

Controlled test to assess the efficacy of a combination of anthelmintics (Ivermectin/Levamisole) against infections caused by *Trichostrongylidae* nematodes in bovines and ovines

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ABSTRACT

The results of a controlled test to assess the efficacy of a combination of anthelmintics [Ivermectin/Levamisole (IVM/LEV)] against infections caused by *Trichostrongylidae* nematodes in bovines and ovines are shown. In livestock farms with a history of infections caused by gastrointestinal nematodes (GIN), 12 steers and 12 ewes were selected by faecal analysis and then transferred to pens to carry out the test under controlled feeding conditions (hay and fresh water) and isolation. The animals were given complementary inocula with infective larvae of GIN and, for each species, 2 comparable groups of 6 animals each were formed based on the amount of nematode eggs in the faecal matter. Group 1 was the untreated control, while the animals of Group 2 received (subcutaneously) the combination of IVM and LEV through a dose of 1 ml/25 kg of live weight (k.l.w.) [equivalent to Ivermectin: 0.2 mg/k.l.w. and Levamisole: 8 mg/k.l.w.]. The animals were slaughtered. Then, the parasites of the abomasum and intestine of each animal were recovered, counted and identified.

In bovines, the efficacy of the combination of IVM and LEV against *Haemonchus placei*, *Trichostrongylus axei* and *Cooperia oncophora/punctata* was 100% ($P < 0.05$), while against *Ostertagia ostertagi*, the efficacy was 99.9% ($P < 0.05$). The faecal egg count reduction test (FECRT) for nematodes indicated a clinical efficacy of 100% ($P < 0.05$).

In ovines, the efficacy of the combination of IVM and LEV against *Teladorsagia circumcincta*, *Trichostrongylus axei*, *Cooperia pectinata/punctata* and *Trichostrongylus colubriformis* was 100% ($P < 0.05$), while against *Haemonchus contortus*, the efficacy was 98.4% ($P < 0.05$). The FECRT indicated a clinical efficacy of 98.4% ($P < 0.05$), with the central presence of *H. contortus* among the few nematodes that survived the treatment.

According to the guidelines of the World Association for the Advancement of Veterinary Parasitology (WAAVP) for the evaluation of anthelmintics in ruminants (Wood *et al*, 1995), the results indicate that the combination of Ivermectin and Levamisole evaluated in this work is considered highly effective (> 98%) against mixed infections caused by gastrointestinal nematodes in bovines and ovines.