

The effect of autumn and winter grazing pressure on end of spring pasture production

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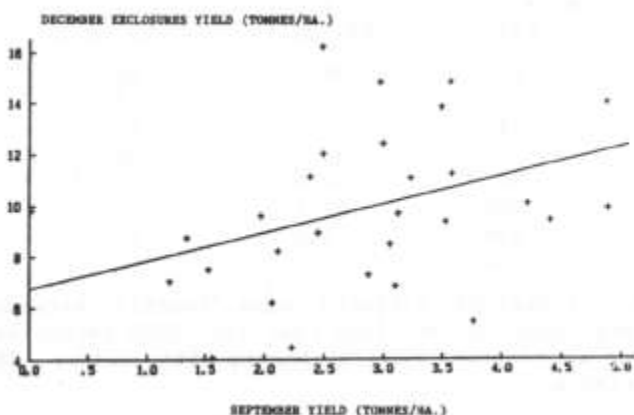
There is little published Australian information on the effect of grazing pressure in autumn and/or winter on spring pasture production on legume based pastures in southern Australia. This work shows the effect of varying intensities of autumn and winter grazing on end of 'green' season production in two environments.

Methods

Experiment 1 : Canberra, A.C.T. Merino ewe production was compared under three management systems on equal areas of subterranean clover based pastures. The treatments were : management systems (1) continuous grazing, (2) grazing deferred on two thirds of the area until July, (3) grazing deferred on two thirds of the area until mid-August; stocking rates: high (26 sheep/ha) and low (13 sheep/ha); breeds: Merino ewes mated with either Merino or Border Leicester rams; and, three replications.

Experiment 2 : Bakers Hill, W.A. Prime lamb production was compared by two grazing systems : (1) continuous grazing and (2) a similar area sub-divided into four sub-plots which permitted deferred grazing to ensure that sufficient pasture was available on one or more of the sub-plots to meet the requirements of the breeding ewes at critical times. These systems were compared at three stocking rates (5.0, 6.0 and 7.0 sheep per hectare) on subterranean clover based pasture. As in experiment 1 there were three replicates.

Results and Discussion



In experiment 1, intensive grazing in July and August markedly reduced the amount present in September (range 0 -4,200 kg). The figure shows that the amount present in September -particularly when there was less than 2,000 kg per hectare - affected the amount present in December. The growth rate from September to December of pastures grazed hard in the winter was about 48 kg/ ha/d dry matter compared with 90 kg/ha/d for pastures lightly or ungrazed in August.

Table 1 from experiment 2 in the snorter growing season at Bakers Hill shows that deferred grazing in July-early August ensured a greater amount of pasture on offer (exclosures were not used in experiment 2) in October ($P < 0.05$).

Table 1. The effect of amount present in July on October yield

Date	Low Stock. Rate		Int. Stock. Rate		High Stock. Rate	
	Cont.	Deferred	Cont.	Deferred	Cont.	Deferred
11/7	1440	1720	930	1700	540	1180
11/10	4510	4120	3280	4500	2130	4050

Both experiments suggested that heavy grazing in July and early August reduces by up to 507 the amount available in late spring, but that intensive grazing in autumn did not appear to affect spring production.