

99/N07



## Producer Research Support

### Improving Winter Pasture Productivity

Keera Landcare



Keera Landcare conducted a two-year pasture productivity trial to identify the most cost-effective method of providing adequate livestock nutrition during the winter months and increasing cattle weight gains and profitability.

The group discovered that despite using fertilizer and supplements, some paddocks could not produce beef liveweight gain in winter.

### The project

The two-year project was initiated to address livestock nutrition deficiency during the winter months when native grasses are dormant and there is a lack of cool season grasses to achieve optimum livestock performance.

### Objectives

1. provide adequate and cost effective winter nutrition and therefore increase weight gain and profitability;
2. compile a database of soil type, nutrient status and corresponding pasture quality over the winter period from 10 sites; and
3. increase the amount of beef produced from 90 kg/ha/year to 200 kg/ha/year.

### What was done

In winter 2001, nine sites on five properties took part in the first year of the trial. Following analysis of initial pasture productivity outcomes, treatments were modified for year two.

Due to logistical problems, the site at Mountain Home was excluded from year two and replaced by an alternative site at Bald Knob, however during the trial period this property was sold. A number of the stock on Gouron was found to be pregnant and due to confounding effects, this site was not included in the analysis. This reduced the number of effective trial sites to six. *Table 1.* explains the treatments under examination at each of the trial sites.

**Table 1. Treatments under examination at trial sites**

	Keera	Thornleigh	Cromarty
Paddock 1.	Natural pasture plus clover and molasses supplement.	Fertilised natural pasture plus clover, supplemented with 10% urea block.	Natural pasture plus 200 kg/ha fertiliser and 3 kg/ha sub clover seed supplemented with oats and lupins.
Paddock 2.	Natural pasture with addition of 250 kg/ha of single superphosphate plus clover and molasses supplement.	Fertilised natural pasture plus clover, supplemented with dry lick.	Natural pasture plus 200 kg/ha fertiliser and 3 kg/ha sub clover seed with cottonseed meal supplementation.

Pastures were assessed and livestock weighed and introduced to the paddocks during autumn or early winter. The rate of intake of each supplement was recorded throughout the trial and the animals were weighed at the completion of the trial.

### Contact details

Ranald Munro  
Yarrowonga  
BINGARA 2404 NSW  
Tel (02) 6723 6666

## 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](mailto:sfeighan@mla.com.au)

## What happened?

The average daily weight gains and income/costs per hectare in each of the treatments for the first year of the trial are summarised in *Table 2*.

**Table 2. Summary of year one results**

Property	Treatment	Live weight gain kg/hd/day	Income/cost \$/ha
Keera	Natural pasture + supplement	0.20	3.31
	Natural pasture + super & clover	0.19	- 0.45
Thornleigh	Fodder oats	0.68	57.00
	Fertilised natural pasture + dry lick	0.0	- 4.04
Gouron	Natural pasture	0.28	50.55
	Lucerne + natural pasture	0.68	123.90
Cromarty	Natural pasture + Rumevite block	- 0.05	- 16.05
	Natural pasture + cottonseed meal	0.23	- 6.84
Mountain Home	Fertilised introduced pasture	0.19	- 12.40
	Natural pasture + supplement	0.10	0.85

*Note: Liveweight changes are for the trial period only and income is calculated on the basis of \$1.30/kg beef produced.*

The average daily weight gains and income/costs per hectare in each of the treatments for the second year of the trial are summarised in *Table 3*.

**Table 3. Summary of year two results**

Property	Treatment	Live weight gain kg/hd/day	Income/cost \$/ha
Keera	Natural pasture + molasses mix + clover seed	0.25	12.54
	Natural pasture + molasses mix + fertiliser @ 244 kg/ha + clover seed	0.11	-44.46
Thornleigh	Natural pasture + urea supplement + Fertiliser @ 96 kg/ha	0.61	106.59
	Natural pasture + dry lick + Fertiliser @ 20 kg/ha	0.35	72.16
Cromarty	Natural pasture + oats and lupin suppl.	-0.14	- 34.60
	Natural pasture + cottonseed meal	-0.16	- 26.31

*Note: Liveweight changes are for the trial period only and income is calculated on the basis of \$1.30 per kilogram beef produced.*

99/N07



### **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](http://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](http://www.mla.com.au)

### **Improving Winter Pasture Productivity**

November 2005 / PIRD OUTCOMES

## **Discussion**

The trial at Keera compared the performance of livestock grazing on an unfertilised natural pasture with those grazing on a similar natural pasture which had been fertilised with 250 kg/ha single super (SS) in year one and 244 kg/ha SS in year two. The weight gains of livestock on the natural pasture (plus clover seed) were more than double those on the fertilised pasture when both mobs were given access to the same supplementary feed source in year two. Fertiliser application had no positive effect on weight gains during the winter months.

The application of different rates of fertiliser at Thomleigh to what was originally intended is likely to have masked and certainly confounded any effect of the supplement. It is more likely that the greater weight gains achieved in paddock 1 were due to increased fertiliser application in combination with the provision of the urea supplement, but it is not possible to determine the relative influence of each.

Animal performance at Cromarty was poor in both treatments, with animals losing weight from the date of entry into the paddocks. The rate of weight loss was reduced with the provision of the supplementary feeds. The addition of the fertiliser appears to have had little effect on pasture production or animal performance during the trial period. There was a low level of pasture available at the start of the trial and the quality of dry standing material was very poor. It is likely that feed availability in the paddocks was insufficient to meet the dry matter requirements of the stock, even with the introduction of the respective supplementary feed sources.