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Status of cattle gastrointestinal parasitism and associated risk factors in Kilinochchi district, Sri Lanka

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Kilinochchi district is situated in the Northern part of Sri Lanka and the people there traditionally practice livestock and crop integrated farming. This district has a high potential for livestock integrated crop farming practices hence this sector is considered as a major source of income for the farming community. Gastrointestinal parasitism is a condition caused by gastrointestinal parasites, and is a major impediment to livestock production. A cross-sectional study was carried out to quantify the risk factors (age, breed, rearing system, grazing system, deworming and frequency of deworming) associated with gastrointestinal parasitism in cattle in the Kilinochchi district from January 2020 to July 2020. For this study, a total of 106 cattle were selected from four veterinary divisions in the Kilinochchi district. Fecal samples were collected and coprological examinations were done by using standard flotation and sedimentation techniques, and questionnaire survey was conducted with the farmers. The overall prevalence of gastrointestinal parasitic infestation was 89% (n=90). Based on the result of fecal examination and data analyzed from questionnaire survey there was a significant difference between age, breed, rearing system, grazing system, deworming, and frequency of deworming with the prevalence of gastrointestinal parasites ($p<0.05$). Infestation in elderly cattle (>6yrs) was found to be high (33%) compared to the young cattle. The local breed (36%) had a higher infestation level than crossbreed (64%). The highest infestation level was observed in crop-livestock integrated farming systems (67%) and semi-intensive farming systems (62%). Female (78%) cattle were more infected than the male cattle (28%). In this study area, only 68% (n=50) of the farmers were found practicing deworming their cattle; among these cattle, 49% were infected by gastrointestinal parasites. However these cattle were dewormed at different time intervals so that the highest infestation level was observed in cattle that were dewormed at a one-year time interval (33%). Nearly 32% of the farmers were not practicing deworming. Further, most of the cattle in the semi intensive and crop–livestock farming systems were found to be infected by gastrointestinal parasites.

Keywords: Gastrointestinal parasites, Coprological examination, Floatation and sedimentation techniques