

Gastrointestinal and Blood Parasites of Sheep in Kaithady Farm in Jaffna District

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Parasitism is one of the major economic and health problems affecting the sheep industry. The present study determined the prevalence, intensity and types of gastrointestinal (GI) and blood parasites of a sheep flock at Kaithady in Jaffna district. Fresh faecal samples (~5 g) from a sheep breed known as 'Jaffna Locals' were collected in September 2010 (during the dry season) and March 2011 (after the rainy season). Fifty samples (10% of the sheep in the farm) were collected in one season and were processed by modified salt floatation and by direct iodine smears. Fifteen blood samples were collected only once in September 2010 and thin blood smears were prepared and stained with Giemsa stain. Identification of parasites in the faeces and blood was based on light microscopic morphology. Some nematode eggs were cultured to obtain larvae to confirm identification. Seven genera of GI parasites namely, *Haemonchus*, *Toxocara*, *Trichuris* (Nematoda), *Pramphistomum* (Trematoda), *Moniezia* (Cestoidea), *Eimeria*, *Giardia* (Protozoa) and unidentified strongyle type eggs were recorded in this study. Although the overall prevalence of GI parasitism after the rainy season was higher (92%) than that of the dry season (84%), this difference was not statistically significant ($\chi^2 = 2.9536$; $P > 0.05$). Moreover, there was no difference in the prevalence or intensity of GI parasitism between males and females or between lambs and adults (chi square test; $P > 0.05$). Eight types of GI parasites were recorded after the rainy season while only five were found in the dry season. The most common type of infection was strongyle type eggs (78%) followed by oocysts of *Eimeria* spp. (76%). Four species of *Eimeria* were identified namely, *E. ovinoidalis*, *E. ovina*, *E. intricata* and *E. parva*. Concurrent infections of *Eimeria* spp. and GI nematodes were common. Infections of *Moniezia*, *Giardia* and *Trichuris* were recorded only after the rainy season. The intensity of infections of nematodes and *Eimeria* spp. was significantly higher after the rainy season compared to dry season (Mann Whitney U test; $P < 0.001$). A wider range of parasite species and a higher intensity of infection after the rainy season could be due to the free grazing management of animals and favourable climate (high moisture content and low temperature) for the development and survival of the infective stages on pasture. According to the farmer, only few animals of the flock were dewormed at a time due to high cost of drugs. A tick-borne haemoparasite, *Theileria* sp. was found with a very high prevalence of 87%. The sheep at the Kaithady farm harboured many parasites and the intensity of infection and types of parasites increased after the rainy season. Long term monitoring of this flock will help to develop strategic control measures of these parasites in sheep.