WORM CONTROL IN CATTLE BY MEDICATING THE DRINKING WATER

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The control of intestinal worms in cattle by drenching with anthelmintics is labour intensive and is stressful for the animals. Administering anthelmintics through the drinking water offers an easier and cheaper alternative, which we tested with weaner cattle in 1985 and 1987.

In 1985 three groups of 121 weaner cattle (mean LW 200 kg) were either (a) untreated, or (b) drenched orally with levamisole (7 mg/kg LW), or (c) given the same amount of levamisole mixed in the drinking water. Sub-groups of 20 weaners were selected for sampling. In 1987 groups of 55 weaners (mean LW 180 kg) were used and all were sampled. In both years the weaners drank the medicated water in about 36 hours, and the three groups then ran together.

Worm eggs were counted in individual faecal samples taken prior to treatment and 10 d after treatment. Pre-treatment counts were compared by analysis of variance using a log transformation $\lceil \log_e (C/25 + 1)$, where C = eggs/g], and post-treatment counts by a non-parametric chi-squared analysis of the contingency table:zero versus > zero.

Medication of drinking water with levamisole at the same dose rate as for oral drenching effectively eliminated the worm-egg burden, and worm eggs were found in only a few faecal samples from either of the treated groups (Table 1).

Table 1. Back-transformed mean worm egg counts (eggs/g) prior to and 10 d after treatment with levamisole

	Untreated	Drenched	Medicated
1985			
Pre-treatment	95^{a}	227^{a}	101^{a}
10d post-treatment	139^{b}	2^{a}	2^{a}
1987			
Pre-treatment	120^{a}	175^{a}	144^{a}
10d post-treatment	253^{b}	3^{a}	5^{a}

Within rows, means with different superscripts are significantly different ($P<0.01$).

Adding a soluble anthelmintic to the drinking water controlled worms just as effectively as conventional oral drenching, but was much easier to do and was less traumatic for the stock. New dispensing equipment now makes it possible to treat grazing animals wherever stock watering points can be controlled. The technique can also be readily applied at weaning, when cattle are normally held in yards for a short period. However, care should be taken to avoid patterns of administration which could lead to anthelmintic resistance in the worms.

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