NSW GOVERNMENT Local Land Services

LAND FACT

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Pregnancy testing ewes – the benefits

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Introduction

The use of ultrasound technology to identify a ewe's pregnancy status and/or litter number has been commercially available for over 30 years. In recent years improvements in scanning accuracy, handling equipment, data capture (and use) when managing lambing ewe flocks have contributed to improved lamb survival within both wool and crossbred lamb enterprises.

Scanning can assist with management decisions in terms of:

- Which ewes to feed and your projected feed requirements (pasture and supplements),
- Which ewes to sell,
- When to start a feeding program,
- What feed quality is needed, and
- The differential management of dry, single and multiple bearing ewes prior to lambing

The benefits

The higher the dry ewe percentage in a flock, the greater the benefit from scanning.

As the scanning rate (foetuses/100 ewes) increases, the benefit of scanning for multiples and managing these ewes separately increases compared to the benefit of scanning for just pregnant versus non-pregnant ewes.

Scanning and differential nutritional management of ewes based on pregnancy/foetal number can help improve:

- ewe and lamb survival rates
- ewe wool quality and cut
- lamb(s) lifetime wool quality and cut
- lamb muscle development and growth rates
- placental development
- udder development
- milk production and quality
- flock fertility
- production efficiencies
- classable ewe numbers and
- saleable lambs, breeding ewes and/or mutton

It will also assist in the reduction of:

- supplementary feed costs (through targeted feeding of supplements to those ewes most in need)
- enterprise production costs

The value of scanning also increases if poor seasonal conditions and/or drought occurs. Targeted paddock selection and/or strategic feeding of multiple bearing ewes to improve ewe/lamb survival and their life-long productivity, have positive benefits to cost outcomes.

Does scanning pay?

The following 1000 ewe flock scenario can be used to illustrate the financial benefit of scanning and strategically feeding multiple bearing ewes during poor seasonal conditions. Pasture intake was assumed to provide half of the ewes' daily requirement pre-lambing.

Assumptions:
1000 Merino ewe flock with

- 60% (600) single bearing ewes
- 30% multiple bearers (300 ewes)
- 10% of ewes non-pregnant (100) and

Three (3) management scenarios:

1. Do not Scan/Feed ("Traditional")
2. Scan only for Pregnant/Non-Pregnant ("Wet/Dry"). Feed entire flock 700g/hd/day of supplement ($400/t, 20c/hd/d) for 70 days post-scanning. Labour ($30/day fed)
3. Scan for foetal number ("Multiples") and preferentially feed twin bearing ewes post-scanning an additional 300g of supplement (1kg/h/d, 26c/ewe) – providing an extra 3 to 4 megajoules of energy. Labour ($50/day fed as split mobs on basis of foetal number)

Assumed Potential Gains for 'Multiples' (compared to 'Traditional' and 'Wet/Dry' scenarios):

- Improved ewe survival (extra 6 and 4%; ewes valued @ $150)
- Increased ewe wool value (extra 0.325kg clean woo/ewe; wool 1800c/kg clean)
- Improved twin-born lamb survival (75% compared to 55 and 65%)
- Improved twin-born lamb lifetime wool production (extra 300g cfw/year; wool 1800c/kg clean)
- Increased wether lamb sale numbers (Year 1 only, $80) and wool return (2kg cf, 1500c/kg)
- Increased ewe lamb sale numbers when culled ($80)

Additional Costs (Compared to 'Traditional' scenario):

- 'Wet/Dry'
  - Feed Total - $12,348 (20c/ewe/day)
  - Labour $2,100 ($30/day)
  - Total ~$16/ewe
- 'Multiples'
  - Feed Total $16,632 (26c/ewe/day)
  - Labour $3,500 ($50/day)
  - Total ~$22/ewe

Findings (Compared to 'Traditional' scenario):

- 'Wet/Dry'
  - Losses as a % of Total Flock Value post-marking = 11.2% [(a)]
  - Additional Income $9,030
  - Benefit to Cost = 1.2 to 1[(b)]
- 'Multiples'
  - Losses as a % of Total Flock Value post-marking = 5.1% [(a)]
  - Additional Income $20,790
  - Benefit to Cost = 1.75 to 1[(b)]

[(a)] 'Traditional' losses as a % of Total Flock Value = 16.3%
[(b)] These benefit to cost values are compared to 'average' lamb survival rates during 'normal' seasonal conditions. These would increase significantly if the 'Traditional' scenario was facing poor seasonal conditions or drought.

If pasture conditions can meet a single bearing ewe's daily energy requirements and only twin bearing ewes are target fed the benefit to cost in terms of extra lamb value from increasing twin lamb survivals = 3 to 1. This benefit to cost ratio increases to 4.5 to 1 when compared to feeding all ewes in the 'Wet/Dry' scenario under poor pasture conditions.

Targeted, strategic supplementation of twin bearing ewes is therefore economically feasible under most pasture conditions.

For additional information on feeding and management of scanned ewes please refer to Land Facts:

- Managing Scanned Ewes – The Basics
- Managing Scanned Ewes – Feeding
- Managing Scanned Ewes – Pre-Lambing
- Managing Scanned Ewes – Lambing

For a complete list of Northern Tablelands Local Land Services Land Facts, please visit our website at www.lls.nsw.gov.au/northerntablelands

More information

For advice and information about improving your sheep enterprise, contact Brent McLeod, Northern Tablelands Senior Land Services Officer – Livestock, on 02 6730 1931, 0413 884 710 or brent.mcleod@lls.nsw.gov.au

Additional resources

1. 'The value of pregnancy scanning – should I do it?' Sheep CRC Practical Wisdom Factsheet http://www.sheepcrc.org.au/industry/sheep-management/pregnancy-scanning.php
2. Jordan D.J; Hatcher S; Lee, G.J; McConnel,I; Bowen M.K; Della Bosca A.J and Rowe JB (2006) Nutritional management for reproductive efficiency. Sheep CRC 'Wool meets Meat' Conference Proceedings https://www.sheepcrc.org.au/files/pages/articles/wool-meets-meat--2006-conference-papers--nutrition/Nutritional_management_for_reproductive_efficiency.pdf
3. 'Successful Pregnancy Scanning' Sheep CRC Practical Wisdom Factsheet http://archive.sheepcrc.org.au/files/pages/information/practical-wisdom-notes/reproduction-series/Successful_pregnancy_scanning_2014_for_web.pdf

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