning to marking.
- The lambing percentage of the ewes mated was 89.6%.
- The lambing percentage of the ewes scanned in lamb was 102 %.
- Twin ewe mobs that were managed separately had an average lambing percentage of 145.4%.
- The lambing percentage of ewes scanned in lamb, for Merino ewes mated to Merino rams was the same as Merino ewes mated to terminal sires.

What happened?

Scanning was completed in the first week of February and April. Eleven producers were involved in the project, with 10,640 ewes scanned.

Ram Performance

Ram joining percentage ranged from 0.5-2.75% with an average of 1.93%. One producer used teasers. Some rams were given lupins prior to joining.

Nutritional Requirements Of The Ewes

Due to summer rains the stubbles and pastures provided enough feed for the sheep and minimal supplementary feed was required. The supplementary feed calculator was therefore not required.

Ewe Condition Score

Ninety five percent of the ewes scanned were in condition score 3-4 at scanning and through to lambing.

Paddock Conditions

The majority of participants fox baited and had shelter in their paddocks. Pastures were good early in the season due to the early break.

Across the 11 farms the following results were achieved:

- On average 13% of the ewes scanned were dry;
- There was a 3% ewe death rate from scanning to marking;
- The lambing percentage of the ewes mated was 89.6%; and
- The lambing percentage of the ewes scanned in lamb was 102 %.

Lambing Time

Farm 1	Split lambing Autumn and Winter
Farm 2,3,4,5,6,7	Winter
Farm 8,9,10,11	Autumn

Farm 1 had a high dry percentage because a majority of dry ewes re-mated from autumn lambing were dry again at winter lambing.

Farm 2 had a high dry percentage due to lambs being weaned and rams being put in within the same week to get lambing time back to normal.

On average the lamb scanning percentage for Merino ewes joined to terminal sires was 89.9%. The lamb scanning percentage was high in the mobs that were scanned for multiples. The average lambing percentage on scanned in lamb Merino ewes joined to terminal sires was 104.6 %.

The average lamb scanning percentage for Merino ewes mated to Merino sires was 107.5%. The average lambing percentage on scanned in lamb Merino ewes joined to Merino sires was 104.9 %.

For the mobs scanned for multiples, on average 67.9% of the ewes scanned in lamb had a single lamb and 32.1% of ewes scanned in lamb were having twins.

Mob 5 had the highest scanning of twin ewes with 53% of the ewes scanned in lamb having twins. The mob had 11 dry ewes, 109 scanned to singles and 123 scanned for twins. If all of the lambs were to survive 70% of the lambs would have been a twin lamb. There is a higher percentage of twins in the later lambing mobs. Twin ewe mobs that were managed separately had an average lambing percentage of 145.4%.

One farm scanned all their ewes for multiples and managed them separately. The mobs did not include any dry ewes. The ewes mated to

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White Suffolk were the older ewes and the culls from the Merino flock. The Merino flock included maidens. The wastage includes lambs lost from ewe deaths.

The Merino single mob had a lambing percentage of 86.5% therefore 13.5% of the lambs were lost between scanning and marking. The Merino single mob joined to White Suffolk had 100% lambing, which may have been due to some twins missed at scanning. The Merino twins had a lambing percentage of 113% compared to the Merino cross White Suffolks lambing percentage of 145%. The wastage was 43% and 27% respectively. Overall from scanning to marking 21.7% of the lambs were wasted. By feeding the twinning ewes and managing them separately, this producer increased his lambing percentage from a historical average of 95% to 105% – a 10% increase. His plans are to improve his management of lambing ewes even further in 2007.

Discussion

The group set out to implement pregnancy scanning into their sheep management with support from livestock consultant Daniel Schuppan. None of the group members routinely scanned, although some had done it in the past when it was more labour intensive. The producers in the project group that implemented the technology for the first time all have had a good experience and will use it again in 2007.

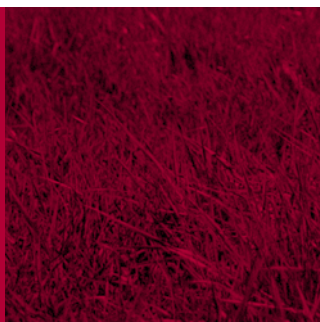
The main result of the project was that farmers were able to get together and share their results and experience of pregnancy scanning. Producers were able to get a better understanding of the reproductive status of their flocks. Although some producers had as low as 6.5% dry ewes in their mob at scanning, it had little influence on lambing percentage. Eight of the 11 farmers achieved above 100% lambing on the ewes scanned, while only one producer achieved above 100% lambing on the number of ewes joined. Scanning allowed the producers flexibility in their management and afforded them the opportunity to increase their flock numbers due to better management.

The major impacts on lambing percentage occurred between scanning and marking. Paying more attention to the ewes in this period greatly increases lambing percentage and reduces wastage. By scanning for multiples, lamb wastage can be identified. High lamb wastage can be reduced by identifying the time when most losses occur. Nutrition is a key factor, and producers agreed to pay closer attention in order to increase lambing percentages. Increasing lambing percentage also means more feed is required for the extra lambs.

There was no difference observed between the lambing percentage of first cross lambs and Merino lambs which indicates above 100% lambing for Merinos is achievable if managed correctly.

Mobs scanned for multiples showed that on average 32% of the ewes scanned in lamb had multiples. This did vary and the results show that the ewes joined in January/February had a higher percentage of ewes with multiples. The twinning mobs that were managed separately were provided with the best pasture paddocks and achieved 145.4% lambing. At this percentage there is still a high wastage rate and some producers were not happy with the result and feel they can get a higher percentage from their twinning ewes.

Most of the producers identified that the number of paddocks on their farms were not suitable for managing twin and single mobs separately.



Their understanding of the nutritional requirements of lambing ewes was also poor. The main change that producers will undertake is improving their feeding of pregnant ewes and setting up their paddocks so this can be done.

It is difficult to quantify the value of scanning as every farm is different, and there is many factors that need to be considered.

Some of the economic considerations are listed below.

- In a dry season with high feed input cost it may be beneficial to remove the dry ewes and concentrate on feeding the ewes in lamb;
- Premiums paid for ewes scanned in lamb or not in lamb;
- Managing twinning ewes;
- Price of feed, wool and meat and numbers of extra lambs; and
- Lifetime production benefits in the progeny.

At a stocking rate of 8DSE/ha for a self-replacing Merino flock, a 10–20% increase in lambing percentage could improve the gross margin by \$20–\$30/ha. This does not take into account extra feed required for the extra lambs, or the additional time it takes to manage them.

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