SHEEP GASTROINTESTINAL NEMATODE CONTROL AND ANTHELMINTIC RESISTANCE IN A SEMI - ARID ZONE OF KENYA .

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A study to investigate the existing sheep gastrointestinal nematode control and antelmintic resistance in a semi-arid zone of Kenya was carried out amongst dorper sheep farms in April 2021. Faecal material collected on Day 0 were processed and examined for faecal egg counts. Only sheep that had not been dewormed in the previous 28 days and had an egg count of $\geq$150 eggs per gram of faeces were included in the efficacy trial. From those that met the inclusion criteria, 64 sheep of all ages and both sexes were selected and randomly allocated to four treatment groups of 16 sheep based on the faecal egg counts at Day 0. The faecal egg count reduction (FERC) was used to determine the efficacy of the commonly used anthelmintics, of benzimidazoles, levamisoles and avermectins.

Prior to the anthelmintic efficacy trial ,a total of 180 farmers were interviewed to investigate existing helminth control strategies and other challenges faced by Dorper sheep farmers.

Majority of the farmers (90%) managed worm infections through routine use of anthelmintics, with the majority applying an annual frequency of four times a year. The rest used a lower frequency (24% using 3 times, 3% at twice and 1% at once a year) and a higher frequency (3% at five times and 11% at six times a year).

Results of FERC indicated lowered efficacy with the best performing drug (benzimidazoles) at 83 % Levamisole at 76 % the lowest performing was ivermectin at 63 %.

Further farm based investigations are recommended to determine the possibility of resistance occurring in individual farms .This will enable both farm and region based interventions to manage the situation and prevent resistance in clean farms.