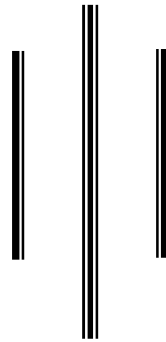


**A STUDY TO  
DETERMINE THE SEASONAL PREVALENCE OF HELMINTHS  
PARASITES IN GOATS FROM VILLAGE AREA OF ARGHAKHACHI,  
KHILJEE, NEPAL**

**A DISSERTATION  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE MASTER'S OF SCIENCE IN ZOOLOGY WITH SPECIAL PAPER  
PARASITOLOGY**



**BY**

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**SUBMITTED TO  
CENTRAL DEPARTMENT OF ZOOLOGY  
INSTITUTE OF SCIENCE AND TECHNOLOGY  
TRIBHUWAN UNIVERSITY  
KIRTIPUR, KATHMANDU  
NEPAL  
2010**

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**RECOMMENDATION**

It is our pleasure to mention here that Miss Basanti Rizal has completed her dissertation work entitled “**SEASONAL COPROLOGICAL STUDY ON HELMINTH PARASITES OF GOATS OF VILLAGE AREA OF ARGHAKHACHI, KHILJEE, NEPAL**” under our supervision and guidance. It is her original work and brings out useful results and findings in the concerned field.

We strongly recommend this dissertation for approval for approval for the partial fulfillment of the requirements for the Master’s Degree of science in Zoology with special paper **Parasitology**.

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On the recommendation of supervisor Mr. Janak Raj Subedi and co-supervisor Dr. Kedar Bdr. Karki, this dissertation of Miss Basanti Rizal is approved for examination and is submitted to the Tribhuvan in partial fulfillment of the requirements for Master's Degree of science zoology (Parasitology).

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**APPROVAL**

This dissertation presented by Miss Basanti Rizal entitled “**SEASONAL COPROLOGICAL STUDY ON HELMINTH PARASITES OF GOATS OF VILLAGE AREA OF ARGHAKHACHI, KHILJEE, NEPAL**” has been approved for the partial fulfillment of the requirements for the Master’s Degree in Zoology with Parasitology as specialization paper.

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**DECLARATION**

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

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## ABSTRACT

*Capra hircus* (goat) being an important source of meat and livestock in Nepal has been considered in the present thesis work. This species is greatly affected by the helminthes parasites. The current study was carried out in order to observe the seasonal prevalence of intestinal helminthes parasites in goat. The samples were collected in the month of December/January, May/June and August/September. The total number of samples collected and examined for the study were 100, 100 and 50 respectively for these study period. The overall prevalence of helminthes parasite during December/January were 54%, in the month of May/June were 84% and in the month of August/September were 32%. During December and January (winter) 48.18% of infection were caused by Trematodes, 22.22% by Cestodes and 74.07% by Nematodes. In May/June (summer) 53.57%, 20.23% and 79.76% of infection were caused by Trematodes, Cestodes and Nematodes. Likewise 53.12%, 31.25% and 90% of infection were caused by Trematodes, Cestodes and Nematodes in the month August/September (rainy season). Nematode genus *Strongyle* has been reported in goats from other part of the world but not in goat of Nepal. So it has been reported for the first time in goat of Nepal. The prevalence percentage of identified genera of trematode are *Dicrocoelium* 7.05%, *Fasciola* 18.82% and *Schistosoma* 25.88%.

Among cestodes, the genera identified with their prevalence percentage were found to be *Moniezia* 0.58% and *Taenia* 22.94%. Similarly the genera included in nematodes are *Ancylostoma* 3.52%, *Ascaris* 20%, *Bunostomum* 2.9%, *Capillaria* 8.2%, *Chabertia* 5.8%, *Cooperia* 6.47%, *Dictyocalus* 5.2%, *Haemonchus* 2.94%, *Nector* 2.94%, *Oxyuris* 0.58%, *Strongyl* 1.76%, *Strongyloids* 5.2%, *Toxocara* 2.35%, *Trichuris* 7%, *Trichostrongylus* 5.8%. Mixed infection was observed in 46.29%, 71.42% and 78.12% in the samples of winter, summer and rainy respectively. The difference in the prevalence of helminthes parasites during three seasons were found statistically significant ( $t^2 = 54.81$ ,  $P < 0.05$ , d. f. = 1)

**Key words:** Helminth, Trematodes, Cestodes, Nematodes, Parasite, Prevalence, Sedimentation, Flotation.

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## **ABBREVIATIONS**

- CBS – Central Bureau of Statistics
- CDZ – Central Department of Zoology
- CTVM – Centre of Tropical Veterinary Medicine
- CVL – Central Veterinary Laboratory
- DLSO - District Livestock Service Office
- FAO - Food and Agriculture Organization
- GDP - Gross Domestic Production
- IAAS - Institute of Agriculture and Animal Science
- MAOC- Ministry of Agriculture and Cooperative
- PCV - Packed Red Cell Volume
- VDC - Village Development Committee
- VEC - Veterinary Epidemiology Centre
- WHO - World Health Organization
- TU – Tribhuvan University