

COMPENSATORY LIVELWEIGHT GAIN AND MOHAIR GROWTH IN ANGORA GOATS

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The growth and mohair production of Angora wethers when exhibiting compensatory liveweight gain are described. This experiment was undertaken following larger experiments examining the maintenance requirements of Angora goats (B.A. McGregor unpublished).

In August 1981, 20 Angora wethers were housed and fed a complete pelleted diet (crude protein 16.5%, 11.8 MJ ME/kg DM est). The wethers were 18 months old and had been shorn 3 weeks' previously. Twelve goats were fed at maintenance (M) and eight were fed ad libitum (ADLIB). Initial mean fleece free live weight of both treatment groups was 16.3 kg. Goats were weighed twice weekly throughout the experiment. Following an introductory period of 26 d, goats were fed for 92 d and then shorn. They then grazed on improved irrigated pasture for 104 d and were then shorn again. Midside fleece samples were tested by the Australian Wool Testing Authority. Results are summarised in Table 1.

TABLE 1 Liveweight gain, mohair growth and fleece characteristics of Angora wethers fed at maintenance (M) or ad libitum (ADLIB) from August to December and then grazed on irrigated perennial pastures until April

Observation	Treatment					
	Pellets in Spring			Irrig. Summer pasture		
	M	ADLIB	Signif*	M	ADLIB	Signif*
Fleece free liveweight gain g/d	2	114	P < 0.001	74	6	P < 0.001
Fleece % yield	94.9	95.2	NS	90.8	92.0	NS
Clean fleece growth g/d	2.9	5.3	P < 0.001	5.5	8.1	P < 0.001
Fibre diameter μ m	24.5	27.3	P < 0.01	28.2	29.3	NS
% Medullated fibre (Greasy basis)	6.7	3.7	-	-	-	

* Significance of difference as determined by Student's 't' test

ADLIB fed goats which grew rapidly in spring grew little on irrigated pasture while goats maintained during spring grew rapidly on irrigated pasture. When the M goats were compensating they grew mohair which tended to have a greater fibre diameter than mohair from ADLIB goats fed pellets in spring (P < 0.30) but mohair growth rates were similar. During spring when fed pellets, mohair from ADLIB fed goats had greater fibre diameter than M fed goats but when both groups grazed irrigated pasture fibre diameter was not different (P < 0.20). ADLIB fed goats grew more mohair than M fed goats in both seasons but mohair growth is confounded by food intake in spring and by food intake and live weight in summer. The proportion of medullated fibre was reduced with better nutrition. Fleece yield was significantly higher in spring when both groups were housed than in summer (P < 0.001) when grazing pasture. Both groups also grew more mohair (P < 0.01) on pasture in summer than when fed pellets indoors in spring.

Angora wethers fed maintenance rations and then grazed on irrigated pastures exhibited compensatory liveweight gain compared to wethers initially fed ad libitum and then grazed on irrigated pastures. Compensatory liveweight gain was not associated with increases in mohair growth rate.

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