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Abstract

The present study focused on trichostrongylid nematodes, which are one of the main limiting factors of the livestock industry causing major economic losses globally, particularly in Malaysia. The present study aimed to investigate the bionomic of trichostrongylid infection in goat farms located in Penang Island, Malaysia and also to evaluate the efficiency of common anthelmintic drugs used in these farms. For the bionomic study, faecal samples were collected from the naturally infected goats and the faecal egg counts (FEC) were determined during 12 months from January 2011 until December 2011. The body weight gain (BW), haemoglobin (Hb), and packed cell volume (PCV) of the animals were also assessed during the study period. The correlation of climatic factors (rainfall, humidity, and temperature) and FEC, BW, Hb, and PCV were determined. To evaluate the efficiency of anthelmintic drugs, a total of 250 goats located in different five locations in Penang Island were used in this evaluation. In each location fifty animals were divided to five groups (10 per each) and the first four groups were administered with four drugs namely; albendazole, oxfendazole, ivermectin, and closantel respectively. The fifth group was kept untreated as a control group. Faecal egg count reduction test was used to determine the drugs efficiencies. The results revealed that trichostrongylid infection had seasonal pattern which peaked during the rainy season (Sep. ? Dec. 2011) and declined during the dry season (May ? Aug 2011). The rainfall was the most limiting faction on these parasites which lowered the animal body weight and cause sever anaemia. Trichostrongylid nematodes exhibited multiple resistance against all anthelmintic drugs, however closantel showed 92% efficiency. In conclusion, this study contributed in the knowledge of the bionomic of trichostrongylid nematodes and demonstrated their multiple resistance against all anthelmintic drugs used in goat farm in Penang Island. Therefore, a great attention should be given to fined alternative solutions to control this infection in this part of Malaysia.

Keywords: Trichostrongylid nematodes, anthelmintic resistance, bionomic, Goats.