A Study on Gastrointestinal Strongyle Parasitism of Free Grazing Jaffna Local Sheep

S. Tharanja and M.S. Kurukulasuriya*

Department of Animal Science, Uva Wellassa University, Badulla, Sri Lanka

Gastrointestinal (GI) parasitism is a major health problem that limits the maximum production of sheep. *Ad hoc* use of anthelmintics has been led to anthelmintic resistance in parasites. Hence, strategic deworming of parasite susceptible risk groups will be a suitable option to reduce the anthelmintic usage and further development of anthelmintic resistance in parasites. Therefore, this study was aimed to identify the differences of parasite susceptibility for GI strongyle parasitism between males & females and adults & kids of Jaffna Local Sheep (JLS). Five large-scale farms in the Jaffna Peninsula, which are managed similarly were selected for the study. Direct rectal, faecal samples were collected from a total of 214 {Male-Adult (MA)-50; Male-Kid (MK)-49; Female-Adult (FA)-62; Female-Kid (FK)-53} JLS who have not dewormed. Faecal Egg Count (FEC) of each sample was determined by the modified McMaster counting technique and log-transformed FEC {LnFEC=Ln (FEC+100)} were analysed by PROC-MIXED procedure of SAS 9.2 software. The FEC in females (705.21±70.74) were significantly higher than males (623.93±62.70), ($p<0.05$). The age effect on FEC was not significant ($p>0.05$) reflecting the presence of similar infections in adults (649.42±65.14) and kids (677.75±68.11). The interaction effect of sex×age on FEC was significant. Further, female kids (749.29±78.30) have significantly higher FEC compared to MK, FA, and MA ($p<0.05$). The fact that high parasitic susceptibility in female kids may be due to high stress in females may have contributed to the high reproductive events and insufficient or unbalanced diets against their high needs. In conclusion, sheep female kids are the high-risk group for GI strongyle parasitism. Strategic deworming of female sheep, especially kids will be useful in the prevention of GI strongyle parasitism in sheep.

Keywords: Gastrointestinal parasitism, Jaffna Local Sheep, Faecal egg count