

UREA SUPPLEMENTATION FOR EWES IN THE TROPICS

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High lamb and weaner mortalities are a major component of the huge reproductive 'loss in semi-arid Queensland (Rose 1972). This paper examines some practical aspects of improving the survival rate and growth rate of lambs born at a time when ewes are normally experiencing adverse seasonal conditions.

Two hundred and forty pregnant ewes were randomly allocated to two paddocks at a stocking rate of 1 sheep/3 ha. The pastures contained 1.2% N and air temperatures averaged 39.2°C maximum. The sheep liveweights averaged 38 kg; they were in store condition and fairly represented Merino sheep in the semi-arid tropics. Urea was administered via the drinking water of one paddock at 2 g/l to give an average daily intake of 10 g. Supplementation was commenced one week prior to lambing and continued until lambs were a mean age of 13 weeks.

Urea supplementation caused a significant increase in lamb growth rate ($P < 0.01$) and a significant decrease in mortality rate due to starvation ($P < 0.05$). In fact lambs in the supplemented group were 30% heavier and mortality due to starvation was 8% less than the controls at 13 weeks. Ewe live weights were similar in both groups.

TABLE 1: Ewe and lamb live weights 13 weeks after lambing.

Group	Ewe live wt. (kg)	Lamb live wt. (kg)
Control	36.6 ($\pm$ 0.57)	9.8 ($\pm$ 0.30)
Urea supplement	36.8 ($\pm$ 0.51)	12.7 ($\pm$ 0.46)

Apparently, the efficient utilization of the transient surges of blood nitrogen by the udder enhanced milk production without changing the liveweight of the ewes. Collateral pen studies have showed an increase in both milk production and lamb growth rate following this treatment.

The economic and practical aspects of urea supplementation are realistic for industry conditions in the semi-arid tropics. Not only is there the tangible benefit of extra lambs at \$2.80/hd but also the benefits of improved production due to better survival of weaners, earlier puberty and greater wool growth. Husbandry techniques like this which increase net reproductive rates would place producers in the position to cull sheep on production performance; this strategy has been previously denied them because of the low net reproductive rate.

ROSE, M. (1972). Proc. Aust. Soc. Anim. Prod. 9: 48.

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