99/V05

# Producer Research Support

## Best Practice Management of Rotationally Grazed Irrigated Sub-clover

Goulburn Murray Prime Lamb Group

This project was designed to understand how to improve lamb growth during late autumn and winter. Pasture growth and animal growth performance (through liveweight and fat score measurement) were measured under rotational grazing compared with set-stocking.

## Key points

- Group members learned about successful rotational grazing of pastures.
- Producers learned to use supplements and start grazing early, to avoid an uncontrolled feed surplus before the end of the first rotation.
- Group members continued to meet in related grazing groups and expanded their interests from rational grazing.

## Contact details

Charlie Thomas
RMB 3060
NUMURKAH VIC 3634
Tel (03) 5865 8268

## The project

The majority of lamb producers in the Goulburn Murray Prime Lamb Group (GMPLG) lamb ewes onto irrigated sub-clover in early autumn and produce lambs for sale into the heavy domestic market or export market. The challenge is to grow enough clover to provide winter feed and achieve good lamb growth rates. Lambs are sold directly from their mothers in July or August, aiming for a premium price as new season's lambs.

The group hadn't considered rotational grazing because it was believed that sub-clover responds best to set-stocking. There was also a concern that ewes and lambs would be difficult to rotationally graze and cause issues with poor mothering of lambs, worms and water supply.

A NSW Agriculture field day highlighted that rotational grazing of sub-clover between five and 15cm can enhance pasture quality. Information from a producer who has ration grazed pregnant ewes and rotationally grazed ewes and lambs, encouraged the project group to develop their own rotational grazing trial.

## Objectives

1. use best practice sub-clover management and rotational grazing to grow sucker lambs to trade weights by weaning (12-16 weeks) and compare this with normal practice;
2. establish and grow sub-clover using best-practice irrigated sub-clover management to produce enough feed to maintain ewes at a fat score of three, and achieve lamb growth of greater that 200g per day during the trial;
3. monitor pasture growth and animal growth performance (through liveweight and fat score measurement) under rotational grazing compared with set-stocking;
4. provide an opportunity for GMPLG members to update their animal and pasture assessment skills; and
5. use the objective data gained on lamb weights and fat scores to base marketing decision on.

## What was done

A set stocking grazing system was compared against a rotational grazing system. For the set-stocking control group, lambs were dropped in March. Lamb and ewe weights and fat scores were monitored monthly. Carcase feedback data was collected where possible.

The comparative group of ewes and lambs followed the same timing and data collection protocols, but were rotationally grazed from lambing to marketing, with pasture maintained between five and 15cm.

99/V05

The main rotation flock were run on 16.5ha of irrigated sub-clover. This area was divided into four paddocks and a simple four paddock rotation was utilised. Half of the paddock was already established to sub-clover at the start of the trial with the remaining area sown at 25kg per hectare to Trikkala, Lariss and Riverina sub-clover at the end of February 1999. Lambing commenced in March of each year, with the first weighing in May. Lambs were monitored through to marketing in August and September.
Stocking rates were set as follows:

| | |
|---|---|
| 1999 | 130 first cross ewes plus lambs. |
| 2000 | 135 first cross ewes plus lambs. |
| 2001 | 149 first cross ewes plus lambs. |

In 1999 and 2000 the trial compared the growth rates of rotationally grazed lambs with those that were grazed according to set-stocking practices. Lambs and a select group of ewes were weighed monthly from marking through to marketing. For each of the treatments lamb weight and fat score was recorded monthly as were ewe weights. During 2000 a number of other properties also monitored lamb growth rates. While these properties did not compare different grazing systems, they contributed to knowledge about lamb growth rates across the Nathalia region.

During 2001 a control mob was not monitored with the same rigour as in previous years. The set-stocked lambs seemed to grow faster and were sold earlier than the rotationally grazed lambs. Without the proper records of growth rates and fat score for a control mob, this evidence is only anecdotal.

Other properties continued to monitor growth rates of lambs. The focus of the trial for 2000 and 2001 became a comparison of growth rate of lambs on different properties.

No carcase information was collected.

## What happened?

The stand out point from all years is the variation that was observed in the growth rates of the lambs. This variation occurred not only between different properties, but within the same property, and existed in all years. Genetics, pasture and different management systems between farms are thought to have contributed to these variations.

The producer that owns the trial site believes that performance of the rotational grazing system should be superior to the set-stocking system, and wishes to continue the trial. The potential to run more ewes on a given area means that more clover hay could be cut and more ewes could be run across the whole property.

The aim of the trial was to maintain the pasture in optimal growth. The grazing interval therefore varied considerably over the growing season. From a pasture management perspective, it was easier to move the stock on a calendar basis than according to pasture height.

Grazfeed predictions for 2000 suggest that lambs should have been growing more quickly than was observed. It is possible that the drop in growth rate at 12 weeks is related to worm burden. It may also relate to an increase in feed demand and a decrease in pasture growth rate – indicating that the system is not optimally timed to match feed demand with pasture growth. Further measurement of FEC at 12 weeks and more closely monitoring pasture growth rate of the two comparative systems may provide further insight into these issues.

An economic and physical benchmark of each system would help to determine whether more ewes could be run per hectare and more lambs finished.

## Producer Research Support

MLA Producer Research Support offers support funding of up to $15,000 over three years for groups of producers keen to be active in on-farm research and demonstration trials.

These activities include:

- Producer Initiated Research and Development
- More Beef from Pastures demonstration trials
- Prime Time Wean More Lambs demonstration trials
- Sustainable and productive grazing grants.

Contact Stephen Feighan - MLA Project Manager, Producer Delivery and Adoption.

Tel (02) 9463 9245 or
sfeighan@mla.com.au

99/V05

## MLA also recommends

### EDGEnetwork

EDGEnetwork offers practical field-based workshops to improve productivity and profitability for the long-term.

Workshops cover breeding, nutrition, grazing management, marketing and selling.

Call MLA on 1800 993 343 or www.edgenetwork.com.au


**Meat and Livestock Australia**
Level 1, 165 Walker Street
North Sydney NSW 2060
Tel (02) 9463 9333
Fax (02) 9463 9393
Free Phone 1800 023 100 (Australia only)
www.mla.com.au




## Discussion

Direct comparisons with set-stocking were not made, but that didn't hamper adoption of rotational grazing among group members.

Group learning was greatest during the first year of the project when meetings were more formal and structured.

Group members continued to meet in related grazing groups and expanded their interests from rational grazing.

## Next steps

This project was designed to understand how to improve lamb growth during late autumn and winter. Further rigour monitoring growth and fat score of lambs produced under different grazing management systems is required to yield more robust data.

The change in fat score of ewes during lactation should be measured and compared for the set-stocking and rotational grazing systems. Given that lambs weaned is one the main profit drivers of a prime lamb enterprise, the effect that changes in fat score have on the following joining and number of lambs weaned by ewes also requires further investigation.