THE EFFECTS OF ZERANOL (RALGRO, ALBENDAZOLE (VALBAZEN), AND COPPER TREATMENT ON GROWTH RATE AND FAECAL EGG COUNTS OF WEANER STEERS GRAZING WINTER OATS

D. LLEWELYN* R.S. COPLAND# and A.W. PLASTO$

Zeranol (Ralgro, Coopers) increases growth rate by at least l0% in rapidly growing animals (Wood and Bonner 1982), but the interactions of Ralgro, Copper, and anthelmintic treatment are not well documented. The aims of this study were to examine the effects and interactions of these treatments on growth rate and faecal egg count in a 2X2X2 factorial experiment using 8 groups of 30 Beefmaker steers. Treatments were administered prior to the grazing period, and weight gains and faecal egg counts were measured at the end of the trial (see Table 1).

Table 1 Mean weight gains (kg) and faecal egg counts (epg) for steers treated with Ralgro, Copper, and Anthelmintic after grazing oats for 111 days. (O=control; 1=treated; SD after each mean)

Treatment				Weight gain	Faecal egg counts	
Ralgro	Copper	Drench	N		epg	no>500 epg
0	0	0	27	85.8 (14.8)	372 (472)	3/14
0	0	1	25	93.7 (13.3)*	117 (393)	1/13
0	1	0	27	85.8 (30.2)	112 (147)	0/12
0	1	1	27	86.2 (15.8)	12 (22)	0/13**
1	0	0	28	90.2 (21.8)	1390 (1494)	10/15**
1	0	1	28	94.2 (18.4)	27 (33)	0/14
1	1	0	30	93.4 (22.9)	145 (161)	0/15
1	1	1	29	97.0 (19.9)**	50 (141)	1/15

Legend: *P<0.05, **P<0.025 compared to controls: egg counts transformed to log (epg+1) for tests of significance; N=no in group at end; denominator in last column indicates sample size

The increased weight gains for all animals drenched (3.92kg, P<.25) and treated with Ralgro (5.96 kg, P<0.05) were less than expected, considering the relatively high parasite burden of undrenched animals and the low reinfestation during the fattening period. Copper treatment significantly (P<0.005) decreased faecal egg counts, but this apparent anthelmintic effect did not increase weight gain. On the other hand, Ralgro treatment significantly (P<0.05) increased faecal egg counts. This phenomena has been reported previously with corrective mineral supplements (Nicol and Smith 1981) but not with anabolic agents.

The endocrine system affects animals resistance to internal parasites (Turner and Short 1971), so it is not surprising that Ralgro changes faecal egg counts, but further work needs to be done to arrive at the mechanisms involved.

This study indicates that drenching may be more important in animals treated with Ralgro.

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* Department of Primary Industries, P.O. Box 300, Goondiwindi, Qld 4390.
# Pastoral Veterinary Centre, P.O. Box 168, Goondiwindi, Qld 4390.
$ Department of Primary Industries, P.O. Box 102, Toowoomba, Qld 4350.