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PROFIT MAXIMIZATION OF GOAT FARMERS IN COIMBATORE DISTRICT THROUGH CONTROL OF PARASITES

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Abstract: Goat rearing has gained the reputation of one of the most important livestock rearing for poverty alleviation, livelihood enhancement, food and nutritional security in India. It is associated with simplicity in maintenance comparing the other livestock, especially to landless and resource poor farmers. One village was selected from each block of Coimbatore district and a total of 12 villages from all 12 blocks of Coimbatore district were covered under the study. The dung sample was collected from dull and anaemic goats and kids with poor weight gain. From the routine examination of dung samples collected from organized goat farms in Coimbatore district it was observed that the productivity loss is mainly due to the presence of ecto and endo-parasites in goats and kids. In each village dung samples were collected from 6 goats and 6 kids directly from the rectum and examined under microscope. Out of the 72 dung samples of goats (dung samples collected from 6 goats in each block and a total of 12 blocks of Coimbatore district) examined, 39 goats (54.16%) showed the presence of endo-parasites. This revealed the presence of parasite eggs of Strongyle sp. in 34 goats (87.18%) and Trichuris sp. in 5 goats (12.82%). Out of the 72 dung samples of kids examined, 28 kids (38.88%) showed the presence of endo parasites. This revealed the presence of parasite eggs of strongyle sp. in 24 kids (85.71%) and Trichuris sp. in 4 kids (14.29%). Out of the 289 goats examined for ecto-parasites from all the 12 blocks, 46 goats (15.91%) had tick infestations. Among the 46 goats 14 goats had Rhipicephalus sp. (30.71%) and 32 goats had Hyalomma sp. (69.57%) tick infestations. The weight of the goats and kids during the conduct of camps were compared to the weight of goats and kids during the follow up. The goats and kids exhibited weight gain which ranged from 0.65 kg to 1.08 kgs and 1.50 kgs to 2.36 kgs respectively and there was an additional profit of Rs.130 - 216/- per goat and 300 - 472/- per kid after the intervention which indicated maximization of the profit of goat farmers.

Keywords: Endo-parasites, Ecto-parasites, profit maximization, goat farming.

INTRODUCTION

Small ruminants are the backbone of our rural economy, of which goats play an important role and they have been closely associated with rural livelihood from time immemorial. Goats are mainly reared for meat purpose and to certain extent for milk. Goat meat is the most preferred meat among all sections of population and having ever increasing demand. Goat rearing has gained the reputation of one of the most important livestock rearing for poverty alleviation, livelihood enhancement, food and nutritional security in India. It is

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associated with simplicity in maintenance comparing the other livestock, especially to landless and resource poor farmers. At present, mortality in kids and poor weight gain after weaning are the two major (field based) problems faced by the goat farmers. Gastrointestinal (GI) parasitism is one of the major health problems affecting productivity of goats worldwide. Gastrointestinal (GI) parasites cause high mortality, reduce production and lead to a significant overall economic loss (Al-Quaisy et al., 1987; McLeod, 1995; Simpson, 2000). GI parasitic infection in sheep and goats are of much economic importance because, goat rearing has become a major source of income especially for the poor marginal farmers in rural areas of India. Vast studies on the prevalence of GI parasites have been documented from different parts of India and a few numbers in Tamil Nadu (Pathak and Pal 2008; Varadharajan and Vijayalakshmi, 2015). A proper understanding of the epidemiology of parasitic diseases in goats is a prerequisite for the rational design for the effective preventive and control measures against the dreadful parasitic diseases in these animals. Although most of the studies have been carried out with respect to gastrointestinal parasitism in large animals, there is no much study on small ruminants in Western part of Tamil Nadu, hence, the present study is conducted to assess the prevalence and control of parasitic infection in goats in Coimbatore district.

MATERIALS AND METHODS

Selection of Animals and Study Area

One village was selected from each block of Coimbatore district and a total of 12 villages from all 12 blocks of Coimbatore district were covered under the project. A goat farm of a progressive farmer who is having a minimum of 20 goats in his goat farm was selected. 10 goat farmers in each block participated in the training programme and a total of 120 goat farmers (Ten goat farmers each from Periyanaicken Palayam block, Annur block, S.S.Kulamblock, Kinathukadavu block, Karamadai block, Sultanpet block, Pollachi North block, Thondamuthur block, Anaimalai block, Sulur block, Pollachi South block and Madukkarai block) in all 12 blocks of Coimbatore district were covered under the study. The dung samples were collected from goats which were dull and kids with poor weight gain. In each camp the weight of kids within 6 months age group and goats aged more than one year were recorded. During the Camp, the goats were observed for the presence of ecto-parasites and they were collected and identified.

After the conduct of training camps, followup activities were carried out in all the 12 blocks of Coimbatore district. During the follow up of each camp, the dung samples were

collected and examined under microscope. The weight of the goats and kids measured during the conduct of camps were compared to the weight of goats and kids during the follow up.

RESULTS

Awareness camps were conducted in all the 12 blocks of Coimbatore district and a total number of 120 goat farmers participated and benefitted in the study. During the camp, a total of 72 dung samples were collected each from goats and kids for identification of endo-parasites. Out of the 72 dung samples of goats (dung samples collected from 6 goats in each block and a total of 12 blocks of Coimbatore district) examined, 39 goats (54.16%) showed the presence of endo-parasites. This revealed the presence of parasite eggs of Strongyle sp. in 34 goats (87.18%) and Trichuris sp. in 5 goats (12.82%). Out of the 72 dung samples of kids (dung samples collected from 6 kids in each block and a total of 12 blocks of Coimbatore district) examined, 28 kids (38.88%) showed the presence of endo parasites. This revealed the presence of parasite eggs of strongyle sps. in 24 kids (85.71%) and Trichuris sp. in 4 kids (14.29%). Out of the 289 goats examined for ecto-parasites from all the 12 blocks 46 goats (15.91%) had tick infestations. Among the 46 goats 14 goats had Rhipicephalus sp. (30.71%) and 32 goats had Hyalomma sp. (69.57%) tick infestations. In each camp the weight of kids within 6 months age group and goats with more than one year age group were taken using weighing balance and recorded. The weight of the goats and kids during the conduct of camps were compared to the weight of goats and kids during the follow up. The goats and kids exhibited an increase in weight gain which ranged from 0.65 kg to 1.08s kg and 1.50s kg to 2.36 kgs respectively. During the follow up, ecto-parasites were not detected in goats and kids. Signs of parasitic infections such as dullness, poor weight gain and anaemia were not seen in goats and kids during follow up after the camps.

CONCLUSION

Awareness was created among the goat farmers on the prevalence of ecto and endo-parasites in goats and its effects on performance of kids and goats. Signs of parasitic infections such as dullness, poor weight gain and anaemia were not seen in goats and kids during follow up after the camps. The goats and kids exhibited weight gain which ranged from 0.65kg to 1.08kgs and 1.50kgs to 2.36kgs respectively and there was an additional profit of Rs.130 - 216/- per goat and 300 - 472/- per kid after the intervention which indicated maximization of the profit of goat farmers.

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