

PREVALANCE OF CESODE INFECTION OF *CAPRA HIRCUS* L. FROM LATUR (M.S.)

A. A. PAGE, D. B. BHURE* and S. S. NANWARE

Department of Zoology (U.G. & P.G.), Yeshwant Mahavidyalaya, Nanded (M.S.)

ABSTRACT : A study on the prevalence and seasonal incidence of cestode parasite infection of goats was carried out in Latur district for one year (February,2019-January,2020). During this period, the gastro-intestinal tract was collected from 180 goats. The viscera were examined for larval and adult cestodes following standard procedures. The overall high incidence of infection of *Moniezia* sp. and *Stilesia* sp. were recorded in monsoon season (78.33% and 68.33%) followed by winter season (58.33% and 50.00%) whereas infection was low in summer season (38.33% and 35.00%) respectively. Results of this study clearly indicate the environmental factors and feeding habitat are influence the seasonality of parasitic infection either directly or indirectly.

Key words : Cestode parasites, *Capra hircus*, *Moniezia* sp., *Stilesia* sp., Prevalence.

INTRODUCTION

Among livestock animals, sheep and goats are of high economic importance. Also they are multi-purposes animals not only for mutton and milk production but also for their wool and skin. These animals have the ability to survive on a variety of vegetation and seeds. Furthermore, sheep and goats are easily bred and become adapted to rural and urban environmental conditions. At the same time, helminths are the most destructive internal parasites responsible for the increased mortality and decreased animal production as they could cause many pathological changes which may lead to severe illness or death of the host. Helminths are major threat for sheep and goat production. Goat received the great interest as one of the most important and preferable livestock for human consumption. This study was planned to record the prevalence of cestode parasites collected from the intestine of a *Capra hircus* L. Seasonal prevalence were studied throughout the year dividing into three seasons, summer (Feb.-May), monsoon (June-Sept.) & winter (Oct.-Jan.).

MATERIAL AND METHODS

Study was conducted in different collection sites of Latur district. During the study, the 180 intestine of goats in and around Latur district of Maharashtra State were collected during the period of February,2019-January,2020. Cestodes were collected, preserved in hot 4% formalin, dehydrated in various alcoholic grades, stained with Borax carmine, cleared in xylene and mounted in D.P.X. These cestodes were identified by standard methods. Obtained data were recorded; processed for study of seasonal variation.

RESULTS AND DISCUSSION

The overall prevalence of gastrointestinal parasitic infections were determined in terms of data was analyzed as per the different parameters of study and are depicted in Tables.

1&2. The high incidence of infection of *Moniezia* sp. and *Stilesia* sp. were recorded in monsoon season (78.33% and 68.33%) followed by winter season (58.33% and 50.00%) whereas infection was low in summer season (38.33% and 35.00%) respectively.

The prevalence of parasitic infection in goat depicted higher infection of helminthes in rainy season followed by winter than in summer. This is in accordance with findings of other researchers (Yadav *et al.*,2006). Similarly Katoch *et al.* (2000) from Mathura region reported high incidence of *Haemonchus* sp. during rainy season. Result of Pathak and Pal (2008) showed that prevalence of gastrointestinal parasite of goat was highest in monsoon (94.60%), moderate in summer (87.50%) and lowest in winter (63.15%).Varadharajan and Vijayalakshmi (2015) reported overall infection percentage was higher in rainy season (68.36%) followed by winter (60.84%) than in summer (55.30%). Dappawar *et al.* (2018) reported goats percent infections observed were 75.86%, 66.93% and 21.67% during monsoon, winter and summer seasons, respectively.

Heavy rainfall and high relative humidity predisposed to heavy parasitic infection (Hawkins,1945). Climatic factors also influenced dispersion of larvae in the herbage which increased the chance of contact between host and larvae (Ogbourne,1972 and Croll,1975). Higher infection during rainy season may also be attributed to suitable molarity of salt present in soil, an important factor for ecdysis (Soulsby, 1966). Prevalence of gastrointestinal parasite infection in livestock varies according to the existing climatic condition and managerial practices (Kumar *et al.*,2016). The environmental factors like temperature, rainfall and humidity play an important role in the development and survival of pre-parasitic stages.

ACKNOWLEDGMENTS

The authors express sincere thanks to Principal, Yeshwant Mahavidyalaya, Nanded for facilities provided.

