

# Seasonal Incidence of Caprine Gastrointestinal Nematodosis

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## Abstract

A total of 157 goats, irrespective of sex, breed and age from an organized farm were screened for gastrointestinal nematode infection for a period of one year i.e. from February 2006 to January 2007. Occurrences of G.I. nematodes in different age group were also studied. The goats below 1 year were found to carry significantly higher nematode burden than the goats of 1-3 years and above 3 years of age. In strongyle groups, the parasites were recorded as *Haemonchus*, *Oesophegastomum*, *Trichostrongylus*, *Strongyloides*, *Bunostomum* and *Cooperia*. Prevalence of Strongyle infection was higher in monsoon season in goats below one year of age. Non-occurrence of *Trichuris* spp in winter season was also recorded. Ivermectin @ 10 mg/30 kg. Body weight orally as single dose was found to be most effective for treatment of gastrointestinal nematodosis.

**Keywords:** Nematode, Gastro-intestinal, *Haemonchus*, *Oesophegastomum*, *Trichuris*, Ivermectin, Helminth.

## Introduction

Goats are considered as poor mans` cow. In Northeast India, all the poor farmers prefer to keep goats for meat and milk purposes. In this region the total population of goat is around 3 million (Anonymous, 2002). The helminth diseases generally do not occur in acute form. Under favorable conditions parasitic infection rapidly spread from one animal to another causing health hazard in general and indirectly affects the goat husbandry and production in particular. The climatic condition of Assam is conducive for development of parasitic infection in goats, which is responsible for enormous loss in farm, therefore, importance should be given on successful treatment and control of disease in different age group of animals (Rajkhowa and Hazarika, 2001). Gastrointestinal nematodosis is one of the major factors limiting goat productivity in India. Parasitism in goats is known to cause lowered resistance, loss of production and even mortality. Considering the importance of disease, the present study was undertaken to evaluate seasonal incidence of G.I nematode infection in goats with an aim to provide better management

## Materials and methods

A total of 157 goats, irrespective of sex, breed and age from an organized farm were screened for

gastrointestinal nematode infection for a period of one year i.e. from February 2006 to January 2007. The animals were divided into three groups based on their age viz, goats below 1 year (Group I), 1-3 years (Group II) and above 3 years (Group III). The faecal samples were examined by the method of direct smear and flotation. Egg per gram (EPG) of positive samples was determined as per standard technique of Stoll's (HMSO, 1979). Faecal samples found to be positive for gastrointestinal nematode parasites are processed and cultured in BOD incubator for 7 days for the recovery of infective third stage larvae for generic identification. Therapeutic management with Ivermectin (Endectin) tablet at the dose rate of 10 mg per 30 kg. Body weight was done orally for single occasion to the affected goats. Data were analysed as per standard key Snedecor and Cochran (1994).

## Results and Discussion

During the present investigation, *Haemonchus contortus* was recorded as highest in goats below one year of age and their overall prevalence rate as 45.13%. The seasonal incidence was found to be highest in monsoon followed by post monsoon, pre monsoon and winter season respectively and it was correlated with the findings reported by Endrajat (1964). Yadav and Tendon (1989), Maingi et al. (1993),

Pandey et al.(1994), Katoch et al.(1999) and Rajkhowa and Hazarika (2001). The highest occurrence of *H.contortus* in monsoon season might be due to prevailing climatic conditions at particular period, which was congenial for development of eggs. On the other hand, *Trichuris* spp was recorded in age group of goats one year and 1-3 years. Absence of *Trichuris* spp in winter season can be attributed to no development of eggs below 20°C atmospheric temperature (Soulby, 1982). Other parasites of *Strongyle* group were recorded as *Oesophegastomum* spp (20.45%), *Trichostrongylus* spp (15.22%), *Strongyloides* spp (8.18%), *Bunostomum* spp (6.22%), *Cooperia* spp (3.22%) and *Trichuris* spp (1.68%). However, all the nematodes recorded in the present study could be demonstrated in all age groups of animals.

The result of the present findings was in consonance with those of Rajkhowa and Hazarika (2001). Based on clinical recovery, reduction and disappearance of faecal egg count it was observed that Ivermectin at the dose rate of 10 mg per 30 kg. Body weight orally as a single dose was effective treatment of gastrointestinal nematodiasis. Similar observations were also made by Yadav et al. (1993), Maiti et al. (1994).

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