

PRODUCTION LOSSES ASSOCIATED WITH BOVINE
NEMATODIASIS IN WESTERN VICTORIA

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Infestation with *Ostertagia ostertagi* has emerged as a serious disease of beef cattle in this region (Salisbury 1972-73).

In the first experiment, fortnightly treatment with a range of broad spectrum anthelmintics did not improve the growth rate of weaned Hereford heifers between April and December, when treated and untreated groups of 12 grazed together (mean liveweight gain 164 ± 6 and 159 ± 3 kg respectively). Faecal egg counts remained positive and plasma pepsinogen levels became elevated in both groups (e.g. in August they were 104 ± 24 v 162 ± 95 eggs/g wet wt. and 11400 ± 400 v 11900 ± 400 mU tyrosine/ml respectively). Fortnightly drenching was insufficient to control nematodiasis when treated and untreated groups grazed together.

The second experiment compared the growth of two groups of Angus heifers and their calves. One group had access to molasses blocks containing phenothiazine and the other was treated with morantel in June and fenbendazole in August. Between June and December the drenched cows and their calves grew faster than those exposed to the blocks (0.45 ± 0.03 v 0.27 ± 0.04 kg/day for cows and 0.67 ± 0.01 v 0.61 ± 0.02 kg/day for calves). Significantly higher faecal egg counts in the calves during spring (e.g. 199 ± 72 v 1028 ± 260 eggs/g dry wt. in November) and higher plasma pepsinogen levels in the cows in January (8500 ± 1000 v 14800 ± 1100 mU/ml) indicated that the decreased liveweight gain was associated with nematodiasis. Increased availability of infective larvae on the 'block' paddock was also indicated by the mean worm counts (250 v 1900) of two tracer calves which grazed each paddock for 18 days in mid spring. The anthelmintic blocks may have failed to control nematodiasis because of low intakes. Further knowledge of factors involved in the regulation of intake of blocks by grazing cattle is required before this method of treatment could be recommended.

The third experiment compared the growth, between April and December, of three groups of 12 Hereford weaners which received either (a) fortnightly drenching with a range of broad spectrum anthelmintics, (b) one drench in April and one drench in July using fenbendazole or (c) no drenches. Three paddocks were allocated to each drenching regime. The cattle allocated to each treatment were grazed as a single herd and rotated at weekly intervals between the paddocks allocated to that particular treatment. The untreated group gained less weight and one death (137000 adult *O. ostertagi* recovered-at post mortem) occurred in September. The other two groups grew at similar rates. The mean live-weight gain was 122 kg for the undrenched group, 167 kg for the group receiving two drenches and 162 kg for the group receiving 16 drenches (5% LSD = 19 kg). Two effective, strategic anthelmintic treatments gave substantial control of nematodiasis during the experimental period.

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