

CHOP CEREAL SILAGE IS MORE PROFITABLE THAN CEREAL HAY FOR FEEDING WEANED PRIME LAMBS SUPPLEMENTED WITH LUPINS

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Cheaper feeding systems are required to encourage off-season production of prime lambs in WA. This paper compares the economics of feeding chop cereal silage or cereal hay, both with lupin seed, to weaned crossbred lambs for off-season production of prime lambs.

In 1994 and 1995 weaned Merino x Poll Dorset lambs were fed in similar paddocks chop cereal silage or hay *ad libitum* plus lupins 3 times a week. Except for 1994 chop silage, the feeds, their cost and nutrient content were reported in the study by Milton *et al.* (1996). The chop silage fed in 1994 cost 3.9 cents/kg dry matter (DM) and contained 27.7% DM, 12.3% crude protein (CP) and 9.9 MJ/kg DM of metabolisable energy (ME).

The amount of lupins fed was initially set assuming similar DM intakes for both conserved fodders and lupins were fed at a rate to provide both groups of lambs with similar estimated intakes of CP and ME to achieve growth rates of 75 g/day in 1994 and 150 g/day in 1995 (SCA 1990). The lower CP and ME content of the hays meant more lupins were fed to the lambs on hay. The lambs were weighed and condition scored (1 - 5) every 2 or 3 weeks and the amount of lupins fed was adjusted to try to maintain the desired growth rate for both groups of lambs. In 1994 the lambs were fed the conserved fodders with lupins for 98 days and then lupins alone for 29 days after the break of season rain. The mean intake of lupins over the 127 days is shown in Table 1. The conserved fodders were fed with lupins during the entire feeding period in 1995, but initially the growth rate of lambs on hay was higher than that of lambs on chop silage due to inadvertent overfeeding with lupins. These lambs maintained this advantage in liveweight and condition throughout the study and were sold 13 days earlier than those on chop silage to allow a valid comparison between the 2 groups (Table 1).

Table 1. Feeds fed and mean performance with costs and returns for weaned crossbred lambs fed chop cereal silage or cereal hay plus lupins in 1994 and 1995

Attribute	1994		1995	
	Silage	Hay	Silage	Hay
Number of lambs fed	110	110	90	90
Days on feed	127	127	74	61
Conserved feed fed (g DM/lamb.day)	640	880	925	1080
Lupins fed (g DM/lamb.day)	175	235	265	465
Liveweight at slaughter (kg)	39.0	39.3	41.2	41.7
Condition score at slaughter (1 - 5)	2.6	2.5	2.5 ^a	2.9 ^b
Growth to slaughter (g/head.day)	70.1	70.1	122.0 ^a	146.0 ^b
Total value of lambs (\$)	4346 (5) ^A	4300 (8)	4766 (4)	4781 (4)
Feed cost/lamb fed (\$)	7.16	10.04	7.03	9.31
Purchase of lambs (\$)	2038	2038	2430	2430
Net return per lamb fed (\$)	13.82	10.52	18.92	16.81

^A Unsold lambs in brackets. Attribute means in a year with different superscripts differ ($P < 0.05$).

Growth rates were only slightly less than targeted. Lambs fed hay in 1995 grew faster, had heavier carcasses and were fatter and discounted more than lambs fed silage giving similar incomes for both. The net return for lambs fed chop silage in 1994 and 1995 was \$3.30 and \$2.11 above that for lambs fed hay. These higher returns were mainly due to lambs on silage being fed less lupins than lambs fed hay. Silage intakes were also less than the more expensive hays. This study shows that feeding chop cereal silage plus lupins to finish weaned prime lambs in WA is more cost-effective than feeding cereal hay plus lupins. The Meat Research Corporation funded this on-farm research.

MILTON, J.T.B., DAVIDSON, R.H. and RYAN, J.M. (1996). *Proc. Aust. Soc. Anim. Prod.* **21**: 373.
SCA (1990). "Feeding Standards for Australian Livestock, Ruminants" (Standing Committee on Agriculture: East Melbourne).