



Assessment of Parasitic Worm Load in Small Ruminants

KEYWORDS

Tamil Nadu, Small ruminants, Endoparasites

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ABSTRACT A study was carried out to assess the parasitic infection in Sheep and Goat owned by the farmers in Karur District of Tamil Nadu. A total number of 957 (491 sheep and 466 Goat) dung samples collected randomly and examined in five years from 2009 to 2013. The results showed that 66.59% and 77.46% of Sheep and Goat samples were positive for parasitic infection. From the positive sheep dung samples majority (70.94 %) of samples had Strongyle eggs, 34.25% and 32.11% of dung samples were positive for Trichuris eggs and Oocysts of Eimeria respectively. Out of positive Goat dung samples 77.28% of samples had Oocysts of Eimeria and 59.83% of samples had Strongyle eggs. It was found that a minimum of 28.25% of goat dung samples had Trichuris eggs. The study reveals that major parasitic worm load found in small Ruminants were Strongyle, Eimeria and Trichuris Sp. in field conditions. Awareness is to be created with the farmers towards the importance of deworming in Small Ruminants, examine the dung samples periodically and deworm their animals with suitable drugs.

INTRODUCTION:

India possesses about 15 per cent of the world's goat population and 6 per cent of sheep population with population numbers of 135.17 million goats and 65.06 million sheep as per 19th livestock census, 2012. The population of sheep & goats in Tamil Nadu is 79.91 and 92.75 lakhs (19th livestock census, 2012) of which 2.6 and 1.75 lakhs sheep and goat are available in Karur district (DLS, 2012). The population growth in sheep is almost static at the level during the period between 1970 and 2010, while the population growth in goats is phenomenal at 144 per cent. However it is not reflected in India, as the goat: sheep ratio had always been around 2.00 in the above period, signifying that both these species are important despite a slight decline in population in both the species over the 2007 census. Therefore it is important to keep the production system in both these species in dynamic state by balancing the key components like the population size, birth and death rate. For rearing small ruminants only, a minimum investment is required, without specific arrangement of housing, grazing on barren and road – side grass land and least homemade supplied feed (rice gruel & boiled rice) it can be reared. They also have important role in generating employment, income, capital storage and improving household nutrition. But rearers didn't care about the health status of an animals and parasitic load is a major problem that is unnoticed by them.

High prevalence of different helminthe parasites were reported in sheep (Khalid et al., 2004). Among the problems encountered, a parasite is thought to be the major hindering the goat production (Nooruddin et al., 1987). The prevalence of parasitic infestation depends on ecology, geographical and climatic condition prevailing in Tamil Nadu (Hossain et al., 2004). Gastrointestinal nematodes (Strongyles) cause impaired digestion and also affect the absorption of minerals particularly the calcium and Phosphorus. Hence, a study was carried out to assess the parasitic infection in Sheep and Goat owned by the farmers in all the blocks of the Karur district of Tamil Nadu in five years from

2009 to 2013.

MATERIALS AND METHODS:

Karur district comprises of eight blocks namely Karur, Thanthoni, Krishnarayapuram, Aravakurichi, K.Paramathi, Thogamalai, Kulithalai and Kadavur. A total number of 957 (491 sheep and 466 Goat) dung samples collected randomly from eight blocks and examined in five years from 2009 to 2013. Approximately, 5gms of fresh feces was collected from recently voided feces in airtight fecal collection vials. The samples were immediately transferred to laboratory and kept 4°C temperatures until further examination. Both direct smear and flotation methods described by Urquhart et al. (1996) were performed to screen out the positive samples. Raw data were entered into a Microsoft excel spreadsheet and descriptive statistics were used to summaries the data. The prevalence was calculated for all data as the number of infected individuals divided by the number of individuals examined and multiplied by 100 to express in percentage.

RESULT AND DISCUSSION:

The results showed that 66.59% and 77.46% of Sheep and Goat samples were positive for parasitic infection. From the positive sheep dung samples majority (70.94 %) of samples had Strongyle eggs, 34.25% and 32.11% of dung samples were positive for Trichuris eggs and Oocysts of Eimeria respectively. Out of positive Goat dung samples 77.28% of samples had Oocysts of Eimeria and 59.83% of samples had Strongyle eggs. It was found that a minimum of 28.25% of goat dung samples had Trichuris eggs.

The agro –ecological and geo climatic conditions of Tamil Nadu are highly favorable for growth and multiplication of helminthes. The overall prevalence of endoparasites in the present study found in sheep and goat were 66.59% and 77.46%. This high prevalence might be due to unhygienic condition of sheds, illiteracy of goat keepers and avoidance tendency of preventive measures in the present study. Most of the sheep and goats were found to be

infected more than one species of parasites. Mixed parasitic infections of Strongyles sp., Trichuris sp and Oocysts of Eimeria were reported in the extensive system of rearing. Uddin et al 1994, reported that similar prevalence rate 66.59% and 77.46% in Bangladesh but prevalence rate was in other states. Majority of (70.94 %) samples had Strongyle eggs 34.25% followed with Trichuris eggs 32.11% of dung samples were positive for and Oocysts of Eimeria where as 77.28% of samples of goat had Oocysts of Eimeria and 59.83% of samples had Strongyle eggs. It was found that a minimum of 28.25% of goat dung samples had Trichuris eggs. Vasantha Kumar et al 2014 reported bit different prevalence of parasite 52.7% Haemonchus spp., 41.7% Bunostomum spp., 38.4% Oesophagostomum spp., and 3.5 % Trichuris spp., infection in goats in a sub-tropical and humid zone in India. This might be due climatic difference, flock size, overcrowding and unhygienic condition. Awareness is to be created with the farmers towards the importance of deworming in Small Ruminants.

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