



ORIGINAL ARTICLE

Studies on Occurrence and Seasonal Prevalence of Gastrointestinal Cestode Parasites of *Gallus Gallus Domesticus*

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ABSTRACT

An extensive survey of cestode parasites of domestic fowl was carried out to know the occurrence and seasonal prevalence of gastrointestinal cestode parasites in domestic fowl, *Gallus gallus domesticus* from Nanded district of Marathwada region, M.S., India during June 2006 to May 2007. The intestines of 276 domestic fowls were screened for the assessments of occurrence and seasonal prevalence of gastrointestinal cestode parasites, out of which 130 (47.09%) were found infected with two genera of cestodes viz. *Cotugnia*¹ and *Raillietina*². Data revealed high prevalence occur in summer season followed by winter where as low prevalence in rainy season. The *Gallus gallus domesticus* is highly infected with *Cotugnia* sp. as compared to *Raillietina* sp. The present investigation deals with monthly and seasonal records of cestode parasites from *Gallus gallus domesticus*.

Keywords: *Cotugnia* sp. Domestic Fowl, *Gallus gallus domesticus*, Occurrence and seasonal prevalence

INTRODUCTION

Gallus gallus domesticus is an important item of human food as well as the source of income. Cestodes (Tapeworms) are capable of infecting many birds, *Gallus gallus domesticus* is human diet hence the human gets automatically infected at the time of eating the infected fowl. The seasonal infections of cestode parasites vary because of the environmental factors such as season, temperature and humidity which reduce the development of parasites as well as host. The present investigation includes the survey of cestode parasites from *Gallus gallus domesticus* from Nanded District of Marathwada region, M.S., India.

MATERIAL AND METHODS

Cestodes were collected from the intestine of domestic fowl from different places of Nanded district i.e. Ardhapur, Mukhed, Deglur, Mudkhed, Bhokar, Kandhar, Naigaon, Biloli, Dharmabad, Loha, Nanded, and Himayatnagar. Freshly collected cestodes were fixed in 4 % formaline stained with haematoxyline or borax carmine, drawings are made with the aid of camera lucida.

$$\text{Prevalence} = \frac{\text{Total infected hosts}}{\text{Total examined hosts}} \times 100$$

RESULT AND DISCUSSION

The present study indicates that out of 276 *Gallus gallus domesticus* 130 are infected with 5 species of cestodes parasites including two genera. The genus *Cotugnia* includes 3 species, *Cotugnia lohanesis*, *C. alli*; *C. shinghi*. The genus *Raillietina* include two species i.e. *R. georgiensis*, *R. microscolecia*.

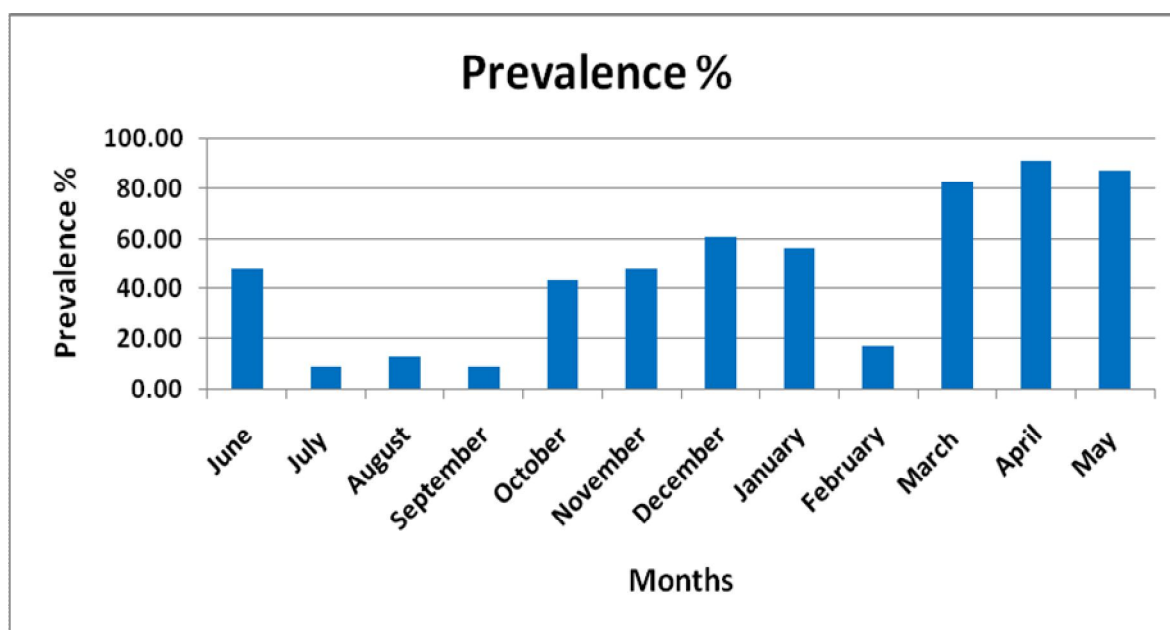
The seasonal fluctuation shows maximum infection of cestode parasites occurs in summer season (69.56%) followed by winter season (52.17%) and rainy season (19.56%).

