

THE EFFECTS OF HAEMONCHUS CONTORTUS BURDENS ON PRODUCTIVITY OF SHEEP  
IN SEMI-ARID QUEENSLAND

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The effects of a moderate burden of *Haemonchus contortus* on liveweight change, milk production, lamb growth and wool growth were studied in groups of 60 lactating ewes and their lambs, 20 dry ewes which had lost their lambs and 100 weaners. Half of the ewes and weaners were infected with 2000 *H. contortus* larvae; the other half were treated with anthelmintic, 10 ml levamisole. The treatments of ewes were undertaken 1 week prior to the commencement of lambing, and the weaners were also treated at that time. On day 37 after treatment faecal samples were collected for parasite egg counts, all animals including lambs were weighed and milk yield was measured in lactating ewes after oxytocin injection. Midside samples were taken for wool growth measurement on day 87. Lambs were weighed 140 days after treatment to calculate growth rate.

TABLE 1 Parasite faecal egg count, weight change, milk yield and wool growth of parasitised and treated lactating ewes and their lambs, dry ewes and weaners (Mean  $\pm$  SE)

Class of sheep	Parasite egg count (e.p.g.) Mean	Weight change (g/hd/d) Mean SE		Milk yield (ml/d) Mean SE		Wool growth (mg/cm <sup>2</sup> /d) Mean SE	
Lactating ewes							
Parasitised	1670 <sup>a</sup>	-74.1	18.9 <sup>a</sup>	703	47.5 <sup>a</sup>	0.82	0.25 <sup>a</sup>
Treated	$\leq 100^c$	- 8.9	18.9 <sup>b</sup>	1043	47.5 <sup>c</sup>	0.93	0.18 <sup>a</sup>
Lambs							
Parasitised	$\leq 100^a$	129.9	13.6 <sup>a</sup>				
Treated	$\leq 100^a$	236.4	12.2 <sup>c</sup>				
Dry ewes							
Parasitised	860 <sup>a</sup>	-37.4	9.4 <sup>a</sup>			1.19	0.11 <sup>a</sup>
Treated	$\leq 100^c$	36.3	9.6 <sup>c</sup>			1.19	0.11 <sup>a</sup>
Weaners							
Parasitised	2550 <sup>a</sup>	0.2	6.9 <sup>a</sup>			1.38	0.11 <sup>a</sup>
Treated	$\leq 100^c$	98.2	7.0 <sup>c</sup>			1.94	0.11 <sup>c</sup>

Parameters within columns with differing superscripts differ significantly (a-b,  $P \leq 0.05$ ; a-c,  $P \leq 0.01$ )

The results of the measurements are presented in Table 1. The lactating ewes which were treated with anthelmintic lost less liveweight and produced more milk than the ewes carrying a parasite burden during lactation. The higher milk yield in the treated ewes was reflected in the higher growth rate of their lambs compared with lambs from the parasitised ewes. Liveweight changes were significantly in favour of all the anthelmintic-treated groups of sheep. The parasitised weaners grew significantly less wool than their treated counterparts but there were no significant differences in wool growth between the groups of ewes.

This study identifies the extent to which moderate *Haemonchus* burdens which are commonly diagnosed in extensively grazed flocks in western Queensland can influence the productivity of grazing sheep.

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