

Effectiveness of Selected Anthelmintics on Nematode Parasites of Sheep in KwaZulu-Natal, South Africa

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Abstract : This study determined the effectiveness of selected anthelmintics (Ivermectin 1% (IVM), Closantel 7.5% (CST) and a combination Abamectin 0.08% and Praziquantel 1.5% (CAP) currently being used in SA. Gender, initial egg per gram (EPG) and initial live weight aided in blocking animals into groups, each group was randomly treated with one of four drug treatments comprising: the untreated control (D0), IVM, CST, and CAP. Animals grazed throughout on infested pasture. Rectal faeces were collected on days 0, 7, 14, and 21 for determining EPG. Faeces were mixed per group and incubated to identify and determine the abundance of larval forms of *Haemonchus*, *Trichostrongylus*, *Strongyloides*, *Nematodirus*, and *Cooperia* species. Differences between treatments changed over time. On day 7 IVM, CST, and CAP depressed EPG to 0.66, 0.37 and 0.80 of their respective starting values whilst EPG increased 1.39 times for D0. Thereafter, EPG increased consistently for all drugs; CST recorded the lowest values. *Haemonchus*, *Trichostrongylus*, *Strongyloides*, *Nematodirus* and *Coperia* species contributed respectively 60%, 30%, 6%, 3%, and 1% of the larval forms on day 0; and 78%, 8%, 11%, 1%, 2% on day 21. Larval forms increased for *Haemonchus* species but decreased for *Trichostrongylus* species over time. Closantel was the most effective dewormer. *Haemonchus* Spp. were least affected whilst *Trichostrongylus* Spp. were the most affect by all drugs.

Keywords : anthelmintics, faecal egg count, L3 larvae, sheep

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