Kennedy reported temperature; humidity, rainfall, feeding habits of host, availability of infective host and parasite maturation are responsible for influencing the parasitic infections. Feeding activity of the host is reason for seasonal fluctuation of infections⁷. Jadhav and Bhure, noticed high temperature, low rainfall and sufficient moisture were necessary for development of parasite.

The domestic fowl is highly infected with *Cotugnia Diamare* 1893 as compare to *Raillietina* hence this type of investigation indicates the morphological, physiological and ecological factors affecting the distribution of parasites. Several workers contributed are valuable information pertaining to the influence of seasons on the helminth parasites.

Table 1: Prevalence of Cestode parasites from *Gallus gallus domesticus* from Nanded Region, M.S., India, during June 2006 to May 2007

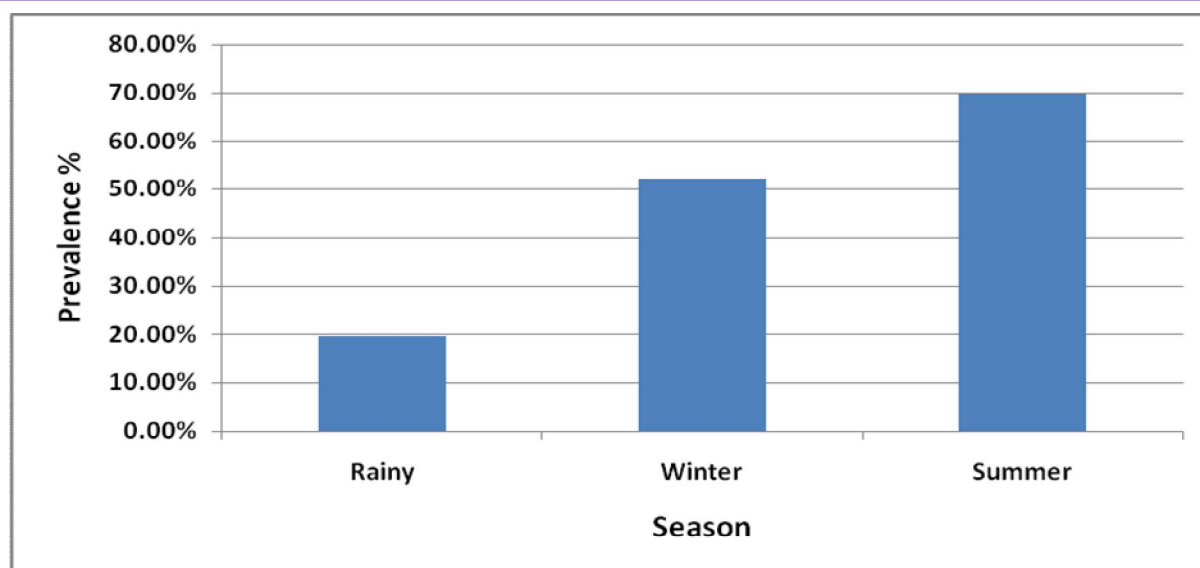
| Name of Months | No. of hosts examined | No. of hosts infected | Prevalence (in %) |
|----------------|-----------------------|-----------------------|-------------------|
| June | 23 | 11 | 47.83 |
| July | 23 | 02 | 8.70 |
| August | 23 | 03 | 13.04 |
| September | 23 | 02 | 8.70 |
| October | 23 | 10 | 43.48 |
| November | 23 | 11 | 47.83 |
| December | 23 | 14 | 60.87 |
| January | 23 | 13 | 56.52 |
| February | 23 | 04 | 17.39 |
| March | 23 | 19 | 82.61 |
| April | 23 | 21 | 91.30 |
| May | 23 | 20 | 86.96 |
| Total | 276 | 130 | 47.10 |



Graph 1: Prevalence of Cestode parasites from *Gallus gallus domesticus* from Nanded Region, M.S., India, during June 2006 to May 2007

Table 2: Seasonal Prevalence of Cestode parasites from *Gallus gallus domesticus* from Nanded Region, M.S., India, during June 2006 to May 2007

| Season | No. of hosts examined | No. of hosts infected | Prevalence (in %) |
|--------------|-----------------------|-----------------------|-------------------|
| Rainy | 92 | 18 | 19.56 |
| Winter | 92 | 48 | 52.17 |
| Summer | 92 | 64 | 69.56 |
| Total | 276 | 130 | 47.09 |



Graph 2: Seasonal Prevalence of Cestode parasites from *Gallus gallus domesticus* from Nanded Region, M.S., India, during June 2006 to May 2007

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