



## Comparative Study of Seasonal Incidence of Chicken Coccidia in Gangapur and Vaijapur Tehsil of Aurangabad District in Maharashtra

Bhimrao N. Jadhav

Shri Muktanand College Gangapur, Gangapur, Dist. Aurangabad M.S. India.

**ABSTRACT**

During the period of 12 months (Monsoon Winter and summer Season) i.e. from, June, 2013 – May 2014, total 896 faecal samples from Gangapur and 872 samples from Vaijapur were examined for coccidial infections, out of which 270 samples from Gangapur and 269 samples from Vaijapur were positive respectively. The percentage of prevalence being 31.07% and 30.84% respectively. Comparative study shows minor differences in prevalence.

**KEYWORDS :** Protozoa, Eimeria, Broiler Chicken, Coccidiosis etc

**Introduction:-**

Domestic poultry has gained a much greater importance in animal production and constitutes a major factor in over all economy. It is realized that sum total of ravages occasioned by various parasitic infections in poultry can in no way be considered less significant than other ethiological agents. Amongst these, Coccidia can cause serious diseases in domestic animals i.e. coccidiosis. Coccidiosis is believed to be a commonest depreciator or even a potential killer of our poultry.

So medical point of view their study is very important. Several species of Coccidia cause extensive pathological damage and mortality in poultry, cattle, sheep, goat, pig and other animals. For this reason Coccidia have attracted of many workers (Chakravarty & Kar, 1947 [1], Deb et al., 1980 [2], Hortom and long, 1963 [3]; Nikam, 1999 [4]; Ray, 1945 [5]; Rahaman and Raman, 1970 [6] and Tyzzer, 1928 [7]). The study of ultra structure of Coccidia have enhanced its biological and veterinary importance. (Nikam et al. 2012)

**MATERIAL AND METHODS**

During the course of present investigation, an extensive survey was carried out to record the incidence of coccidia in broiler chicken particularly in Gangapur and Vaijapur Tehsil of Aurangabad District in Maharashtra. For this study intestine of broiler chicken from different localities and were examined for coccidial infections. The birds (broiler chicken) were sacrificed and various parts of the alimentary canal and caeca were examined. The faecal contents were diluted with water and sieved to remove the large faecal debris, after repeated washing the oocysts were concentrated by centrifugation at 3000 rpm for ten minutes. The oocysts were then spread out in shallow petridishes and covered with 2.5% potassium dichromate solution for sporulation. Care was taken to aerate them properly and also to prevent desiccation. The sporulation was carried out in all cases at room temperature about 28 to 32 °C.

**Result and discussion:-**

During the period of 12 months (Monsoon Winter and summer Season) i.e. from, June, 2013 – May 2014, total 896 faecal samples from Gangapur and 872 samples from Vaijapur were examined for coccidial infections, out of which 270 samples from Gangapur and 269 samples from Vaijapur were positive respectively. The percentage of prevalence being 31.07% and 30.84% respectively. Comparative study shows minor differences in prevalence.

Month wise analysis in Gangapur showed that maximum prevalence was during June (63.10%), followed by July, Sep, Nov, Dec, Aug, Oct, Jan, Feb, Mar, May, and April. (54.54%, 34.21%, 34.72%, 27.66%, 25.51%, 20.10%, 17.52%, 14.28%, 09.09%, 08.88%, and 06.66%). (Table No.1)

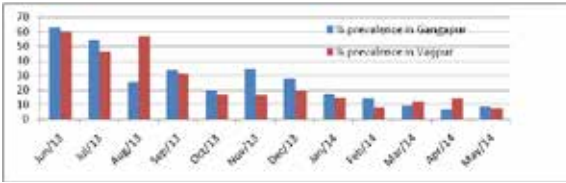
| Period         | No. of Samples         |                        | % Prevalence |
|----------------|------------------------|------------------------|--------------|
|                | No. of Sample Examined | No. of Sample Positive |              |
| June 2013      | 103                    | 65                     | 63.10        |
| July 2013      | 110                    | 60                     | 54.54        |
| August 2013    | 98                     | 25                     | 25.51        |
| September 2013 | 114                    | 39                     | 34.21        |
| October 2013   | 50                     | 10                     | 20.10        |
| November 2013  | 72                     | 25                     | 34.72        |
| December 2013  | 60                     | 13                     | 27.66        |
| January 2014   | 97                     | 17                     | 17.52        |
| February 2014  | 35                     | 05                     | 14.28        |
| March 2014     | 55                     | 05                     | 09.09        |
| April 2014     | 30                     | 02                     | 06.66        |
| May 2014       | 45                     | 04                     | 08.88        |

