

Optimal supplementary feeding strategies for lamb survival

Optimising ewe nutrition during pregnancy and lactation is key for increasing lamb survival. Supplementary feeding is often required to meet the nutritional demands of ewes lambing in autumn and when feed-on-offer is limited when lambing in winter or even early spring. Anecdotal evidence has suggested that supplementary feeding ewes at lambing may cause them to abandon their lambs which could reduce lamb survival. However, there is conflicting opinion as to whether trail feeding or the use of self-feeders is more favourable for lamb survival. A preliminary survey by the team at Murdoch University found that 92% of producers believe further RD&E is warranted to demonstrate the best supplementary feeding regimes to optimise lamb survival. Hence, this project will evaluate the effects of supplementary feeding ewes at lambing via trail feeding or self-feeders on ewe behaviour and lamb survival. It will deliver guidelines to producers for supplementary feeding during lambing to optimise lamb survival.

The project will involve two components;

1. Research sites on at least 28 farms nationally to compare the survival of single and twin lambs born to ewes that are supplementary fed during lambing with self-feeders or a trail feeder
2. Detailed behavioural work using remote technologies to understand the impacts of supplementary feeding during lambing via self-feeders or trail feeding on ewe behaviour

On-farm research

A minimum of 300 single-bearing and 160 twin-bearing ewes are required per farm (no maidens). Ewes will be allocated into a treatment at 135-140 days from the start of joining; self-feeder or trail feeding during lambing. The impact of each feeding method on lamb survival will be assessed to marking.

Paddock 1* Single-bearing ewes Self-feeder	Paddock 2* Single-bearing ewes Trail feeding
Paddock 3** Twin-bearing ewes Self-feeder	Paddock 4** Twin-bearing ewes Trail feeding

*Mob sizes for single-bearing ewes must not differ by more than 50 ewes. Stocking rate should not differ by more than 1 ewe/ha. Minimum mob size 150 ewes.

**Mob sizes for twin-bearing ewes must not differ by more than 30 ewes. Stocking rate should not differ by more than 1 ewe/ha. Minimum mob size 80 ewes.

- Lambing paddocks will need to be comparable for pasture composition, shelter, water access, aspect and topography
- All producers involved will be required to follow the same feeding protocol regarding frequency of feeding for the 4 mobs in the trial; trail feeding every 1-2 days and check self-feeders and fill (where needed) once weekly
- Producers will need to complete a feeding and monitoring diary throughout lambing
- Ewes must be supplementary fed until marking

Measurements collected by research team

- Ewe condition score before lambing and at lamb marking
 - Wet/dry tagged ewes ($n = 50/\text{mob}$) at marking
- FOO before lambing and at lamb marking
- Details of supplementary feeding (rate of feeding, type of feeders, etc)
- Characteristics of the lambing paddocks (size, shelter, topography, water access)
- Lambs will be counted at marking to determine survival per mob
- Remote technology will be used at a limited number of farms in WA and NSW to assess the impacts of each feeding method during lambing on ewe behaviour

Project contacts

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