A-05 Efficacy of Albendazole and Levamisole against gastrointestinal nematodes in goats in Sri Lanka: a preliminary investigation

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The objective of this study was to determine the efficacy of double dose of albendazole with that of a single dose of levamisole on gastrointestinal nematodes from goats managed under an extensive system in the dry zone of Sri Lanka. 205 cross bred goats at Notchiyagama, in the North Central Province were selected and faecal sampled in order to determine their faecal eggs counts (epg). 132 animals with epg > 200 were divided at random into 4 groups. Group 1 was given a single dose (5mg/kg) of Albendazole (Valbazen, Smith Kline Animal Health Products, Asia/Pacific), group 2 a double dose (10mg/kg) of albendazole, while group 3 received levamisole (Nilverm, Coopers Animal Health Australian ltd.) at a dose rate of 7.5mg/kg body weight. Group 4 was

maintained as a control group. All experimental animals were then allowed to run with the other animals in the herd into communal grassland. Faecal samples were collected from all experimental animals just before treatment, 14 days post treatment to estimate epg. Faecal samples of each group which were collected at the time of treatment were pooled after counting of epg and were cultured in order to identify the parasites on morphological criteria of infective larvae. Efficacy of drugs was evaluated on the basis of Faecal Egg Count Reduction Test. The mean % faecal egg count reduction and lower limit of 95% confidence interval (CI) of albendazole as a single dose rate at either 5mg/kg or as a double dose at 10mg/kg body weight and levamisole as a single dose rate at 7.5mg/kg body weight, in reducing trichostrongylid nematode egg counts, were 90% (CI=71%), 94.9% (CI=91%) and 95.0% (CI=90%) respectively. Based on larval culture of bulked faeces and subsequent identification, *Haemonchus* was the dominant genus in goats in the dry zone of Sri Lanka. The results confirm that both anthelmintics are effective except albendazole as a single dose rate, in reducing naturally harboured gastrointestinal nematode infection in goats managed traditionally at Notchiyagama and which contrasts with benzimidazole resistance observed in some goat herds managed intensively in the dry zone of Sri Lanka. This reduced efficacy of albendazole as a single dose rate could be related to its inherent pharamacokinetic behaviour in goats and not to reduced efficacy.

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