

TAGASASTE AND LUCERNE AS SUPPLEMENTARY FEEDS FOR PRIME LAMBSC.G. HALPIN^A, N.J. BARTON^B, S. WHITE^A, J.E. COURT^B and J. REYNOLDS^C^ADept of Agriculture, 117 Johnson Street, Maffra, Vic. 3860^BDept of Agriculture, Regional Veterinary Laboratory, Bairnsdale. Vic. 3375^CDept of Agriculture, 176 Wellington Pde, East Melbourne, Vic. 3001

Tagasaste is a deep-rooted leguminous shrub which produces high protein edible forage in spring and summer. Tagasaste has proven potential to improve both sustained productivity and profitability of agriculture in low rainfall areas of Western Australia (Oldham 1993).

The objective of this study was to evaluate the productivity of tagasaste and lucerne when incorporated into traditional pasture-based prime lamb production systems in the higher rainfall areas of southern Australia. Four systems were investigated - autumn lambing, 100% traditional pasture (AP), spring lambing, 100% traditional pasture (SP), spring lambing, 50% traditional pasture and 50% tagasaste (ST), spring lambing, 50% traditional pasture and 50% lucerne (SL).

This paper presents preliminary results for the first year of a planned 3 year study. The experimental site, approximately 250 km east of Melbourne, was prepared for planting in 1989 (Halpin 1992). First cross Border Leicester x Merino ewes were mated to Poll Dorset rams, pregnancy tested and allocated to their plots in May or June 1992. There were 2 replicates of the AP, SP and SL, and 4 replicates of the ST treatments, at each of 2 stocking rates (5 and 7 ewes/ha), a total of 20 plots each of 3 ha. Lamb liveweights at 100 days after birth were estimated by fitting Mitscherlich curves to the series of weights recorded for each lamb.

Rainfall throughout the experimental period was above average and dry matter production of the lucerne and pasture was excellent, but tagasaste growth was relatively poor. Lamb growth rates varied significantly with both stocking rate and feeding treatment (Table 1). Lambs born in autumn were significantly lighter at 100 days of age than all spring lambing treatments. Overall, spring lambs grazing lucerne were significantly heavier than those grazing tagasaste or traditional pasture.

Table 1. Mean 100 day liveweights (kg) of autumn and spring lambs grazing pasture, tagasaste or lucerne stocked at 5 and 7 ewes/ha

Treatments	Autumn lambing pasture	Spring lambing pasture	Spring lambing tagasaste	Spring lambing lucerne
Stocking rate				
5	19.2 ^b	27.7 ^{dc}	24.1 ^{cd}	31.8 ^c
7	13.4 ^a	21.2 ^{bc}	22.1 ^{bc}	27.5 ^{dc}
Mean	16.3 ^a	24.4 ^b	23.1 ^b	29.7 ^c
Means with the same superscripts are not significantly different $P < 0.05$.				

These preliminary results indicate that significant gains are possible by more closely matching time of lambing with feed supply in this environment. Under the conditions of this study it appears that tagasaste is not able to match lucerne in terms of production of high nutritive value forage to support lamb growth rates of around 250 g/day.

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