PREVALENCE OF SUBCLINICAL GASTROINTESTINAL PARASITIC INFECTION IN DAIRY ANIMALS

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ABSTRACT

The spectrum of helminthic parasites was assessed by coprological survey made in cattle and buffaloes managed by local farmers. Predominant helminths were found to be nematodes with direct life cycle whereas cestodes and flukes were poorly represented. Prevalence was more in cross bred cattle than buffaloes and more positivity with increase in age was observed.

KEY WORDS : Gastro-intestinal parasitism, Prevalence, Cattle, Buffalo, Strongyle infection

INTRODUCTION

Helminth parasitism especially gastrointestinal parasitism is one of the major health problems severely limiting the animal productivity in dairy animals. The problem is neglected due to the chronic nature of parasitism (Sanyal, 1998) but it results in significant loss of production (Shah and Chaudhry, 1995). Usually the effects of parasitism are slow progressive and subclinical such as indigestion or poor feed conversion, less than expected weight gain and decreased milk production. Clinical parasitism occurs less frequently though the parasites of the stomach and intestine cause anemia, scouring, depression and even death. This paper reports the prevalence of subclinical parasitism in the stomach and intestine, of the crossbred cows and buffaloes and also the intensity of strongyle infection.

MATERIALS AND METHODS

A survey was undertaken in local villages of Namakkal to know the presence of gastrointestinal parasites in the apparently healthy milch animals managed by individual livestock owners and agriculturists. A total of 210 fresh faecal samples were collected from a population of Jersey crossbred, Holstein-Friesian crossbred; and Murrah and non-descript buffaloes in different age groups during the rainy season. Faecal examination was carried out by centrifugal sedimentation technique and the morphology of the endoparasitic eggs were identified (Soulsby, 1982).

RESULTS AND DISCUSSION

Out of 210 faecal samples examined, 56 inclusive of white cattle and buffaloes were positive (26.7%). The prevalence was 30.0% and 24.6% in cattle and buffaloes, respectively. This indicates higher prevalence of gastro-intestinal parasites among the cattle than buffaloes which is similar to the findings of Haque (1986). Ross *et al*. (1959) also reported that the *Bos indicus* are more resistant to parasites than *Bos taurus*. The prevalence rate of parasites were 18.6%, 4.3%, 2.9%, 1.0% for round worms, intestinal coccidia, flukes and tapeworms, respectively.

The percentage of animals infected with different endoparasitic species was: *Strongyle sp.,* 14.8% (*Haemonchus sp*., 77.4% and others, 22.5%); *Eimeria sp*., 4.3%; *Amphistoma sp*., 1.9%; *Trichuris sp*., 1.9%; *Toxocara sp.*, 1.4%; *Schistosoma sp*., 1.0%; *Moniezia sp*., 1.0% and *Strongyloides sp*., 0.5%. Strongyles were the most common nematodes as also reported by Muraleedharan (2005). However, Anish *et al*. (2005) reported predominant infection by amphistomes followed by strongyles. The poor reporting of trematodes could possibly be due to the non availability of intermediate hosts which form an important link in the life cycle of them and lack of natural water sources in this dry zone. Mixed infection of coocidial oocysts and *Strongyles sp*. was found in 2.4% of the total animals examined. Role of improved nutrition may be considered important in moderating the effects of concurrent parasitic infections.

The age-wise prevalence rate of gastrointestinal parasites among the total number of animals examined were: calves and heifers (=$2^{1/2}$ years), 22.6%; 1st calving ($2^{1/2}$-$3^{1/2}$ years), 27.8%; 2nd calving ($3^{1/2}$-$4^{1/2}$ years), 27.0%; 3rd calving ($4^{1/2}$-$5^{1/2}$ years), 25.8% and 4th calving ($5^{1/2}$-$6^{1/2}$ years), 41.7%. An increase in the prevalence

of these parasites with the age was observed which is in agreement with Rahman and Mondol (1983).

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