

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

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ABSTRACT

The results of a controlled test to determine the efficacy of a triple combination of anthelmintics [Ivermectin/Levamisole/Clorsulon (IVM/LEV/CLN)] against infections caused by Trichostrongylidae nematodes and *Fasciola hepatica* in bovines and ovines are shown. In livestock farms with a history of infections caused by gastrointestinal nematodes (GIN) and *F. hepatica*, 12 steers and 12 ewes were selected by faecal matter analysis and then transferred to pens to carry out the test under controlled feeding conditions (hay and fresh water) and isolation. The animals of both species received complementary inocula with infective larvae of GIN, in order to increase the amount and spectrum of nematodes in the infection. Ten weeks after the confinement, two comparable groups of six animals each were formed for each species, based on the number of nematode and trematode eggs in the faecal matter. Group 1 was the untreated control, while the animals of Group 2 received (subcutaneously) the formulation to be evaluated by means of a dose of 1 ml/ 25 kg of live weight (k.l.w.) [equivalent to Ivermectin: 0.2 mg/k.l.w., Levamisole: 8 mg/k.l.w. and Clorsulon: 2 mg/k.l.w.].

The animals were slaughtered 30 days after the treatment. The parasites in the abomasum, intestine and liver of each animal were then recovered, counted and identified. In bovines, the efficacy of the triple combination against *Haemonchus placei*, *Ostertagia Ostertagi*, *Trichostrongylus axei*, *Cooperia oncophora/punctata* and *Fasciola hepatica* was 100% (P <0.05). In ovines, the efficacy against *Haemonchus contortus* was 99.2%, against *Teladorsagia circumcincta* was 100%, against *Trichostrongylus axei* was 100%, against *Trichostrongylus colubriformis* was 98.1%, against *Cooperia pectinata/punctata* was 100% and against *Fasciola hepatica* was 100% (P < 0.05).

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 triple combination of IVM/LEV/CLN evaluated in this work is considered highly effective (> 98%) against mixed infections caused by gastrointestinal nematodes and *F. hepatica* in bovines and ovines.