

Seasonal prevalence of gastrointestinal parasites in sheep of rural areas of Ahmednagar district of Maharashtra

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ABSTRACT

Gastrointestinal helminth parasites of sheep of rural areas of Ahmednagar district were studied during the period March 2009 to February 2010. For this purpose, 350 faecal samples of sheep were collected from different villages. Out of 350 samples, 232 were positive (66.28%). In rainy season, out of 105 faecal samples examined, 85 were positive (80.95%), while in winter season, out of 110 faecal samples examined, 78 were positive (70.90%) and in summer out of 135 faecal samples examined 69 were positive (51.11%).

Key words : Prevalence, Gastrointestine, Parasite, Sheep

Sheep is one of the most important species of domestic livestock as a source of meat, wool and manure in India. It plays an important role in the economy of farmers. Gastrointestinal parasitic infections of sheep and goats adversely affect the health status and are responsible for economic losses. The gastrointestinal parasites cause losses through lowered fertility, reduced work capacity, reduction in food intake and weight loss, lower milk production and mortality in heavily parasitized animals. Several reports have been documented regarding gastrointestinal parasitism in small ruminants (Pathak, 2008, Yadav and Khajuria, 2006).

This paper describes the prevalence of gastrointestinal parasites in sheep of rural areas of Ahmednagar district of Maharashtra.

MATERIALS AND METHODS

The present study was conducted in the various villages of Ahmednagar district (M.S.). The faecal samples of 350 sheep were collected during March 2009 to February 2010 in three different seasons *viz.*, summer, monsoon and winter to study the seasonal prevalence. The samples were examined by direct method and also by sedimentation technique as described by Soulsby (1982).

RESULTS AND DISCUSSION

It was found in the study that out of 350 samples, 232 were positive (66.28%). In rainy season out of 105 faecal samples examined, 85 were positive (80.95%), while in winter season, out of 110 faecal samples examined 78 were positive (70.90%) and in summer out of 135 faecal samples examined 69 were positive (51.11%).

The seasonal prevalence of gastrointestinal parasites (Table 1) showed higher prevalence in rainy season (80.95%) followed by winter (70.90%) and summer (51.11%). The lowest prevalence was observed from March up to the end of summer which indicated clearly that the environment of the dry season was unfavorable for the development and survival of the extra host stages of the gastrointestinal parasites (Almalik *et al.*, 2008, Ismail *et al.*, 2004, Sissay, 2007). The infection of gastrointestinal parasites observed in the dry season was due to accumulation of the parasite infections from previous season.

Table 1 : Seasonal prevalence of gastrointestinal parasites in sheep

Season	Total no. of animals examined	No. of animals found positive	% infection
Summer (March- June)	135	69	51.11
Rainy (July – Oct.)	105	85	80.95
Winter (Nov. - Feb.)	110	78	70.90

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Table 2 : Specieswise prevalence of gastrointestinal parasites in sheep

Name of the species	Positive samples	% infection
<i>Haemonchus</i> sp.	89	25.42
<i>Stroglyoides</i> sp.	78	22.28
<i>Cotylophoron</i> sp.	73	20.85
<i>Trichuris</i> sp.	67	19.14
<i>Paramphistomum</i> sp.	51	14.57
<i>Fasciola</i> sp.	46	13.14
<i>Avitellina</i> sp.	33	9.42
<i>Moniezia</i> sp.	25	7.14

Specieswise prevalence of gastrointestinal helminths is recorded in Table 2. The percentage of animals with were different gastrointestinal helminth parasitic species viz., *Haemonchus* sp. (25.42%), *Stroglyoides* sp. (22.28%), *Cotylophoron* sp. (20.85%), *Trichuris* sp. (19.14%), *Paramphistomum* sp. (14.57%), *Fasciola* sp. (13.14%), *Avitellina* sp. (9.42%), *Moniezia* sp. (7.14%). Prevalence of *Haemonchus* sp. was significantly higher in all seasons. Similar observations were made by Sissay (2007) in eastern Ethiopia. *Haemonchus* causes immune suppression (Tizard, 1992) which probably predisposes the animal towards secondary infection. The sexwise prevalence of helminth parasites of gastrointestinal tract showed higher in females (70.56%) than males (52.94%).

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