COPROLOGICAL STUDY ON PREVALENCE OF HELMINTH PARASITES OF BUFFALO (*Bubalus bubalis*, Linnaeus 1758) IN JHALARI VDC OF KANCHANPUR, NEPAL

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RECOMMENDATION

This is to recommend that the thesis entitled **"COPROLOGICAL STUDY OF PREVALENCE OF HELMINTH PARASITES OF BUFFALOES (*Bubalus bubalis*,Linnaeus 1758) IN JAHLARI VDC. OF KANCHANPUR,NEPAL."** has been carried out by Miss Pritima Tiwari for the partial fulfillment of M.Sc. degree in Zoology with special paper **Parasitology** under our supervision. To the best of my knowledge this work has not been submitted for any other degree. Her work is an original and deserve for recommendation for the examination.

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On the recommendation of supervisor Mr. Janak Raj Subedi this dissertation of Miss.Pritima Tiwari is approved for examination and is summited to the Tribhuvan university in partial fulfillment of the requirements for Master's Degree of science in Zoology Parasitology as a special paper.

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CERTIFICATE OF ACCEPTANCE

This thesis work submitted by Miss.Pritima Tiwari entitled**"COPROLOGICAL STUDY OF PREVALENCE OF HELMINTH PARASITES OF BUFFALO (*Bubalus bubalis*, Linnaeus1758) IN JAHLARI VDC. OF KANCHANPUR, NEPAL."** has been approved as a Partial fulfillment of the requirements for M.Sc. degree in Zoology with special paper **Parasitology**

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I hereby declare that the work presented in this has been done by myself and has not been submitted elsewhere for the award of my degree. All sources of information have been specifically acknowledged by references to all the authors or institutions.

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ABSTRACT

The water buffalo or domestic Asian water buffalo (*Bubalus bubalis*) is a large bovine animal, frequently used as livestock in southern Asia, and also widely in South America, southern Europe, northern Africa, and elsewhere. All the domestic varieties and breeds descend from one common ancestor, the wild water buffalo, which is now an endangered species. The domestic water buffalo, although derived from the wild water buffalo, is the product of thousands of years of selective breeding in either South Asia or Southeast Asia.Present study was carried out to find the age, sex and season wise prevalence of gastrointestinal helminth parasites in 224 stool samples of buffaloes from Jhalari VDC. Of Kanchanpur district. The samples were collected during January / February (2015) to June / July (2015). Both sedimentation and floatation technique were used for the detection of helminthes parasites. The overall prevalence of helminthes parasites was found 83.03%. There were significant difference in the prevalence of different parasitic infection among buffaloes (χ^2=198.29, p<0.05, d.f. = 10). Eleven species of endoparasites were identified, among them six species of trematodes, *Fasciola gigantica* (19.64%), *Fasciola hepatica* (12.5%*), Dicrococelium* (21.87%), *Ornithobilharzia pierce* (14.28%), *Schistosoma mansoni* (4.02%) and *Schistosoma bovis* (7.14%) , one species of cestode namely *Anplocephala* sp.(0.45%)and four nematodes species, *Trichostongylus columbiformis* (1.34%), *Strongyloides* sp. (0.45%), *Ostertagia* sp. (0.45%) and *Toxocara vitulorum* (0.89%). Prevalence of helminthes parasites in relation to age, sex and seasonal dynamics were also studied.In term of season, relatively higher prevalence were observed in summer season (90.90%) than in winter season (63.63%). There was significant difference between parasitic infection and seasonal change, (χ^2=3.84, p<0.05, d.f. =1). In age groups, there is an increase in the presence of helminthes parasites as the age increase. The older animal group (>5years) were the most susceptible to helminthes parasites (94.4%), than younger group (>2 to 5years) (88.57%) and then the calves (0.5>2years) (64.28%). There was significant difference between parasitic infection and age of Buffaloes i.e. (χ^2=15.07, p<0.05, d.f=2) Sex wise, the higher prevalence were observed in female (83.95%) than males (80.6%) and was found statistically significant, (χ^2=44.64, P<0.5, d.f. = 1).With the present result it's very important to conduct further more research on water buffaloes in molecular level.

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ABBREVIATIONS

VDC : Village Development Committee

FAO : Food and Agriculture Organization

MOAC : Ministry of Agriculture and Cooperative

CBS : Central Bureau of Statistics

GDP :Gross domestic product

GI : Gastro-Intestinal

EPG :Egg per gram:

rpm : rate per minute