*Corresponding author (email : drajbhure82@gmail.com)

Received 07.10.2020

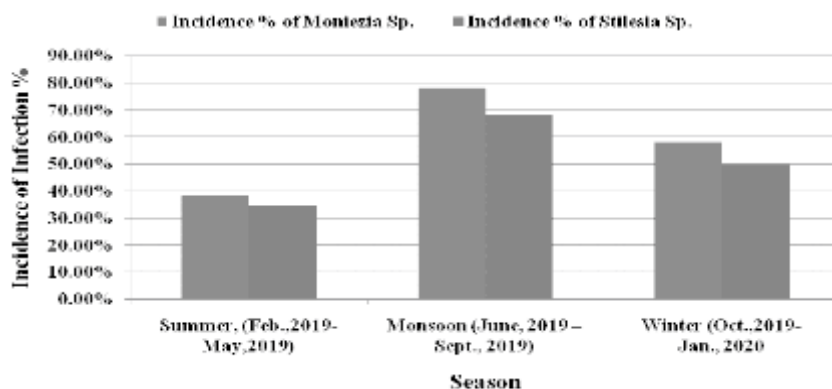
Accepted 15.11.2020

Table. 1 Prevalence of *Moniezia sp.* of *Capra hircus* during February,2019-January,2020.

Seasons	Number of the host examined	Number of the host infected	Total number of parasites collected	Incidence percent
Summer (February,2019-May,2019)	60	23	29	38.33%
Monsoon (June,2019-September,2019)	60	47	65	78.33%
Winter (October,2019-January,2020)	60	35	43	58.33%

Table. 2 Prevalence of *Stilesia sp.* of *Capra hircus* during February,2019-January,2020.

Seasons	Number of the host examined	Number of the host infected	Total number of parasites collected	Incidence percent
Summer (February,2019-May,2019)	60	21	27	35.00%
Monsoon (June,2019-September,2019)	60	41	58	68.33%
Winter (October,2019-January,2020)	60	30	38	50.00%

**Fig. 1** Graph showing Prevalence of *Moniezia sp.* and *Stilesia sp.* of *Capra hircus* during February,2019-January,2020.

REFERENCES

- Croll, N. A. (1975). Behavioural analysis of nematode movement. *Adv. Parasitol.*, **13** : 113.
- Hawkins, P. A. (1945). Studies of sheep parasites VI. Observations on weather in relation to untreated nematode infections. *J. Parasitol.*, **31** : 17.
- Dappawar, M. K.; Khillare, B. S.; Narladkar, B. W. and Bhangale, G. N. (2018). Prevalence of gastrointestinal parasites in small ruminants in Udgir area of Marathwada. *Journal of Entomology and Zoology Studies*, **6(4)** : 672-676.
- Katoch, R.; Chauhan, P. P. S. and Johri, D. K. (2000). Seasonal incidence of gastrointestinal nematodes in goats of Mathura region. *Indian Vet. J.*, **77** : 259-260.
- Kumar, B.; Maharana, B. R.; Prasad, A.; Joseph, P. J.; Patel, B. and Patel, J. S. (2016). Seasonal incidence of parasitic diseases in bovines of South Western Gujarat. *Journal of Parasitic Diseases*, **40(4)** : 1342-1346.
- Ogbourne, C. P. (1972). Observation on the free-living stages of Strongylid nematodes of horses. *Parasitology*, **64** : 461-477.
- Pathak A. K. and Pal, S. (2008). Seasonal prevalence of gastrointestinal parasites in goats from Durg district of Chhattisgarh. *Veterinary World*, **1(5)** : 136-137.
- Soulsby, E. J. L. (1966). *Biology of Parasites*. Academic Press, New York and London, pp. 185-196.
- Varadharajan, A. and Vijayalakshmi, R. (2015). Prevalence and seasonal occurrence of gastrointestinal parasites in small ruminants of coastal areas of Tamil Nadu. *Int. J. Adv. Res. Biol. Sci.*, **2(2)** : 21-25.
- Yadav, A. J. K.; Khajuria, J. K. and Raina, A. K. (2006). Seasonal prevalence of gastrointestinal parasites of sheep and goats of Jammu. *J. Vet. Parasitol.*, **20(1)** : 65-68.