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Comparative Study of Occurrence of Gastrointestinal Parasites in Tho-Tho and Cross-bred Cattle's of Nagaland

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ABSTRACT

A total of 90 animals each of both Tho-Tho and cross bred cattle were screened for the presence of gastrointestinal helminth parasites in and around the locality of Nagaland during the year of 2012-13. Among strongyle parasites, recorded parasites were Trichostrongylus, Haemonchus, Oesophagostomum and Cooperia species in both Tho-Tho cattle as well as cross bred. However, occurrence of *Toxocara vitulorum* and Bunostomum and Eimerian species were also recorded from calves. Among tapeworm infestation, *M. benedeni* was recorded in Tho-Tho and *M. expansa* was recorded in cross bred. As a whole, there was low level of subclinical infestation due to peculiar topography and climate of this region.

Keywords: Gastrointestinal parasites, Tho-Tho and Crossbred etc.

INTRODUCTION

Parasitic gastroenteritis is one of the causes of reduced production in terms of meat and milk. The prevailing geoclimatic condition of the north eastern region is very much congenial for growth and propagation of helminth parasites. Moreover, reporting of occurrence of helminth parasites is very scanty from this region (Baruah et al., 2009 ; Borthakur and Das, 1998). Therefore, the aim of this present study was to know the occurrence of gastrointestinal parasites in bovines which will help in preparing effective anthelmintic schedule for animals for the control of gastrointestinal parasites.

MATERIALS AND METHODS

Fresh faecal samples were collected per rectally from 90 animals each of both Tho-Tho and cross bred cattle from different areas of Dimapur, Kohima and Phek district of Nagaland in the year of 2012-13. They were examined under microscope for the presence of helminth eggs by using standard parasitological methods (HMSO 1979). Faecal samples found to be positive for strongyle group of parasites were subjected to coproculture for recovery of infective third stage larvae (L_3) by following the method of Roberts and O'Sullivan (1949). Larvae were identified following the standard key of HMSO (1979).

RESULTS AND DISCUSSION

In the present investigation the recorded strongyle parasites were Trichostrongylus, Haemonchus, Oesophagostomum and Cooperia species in both Tho-Tho and cross bred. As recorded against Trichostrongylus, the total percentage of occurrence was 12.2% and 10% in crossbred and Tho-Tho cattle, respectively. However, occurrence of Haemonchus was higher in cattle (16.67%) than that of Tho-Tho (7.77%). As against this finding, Oesophagostomum occurrence was highest in case of Tho-Tho (16.67%) than that of crossbred (4.4%). In the same way Cooperia occurrence was higher in Tho-Tho

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(17.77%) cattle. The occurrence of *Toxocara vitulorum* (2.2%) and *Bunostomum sp*. (1.1%) was recorded only in case of Tho-Tho cattle. Among tapeworm infestation, *M. benedeni* was recorded in Tho-Tho (4.4%) and *M. expansa* was recorded in cross bred (1.11%). Among tissue protozoa, only Eimerian species were recorded and occurrence was higher in crossbred (5.5%) than that of Tho-Tho cattle (0.01%).

In the present investigation, there was low level of subclinical strongyle infection in both cross bred as well as Tho-Tho cattle, which may be due to topography and peculiar climate of this region. However occurrence of parasites in cross bred animals might be due to convergence of animal population, manure pit and infected grazing area in the farm premises. Though trematode infection could not be observed in present investigation, its occurrence cannot be ruled out in the given circumstances where deworming is not practiced. Therefore, further detailed investigation is required in these areas. It is worthwhile to mention that the parasitic load in both cross bred and Tho-Tho in the present study was much less in comparison to dairy animals in Assam as reported by Borthakur and Das (1998) which might be due to prevailing geo climatic condition as well as topography of Nagaland. The present finding is in accordance with earlier reports of Baruah et al. (2009) in Kamrup district of Assam. However, occurrence of coccidiosis was also reported by Chamuah et al. (2009) from this region of Nagaland. The temperate climate prevalent in this region might be the cause of low grade parasitic infection.

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