

## EVALUATION OF DROUGHT SUPPLEMENTS FOR YOUNG SHEEP

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Young sheep in north western Queensland suffer high mortality rates (up to 25%), and drought increases these losses. An experiment was carried out which evaluated the liveweight performance of nine-month old Merino wethers fed a range of drought supplements which have potential for the semi-arid sheep districts of Queensland.

Ten groups each of 14 wethers (mean live weight 25 kg) were fed a basal ration of hay (N = 0.9%) and supplements for a period of 85 days. Fortified molasses containing 3% urea and 1% salt was offered twice weekly in narrow troughs to seven of the groups at a rate of 250 g/hd/d. Meatmeal (MM) (50 g/hd/d), avoparcin (AVO) (30 mg/hd/d), bentonite (BENT) (30 g/hd/d) or sulphathiazole (S) (1 g/hd/d) were administered on an individual basis as a daily drench, singly or in combination; control (C) groups received either the basal hay ration or hay plus fortified molasses (Table 1). Quantities of each supplement used were based on results of previous studies and on cost. Animals were weighed at the commencement and completion of the trial.

Table 1 Mean growth rate (g/d) of weaners receiving drought supplements

Treatment	Hay only			Hay + fortified molasses						
	C	MM	MM+ AVO	C	MM	AVO	BENT	S	MM+ AVO	MM+AVO +BENT
Growth rate (g/d)	-12 <sup>a</sup>	10 <sup>b</sup>	20 <sup>bcd</sup>	14 <sup>bc</sup>	32 <sup>de</sup>	31 <sup>de</sup>	12 <sup>bc</sup>	23 <sup>cd</sup>	41 <sup>ef</sup>	45 <sup>ef</sup>

Values with different superscripts differ significantly,  $P < 0.05$ .

Meatmeal and fortified molasses supplements significantly increased liveweight gain compared with the control treatment. When offered together, these two supplements further increased growth rate. The rumen modifier, avoparcin, significantly increased growth rate when offered with the fortified molasses supplement and enhanced the growth responses to other supplements. Bentonite, when offered with fortified molasses or in combination with the molasses, meatmeal and avoparcin did not significantly affect liveweight gain. The response to sulphathiazole when offered with fortified molasses was not significant.

The liveweight data suggest that meatmeal and avoparcin were equally effective in improving liveweight performance of young Merino wethers offered fortified molasses. The results with the rumen digestion modifier, avoparcin, are consistent with responses measured in weaner cattle (Lindsay pers. comm.). Further investigation with sulphathiazole at different dose rates is indicated to determine its use as a rumen modifier which could increase the efficiency of utilisation of traditional drought supplements.

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