

COPROLOGICAL SURVEY OF GASTRO-INTESTINAL HELMINTH IN BUFFALO (*Bubalus bubalis*) OF DHRAMPUR, DHANUSHA, NEPAL



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Batch 067/068

A thesis submitted in partial fulfilment of the
Requirements for the award of the degree of master of
Science in zoology with special paper parasitology

Submitted to

Central Department of Zoology
Institute of Science and Technology
Tribhuvan University
Kirtipur, Kathmandu
Nepal

October, 2015

RECOMMENADATION

This is the recommended that the thesis entitled " **Coprological survey of Gastro-intetinal helminth in Buffalo (*Bubalus bubalis*) of Dhrampur Dhanusha, Nepal**" has been carried out by **Prabhaw kumar Sah** for the partial fulfilment of Masters Degree of science in Zoology with Special paper **Parasitology** . This is his original work and has been carried out under my supervision. To the best of my knowledge, this thesis work has not been submitted for any other degree in any Institutions.

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On the recommendation of supervisor "**Janak Raj Subedi**" this thesis submitted by **Prabhaw Kumar Sah** entitled "**Coprological Survey of Gastro-Intestinal Helminth in Buffalo (*Bubalus bubalis*) of Dhrampur, Dhanusha, Nepal**" is approved for the examination and submitted to the Tribhuvan University in partial of the requirements for the Master's Degree of Science in Zoology with special paper **Parasitology**.

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DECLARATION

I hereby declare that the work presented in this thesis has been done by myself, and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the author or institution.

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ACKNOWLEDGEMENT

I am greatly indebted to my respected supervisor, Janak Raj Subedi, Lecturer of central Department of Zoology (CDZ) Tribhuban University (T. U.) Kitipur for his considerable guidance, appropriate supervision, valuable suggestion and constant encouragement during research work I would like to express my gratitude to Prof Dr. Ranjana Gupta, of CDZ, T.U. for the variable suggestion . I am grateful to all my teacher and all staffs of CDZ, T.U.,kirtipur, Kathmandu Nepal.

I am also grateful to Dr. Awadesh Jha, Veterinary officer, Central Veterinary hospital, Tripureshwar, Kathmandu for being a very accommodating advisor and for his brotherly advices during Lab. examination period.

I would like to acknowledge Associate Prof. Dr. Mahendra Maharjan, PhD, Mr. Pitamber Dhakal, Ashok Bam and other lectures for their inspiration and support through the study period.

I would like to extend deepest gratitude to my parents, brother and my family member without whose support I would not have been able to complete this work and present achieve the present academic position.

I would also like to express special thanks to Mr. Rajeshwer Sah, Mr. Barun kumar Pandit, Manoj Kumar Yadav, Vijay Kumar Sah and Shyam kumar Pun. For their kind support through my dissertation work and all those person who helped me directly or indirectly to complete this study.

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ABSTRACT

Buffalo (*Bubalus bubalis*), an important species of domestic livestock, is generally affected by helminth parasites. Present study was carried out to find the prevalence of gastrointestinal helminth parasites of buffaloes. Out of a total of 300 fecal samples collected 150 each during summer and winter season, were tested for the presence of gastrointestinal helminths using sedimentation and flotation techniques and the parasites were identified morphologically under microscope. The test revealed 74% and 84.66% positive for the presence of eggs of gastrointestinal helminths for the winter and summer season respectively. The fecal samples showed the prevalence of trematodes (47.01%), cestodes (2.66%) and nematodes (10.66%) during winter season.

Likewise, the helminth eggs of trematodes, cestode and nematodes were 52.99%, 3.66% and 12 % of respectively during summer. Among the trematodes, *Fasciola* sp showed a higher (23.33%) prevalence followed by *Paramphistomum* (17.66%) and *Dicrocoelium* (9.66%). Among cestodes, the only eggs detected belonged to *Monezia* (6.33%) sp. Among nematodes *Trichostrongylus* sp showed a higher (9.33%) prevalence followed gradually by *Toxocara* (5.66%), *Strongyloides* (2.66%), *Trichuris* (1.66%), *Ostertagia* (1%), *Haemonchus* (0.66%), *Chabertia* (0.66%), *Cooperia* (0.33%), and *Capillaria* (0.33%) spp. The parasite eggs were identified morphologically under microscope.

The different in the prevalence of positive and negative samples were found statistically insignificant ($\chi^2 = 51.62$, $P < 0.05$, d.f. = 14). Single infection was observed in 216 (90.76%) samples, moderate infection in 14 (5.88%) samples and heavy infection 8 (3.66%) samples.

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LIST OF ABBREVIATION

ADPCD: Animal Disease Protection and Control Division

CBS: Central Bureau of Statistics

CVH: Central Veterinary Hospital

FAO: Food and Agriculture Organization

GDP: Gross domestic product

GI: Gastro Intestinal

IAAS: Institute of Agriculture and Animal Science

MOAC: Ministry of Agriculture and Cooperative

rpm: rotation per minute

VDC: Village Development Committee

VEC: Veterinary Epidemiological Center