Supplementing Sheep Grazing Medics with La Trobe Pellets to Accelerate Growth

Mary Chirgwin[1] and Daniel Schuppan[2]
[1]PIRSA Animal Health, [2]Rural Solutions SA

RESEARCH

Searching for answers

Location: Minnipa Ag Centre

Rainfall
Av Annual: 325 mm
Av GSR: 242 mm
2009 Total: 421 mm
2009 GSR: 333 mm

Soil Type
Red sandy loam

Plot size
9 ha, split into 2 x 4.5 ha

Yield Limiting Factors
Nil

Livestock
Enterprise: Self replacing merinos

Social/Practice
Labour requirement to feed out supplement, fill up feeders

Key messages

- **No significant differences noticed in sheep supplemented with La Trobe pellets and grazing medic compared to sheep grazing medic only, however the sheep added 8 kg liveweight in 4 weeks.**
- **Trial to be repeated next year earlier in the season on rapidly growing medic with younger animals.**

Why do the trial?

Lucerne and medic, while both being high quality feeds, have been reported to cause red-gut in sheep, particularly lambs, resulting in lower than expected animal growth rates when the pasture is growing rapidly.

In 2007 Grain & Graze in conjunction with Lauren Davis, La Trobe University, conducted a grazing trial on lucerne at Winchelsea in Victoria. They concluded that excessive protein levels in lush lucerne, up to 30% CP (crude protein) was resulting in high levels of ammonia in the gut and could be a contributing factor to the elevated levels of disease and reduced performance seen. To counteract this they added an ammonia sponge to a formulated pellet and used it in the trial. The trial found lambs grazing lucerne and supplemented with the pellet gained significantly more weight than lambs grazing lucerne only. The supplemented lambs also experienced less health problems.

Owing to the similarities between lucerne and medic (Medicago genus), a reduced version of the trial was run at the Minnipa Agricultural Centre in partnership with Sheep Connect SA, Rural Solutions SA, PIRSA Biosecurity - Animal Health and SARDI.

How was it done?

A 9 ha paddock of regenerated medic was divided in two equally sized paddocks using electric fencing. Fifty 1 year old ewes were randomly drafted from a mob of 100 young ewes and 25 grazed on one half of the medic pastures from 28 August to 18 September 2009. The pasture was feed quality tested at the commencement and end of the trial. On Friday of each week the ewes were weighed and kilograms of pasture available per hectare calculated. Twenty-five ewes on half of the paddock were used as the control and the other 25 ewes were given the same pellets used in the La Trobe University trial at a rate of 2.5 grams/kg liveweight/hd/day.

Table 1 Medic biomass (t DM/ha) and feed quality over the 4 week study

	Biomass (t DM/ha)	Dry Matter (%)	Crude Protein (%)	Energy (ME)
28 August	3.3	11	24	9.5
4 September	3.8			
11 September	4.1			
18 September	3.8	28	17	8.5

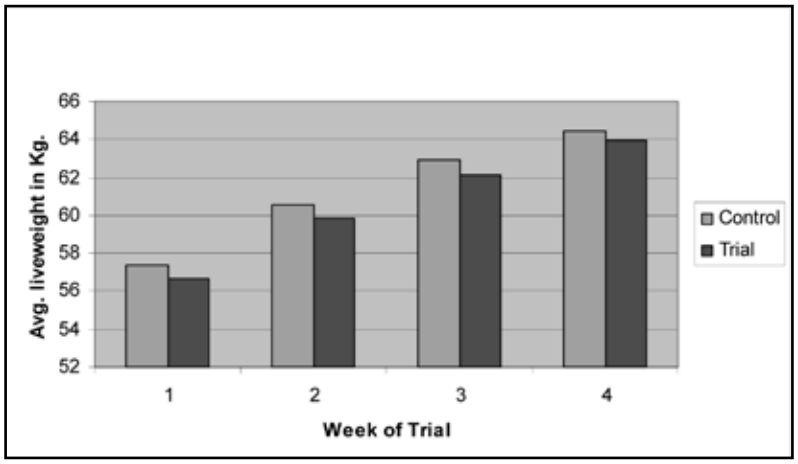

Figure 1 Control & trial mob average liveweight

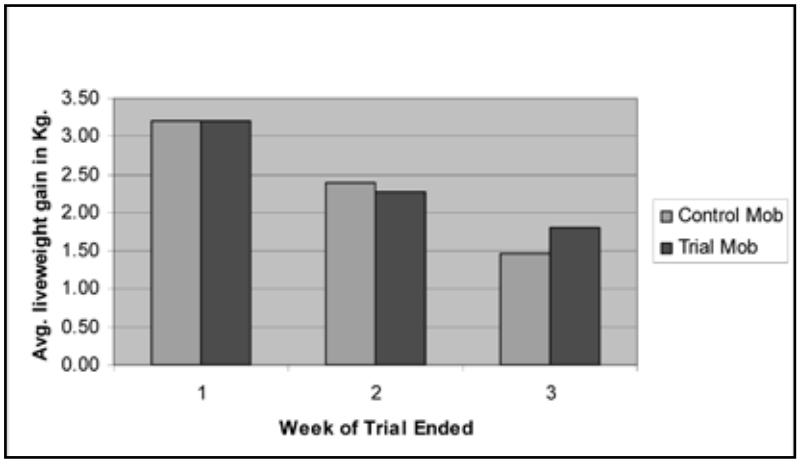

Figure 2 Average weekly liveweight gain

What happened?

No difference in average live weight or liveweight gain between the 2 groups was found (Figures 1 and 2).

What does this mean and where to from here?

The lack of benefit from the pellets may have been because the growth rate of the medic had already slowed down and the medic had started to flower before the trial started. The feed test also showed that the fibre content was ideal (40% NDF), the digestibility was average and the protein declined from the start to the finish of the trial.

The changes in liveweight and growth rate detected in this trial did not show any advantage to using the pellets. However, the sheep all made excellent growth, an average of 8 kg over 4 weeks, indicating the value of medic as a highly productive feed source.

It is intended that the trail will be repeated next year using younger animals in June/July/August when the medic is growing rapidly, depending on the season. This will enable more accurate assessment of the impact the La Trobe pellet is having on liveweight growth rates and animal health.

Acknowledgements

Minnipa Agricultural Centre for the use of pasture for the trial.

Mark Klante – Farm Manager