



WAAVP

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Sifting and Winnowing the Evidence in Veterinary Parasitology



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Abstract Book

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/ mL and 0.500 mg / mL). The eggs were placed in 48-well plates and incubated with the described concentrations for 24 hours at 27°C. The hatchability was evaluated under the inverted microscope. The calculation of lethal concentrations CL50 and CL90 were performed through the SAS Probit program, with the independent variables (dose) transformed by natural logarithm (log dose). Citronellol presented the best anthelmintic efficacy when compared to citronellal as LC50 was 0.02 and Citronellol 0.63 mg / mL, and CL90 was 0.63 and 3.26 mg / mL, respectively. It was concluded that the use of essential oils compounds had a positive influence on *H. contortus* eggs, especially citronellol. The low dose of Citronellol to inhibit the hatch of eggs reinforces the potential anthelmintic activity present in essential oil compounds and deserves further scientific investigations. - FAPESP/2018-02423-0

PS02.24 Efficacy Variation of *Mentha Piperita* Essential Oil on *Haemonchus Contortus* Isolates With Differing Benzimidazole Resistance Backgrounds

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The spread of anthelmintic resistance made treatment options against gastrointestinal parasites increasingly scarce so the search for natural compounds as antiparasitic candidates is now an important field. However, because concentrations of active compounds may vary according to their origin and post-harvest processing, there are many obstacles for the establishment of standards hindering reliable results. To date it is not known if a given compound may vary on efficacy between parasite populations. In this work we evaluate the efficacy of *Mentha piperita* essential oil against eggs of two *Haemonchus contortus* isolates with and without history of resistance to benzimidazole. Tests were carried out using the standard egg hatch inhibition test with a 2% Tween 80 as diluent. Nematode

eggs used in the tests were recovered from adult donor sheep. Egg hatch tests (EHT) were performed with serial concentrations from 1.0 mg/mL to 0.004 mg/mL to obtain a dose-response curve and reach the 99% effective concentration. EHT results for the resistant isolate showed 99.5% efficacy at concentrations above 0.5 mg/mL. However, the EHT results for the sensitive isolate were much lower at 32.3% at 0.5 mg/mL and 41.8% efficacy at the maximum concentration tested (1.0 mg/mL). Our results suggest that the components in *Mentha piperita* essential oil probably have a different mode of action in gastrointestinal nematodes as the resistance background to benzimidazole was not associated with EHT results for the studied isolates. Thus, the importance of testing natural compounds on more than one nematode population is evident in order to provide a better overview of the actual efficacy of said compounds.

PS02.25 Encysted Cyathostomin Larval Counts: Mucosal Digestion Revisited

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Cyathostomins are pervasive equine parasites and may cause larval cyathostominosis. Upon ingestion of the third larval stage, the larvae encyst in the mucosal membranes of the cecum, ventral colon, and dorsal colon. Once encysted, they can arrest development and accumulate in high numbers. No published study has investigated spatial variation of encysted larvae within each intestinal compartment and the current mucosal digestion protocol lacks a description of a standardized area from which to take the tissue sample. Therefore, this study sought to evaluate spatial variation in encysted larval counts in defined sections of each large intestinal organ. Following humane euthanasia, ceca, ventral, and dorsal colons were harvested from 8 foals raised in an anthelmintic naïve parasitology research herd. Each organ was weighed and separated into 3 equal sections by length: the orad, intermediate, and aborad portions. From