Proc. Aust. Soc. Anim. Prod. (1974) 10; 392

HAY AND GRAIN RATIONS FOR FATTENING SHEEP IN FEEDLOTS

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Two experiments conducted at the Pastoral Research Station, Hamilton examined the influence of hay quality (crude protein content, CP) and of the amount of oat grain in the ration on the performance of Corriedale wethers, 18 months of age, when fed in **feedlots** and fattened for late winter markets.

I. EXPERIMENTAL

Experiment 1, 1972 : Hays of either 13% or 10% CP were fed ad *libitum* alone and with 250 g, 500 g and ad *libitum* supplements respectively of oat grain (90% DM). All sheep were slaughtered after 20 weeks when the sheep in one of the groups were considered suitable for market.

Experiment 2, 1973 : Hays of either 15% or 18% CP were fed ad *libitum* with 250, 500 and 750 g supplements respectively of oat grain (90% DM). The sheep in each group were slaughtered when they reached a live weight and condition acceptable for local markets.

In both experiments intakes, digestibilities of fodders, growth rate, wool production and carcass weights were measured.

II. RESULTS AND DISCUSSION

Digestibility of the 10% protein hay was 55%, 13% hay 61%, 15% and 18% hay 65% and of oats 70%. In experiment 1 all measures of production were affected by hay quality and oat supplement (Table 1). However, in experiment 2 hay quality had no effect on sheep performance but oat supplement influenced DMI, liveweight gain and carcass gain. For all qualities of hay feed conversion efficiency was only marginally higher with supplements of 750+ g than with supplements of 500 g of oats.

TABLE]

Main effects: Daily dry matter intake, liveweight gain, carcass gain and wool production of sheep in experiments 1 and 2

Source of	Exper Hay			<u>iment l</u> Oat grain g/day			<u>Experiment 2</u> Hay Oat grain g/day				
variation	13%CP	10%CP	0	250	500	ad (900)	Z.18%CP)	15%CP	250	500	750
DMI kg/day L.wt gain g/day Carcass gain	1.07 95	0.86 58	0.83 28	0.93 62	1.04 99	1.07 116	1.18 130	1.11 128	1.08 110	1.14 133	1.21 145
g/day Greasy wool	35	23	-2	21	40	56	67	66	46	74	80
growth g/day	17	14	12	14	17	18	21	21	21	21	21

It is concluded that rations in which about half the DMI is provided by oat grain and half by pasture hay, preferably at least 15% CP, are adequate for fattening sheep of the age and type used. Wool production is also likely to be very high with sheep fed such rations.

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