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## Seasonal prevalence of gastrointestinal helminths in goats of Assam

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### Abstract

Based on the faecal examination of gastro intestinal helminths, it was recorded that, out of 2380 samples examined 1397 (58.70%) showed the presence of parasitic infections. Of these, 1130 (80.90%) had single and 267 (19.10%) had mixed infection. The highest percentage 549 (74.90%) of helminthic infection was recorded in monsoon season (June-August) and the lowest was recorded in winter season 268 (43.09%).

**Keywords:** Prevalence, goat, helminths, Assam

### Introduction

Parasitic infections are severe constraints to livestock productivity and cause considerable economic losses. Like other species, goats are also highly susceptible to variety of gastrointestinal parasites. Various factors viz. age, sex season and agro-climatic conditions are responsible for the prevalence of helminthic infection. Seasonal variation in prevalence or intensity of gastrointestinal parasitic infection in goat has been reported from Nagpur, India <sup>[1]</sup>. Hence present study was carried out to assess the occurrence of gastrointestinal helminths in goat during different season under the agro-climatic condition of Assam.

### Materials and Methods

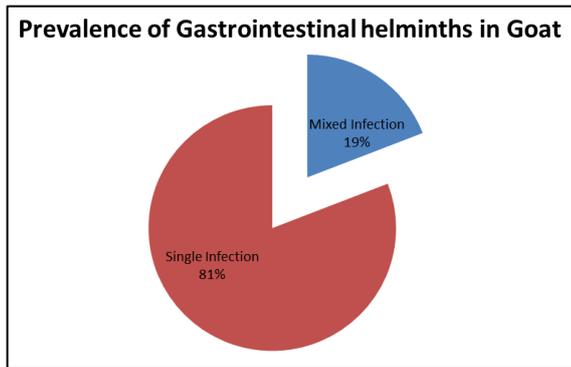
A total of 2380 faecal samples of goats were collected from Kamrup urban and rural area and examined in the present study for parasitic eggs. Faecal samples were collected in polythene bags and brought to the laboratory for examination. The faecal samples were examine in the laboratory, Department of veterinary Parasitology, College of Veterinary Science, Khanapara, during the period of September, 2012 to August 2013 covering four different season of the year viz. Pre-monsoon (March to May), Monsoon (June to August), Post monsoon (September to November) and winter (December to February). The faecal samples were subjected to both sedimentation and floatation techniques and the ova of the parasites were identified as described by Soulsby <sup>[2]</sup>. The prevalence of infection in different season was derived in terms of percentage of the total samples examined.

### Results and Discussion

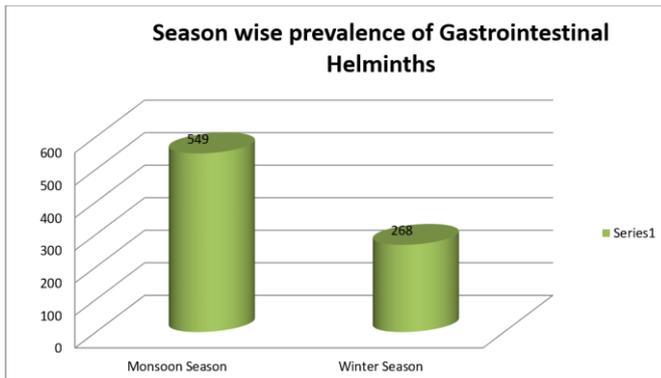
Out of 2380 samples examined 1397 (58.70%) showed the presence of parasitic infections. Of these, 1130 (80.90%) had single and 267 (19.10%) had mixed infection (Fig. 1). The present findings can be comparable with the finding of Maske<sup>1</sup> reported a higher percentage (88.23%) of parasitic prevalence in the goats at Nagpur (Maharashtra).

The helminths encountered in the present study were *Haemonchus* sp, *Oesophagostomum* sp, *Trichostrongylus* sp, *Trichuris* sp, *Bunostomum* sp, *Mecistocirrus* sp, *Gongylonema* sp, *Strongyloides* sp, *Fasciola* sp, *Paramphistomum* sp, and *Moniezia* sp. All the helminths larvae were identified after coproculture by using the key of HMSO<sup>3</sup> methods.

The highest percentage 549 (74.90%) of helminthic infection was recorded in monsoon season (June-August) and the lowest was recorded in winter season 268 (43.09%) (Fig.2). Similar finding was also recorded by Maske <sup>[1]</sup> and Garg <sup>[4]</sup>. The higher percentage recorded in the monsoon season might be due to higher rainfall and relative humidity that favours environment for the development and dissemination of exogenous stage of worms. High rainfall provides suitable molarity of salt present in soil, which is an important factor for ecdysis <sup>[5]</sup>. It helps in larval dispersion on the herbage, which increases the chance of contact between host and larvae.



**Fig 1:** Graphical representation of types of infection in prevalence of Gastrointestinal helminths



**Fig 2:** Graphical representation of Season wise prevalence of Gastrointestinal Helminths in goats.

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