BRIEF COMMUNICATION

Integrating management of sheep and deer

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INTRODUCTION

Efficiency in grassland farming is related to having pastures utilised by grazing with surplus grass being conserved as hay or silage. An alternative is to integrate different classes of stock so their total feed demands better equate with pasture supply. To achieve this, opportunity exists for integrated management of sheep and deer.

METHOD

Published estimates of feed requirements and feed nutritive values have been used in calculations (Fennessy, Moore and Corson, 1981; Supplementary Feeding, 1980), although tabulated pasture nutritive values have been adjusted to account for dead and green matter content of the swards (Rattray, 1978). On-farm estimates of feed intake have considered feed offered as kilograms dry matter, its quality as MJME/kg DM, and wastage of feed likely to occur during feeding due to trampling or stock refusal.

RESULTS AND DISCUSSION

Seasonal Feed Demands

On an annual basis, 1 adult stag or 1 adult hind are each equivalent to about 2 stock units (where 1 stock unit = 55 kg breeding ewe rearing a lamb to weaning). If equal annual stocking rates are assessed on this basis, deer will exert quite different seasonal feed demands (Table 1). Opportunity therefore exists for integrated feeding of hinds with breeding ewes.

Although breeding hinds at equivalent annual stocking rates have a slightly higher feed demand in winter than ewes, this is partly compensated by hinds lower demands in autumn. In spring when ewes are lactating, adult hinds need less than half the feed (45 percent) of ewes. Peak seasonal feed demand for hinds occurs during their lactation in summer, when they need more than twice the feed of weaned ewes. Lactation feed for hinds is best supplied by pasture which has been carefully managed in spring to facilitate summer pasture quality. Hence ewes and lambs may graze to control pastures on the deer unit in spring or silage may be taken to ensure quality pasture being available for lactating hinds.

Farm Practice

On fertile land in Southland 10 hinds/ha is considered reasonable annual stocking. In spring, commencing 6 to 8 weeks before calving, hinds are stocked at 25 to 30/ha to control intake and avoid calving problems. Hence for 100 hinds grazing 10 ha annually, only 35 to 40% of their area is required for grazing in spring, 6 to 8 weeks before calving. Pasture from the 'unrequired' part of the deer farm must be controlled, and silage making is being promoted for this purpose.

Table 2 gives some indication of the potential for silage in these circumstances. It shows for various silage yields and levels of silage feeding for hinds over a 100-day winter, the 'extra' feed that potentially could be conserved off the deer unit in spring and made available to sheep elsewhere on the property. In Southland, provision of 1 bale of hay/ewe during winter is considered normal – hence 'extra' feed in Table 2 has been converted to 'hay-bale equivalents' (24 kilo bales of average quality) to indicate numbers of ewes whose winter feed provision could be supplied from surplus spring grass removed from the deer unit.

In turn, more grass can be made available to sheep from their own area to supply extra winter and pre lambing feed, or extra pasture carried forward to the critical period of early lactation. Whilst regrowth from silage paddocks on the deer farm can provide excellent

TABLE 1 Number of animals to give equivalent stocking rate of 18 s.u./ha/year and changes in seasonal feed demand relative to ewes (from Fennessy *et. al.*, 1981).

		Feed demand/season, Relative to breeding ewes = 100			
	No: of animals	Winter	Spring	Summer	Autumn
Breeding ewes	18	100	100	100	100
Adult hinds	9.5	115	45	225	84
Adult stags	8.2	160	68	157	66

TABLE 2 Number of ewes whose winter feed provision could be obtained from surplus spring pasture conserved off a 10 ha deer unit stocked annually with 100 adult hinds (Southland conditions).

Winter silage feeding level for hinds	Paddock net silage yield kg DM/ha		
	5000	4000	3000
Full feeding	373 ewes	25	–
¾ ration	720	370	20
½ ration	1060	710	360
¼ ration	1400	1050	700

Assumes hinds 25 to 30/ha for 6 to 8 weeks pre-calving. Winter feed provision equivalent to 1 bale hay/ewe.

lactation feed for hinds, some also could be utilised as 'safe' pasture for weaned lambs.

In Table 2, net silage yield is the difference between pasture yield before mowing and that of pasture stubble immediately after. A 20% wastage of dry matter to accommodate wilting, chopping, storage and feed-out losses has been allowed. Net yields of 5000 kg DM/ha have been obtained from silage paddocks in spring receiving 100 kg urea/ha, then closed for 6 to 8 weeks.

REFERENCES

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