**Table No.1: Showing the percentage prevalence of chicken Coccidiosis in Gangapur tehsil during June 2013 – May 2014**

Month wise analysis in Vaijapur showed that maximum prevalence was during June (60.90%), followed by Aug, July, Sep, Dec, Oct, Nov, Jan, Apr, Mar, Feb, and May (57.14%, 46.66%, 31.37%, 19.51%, 17.14%, 16.66%, 15.00%, 14.28%, 12.00%, 08.10%, and 07.84%). (Table No.2)

| Period         | No. of Samples         |                        | % Prevalence |
|----------------|------------------------|------------------------|--------------|
|                | No. of Sample Examined | No. of Sample Positive |              |
| June 2013      | 110                    | 67                     | 60.90        |
| July 2013      | 90                     | 42                     | 46.66        |
| August 2013    | 105                    | 60                     | 57.14        |
| September 2013 | 102                    | 32                     | 31.37        |
| October 2013   | 70                     | 12                     | 17.14        |
| November 2013  | 60                     | 10                     | 16.66        |
| December 2013  | 82                     | 16                     | 19.51        |
| January 2014   | 80                     | 12                     | 15.00        |
| February 2014  | 37                     | 03                     | 08.10        |
| March 2014     | 50                     | 06                     | 12.00        |
| April 2014     | 35                     | 05                     | 14.28        |
| May 2014       | 51                     | 04                     | 07.84        |

**Table No.2: Showing the percentage prevalence of chicken Coccidiosis in Vaijapur tehsil during June 2013 – May 2014**



**Fig. No.1:Showing the percentage prevalence of chicken Coccidiosis in Gangapur and Vaijapur tehsil during June 2013 – May2014.**

#### ACKNOWLEDGMENT:

The authors are very much thankful to the U.G.C. for providing the financial assistance under Minor Research Project F. No. 39-649/2010 (SR) and also thanks for Principal and Head, Department of Zoology, Shri Muktanand College Gangapur, Dist. Aurangabad (Maharashtra) for providing the laboratory facilities during this work.

#### REFERENCES

- [1] Chakravarty, M. M and Kar, A.B. 1947. A study on the Coccidian of the Indian birds. Proc. Soc. Edinb.62 (B) : 225-233. | [2] Deb,A.R.; Sinha, B.N. Ansari, M.Z. and Sahai, B.N. 1980.Incidence and intensity of Coccidia infection at Anchiabst.Ind. J. Parasitol. 3 : 73. | [3] Hortom - Smith, C. and Long, P.L. 1963. Coccidiaandcoccidiosis in the domestic owl and turkey, 67.1070. In :Advances in Parasitology (ed.BenDawrs). Academic Press,London and New York,Vol.1. | [4] Nikam, S.R. 1999. Species composition and relative prevalence of Eimeria in sheep and goat from Marathwada region (Maharashtra). Eco. Env. Cons.5 : 211-213. | [5] Ray,H.N. 1945. On new coccidian Wenyonellagallinae.sp. from the gut of domestic Fowl. Gallus domesticus Linn. Curr.Sci.14 : 275. | [6] Rahan, Abdul S. and Ananta Raman,M, 1970. The species of coccidian parasitic in fowl and pigeon in madras. Mysore. J. Agric, Sci. 4 : 157-163. | [7] Tyzzer, E.E. 1929. Coccidiosis in gallinaceous birds. Amer.J. Hyg.10 : 269-283. | [8] Nikam S.V. (1983):- Coccidia of domestic Goats, Sheep, and Rabbit Marathwada University Library, Aurangabad | [9]Jadhav V.D. (2002):- Studies of coccidial Fauna from Marathwada Region. Dr. B.A.M.University library Aurangabad. | [10] Jadhav B.N. (2009) :- Study of chicken Coccidiosis in Aurangabad District Dr. B.A.M.University library Aurangabad. |