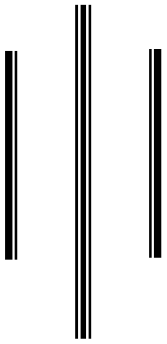
A STUDY TO DETERMINE THE SEASONAL PREVALENCE OF HELMINTHS PARASITES IN GOATS FROM VILLAGE AREA OF ARGHAKHACHI, KHILJEE, NEPAL

A DISSERTATION

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



BY

BASANTI RIZAL

Exam Roll No.360
Regd No.5-3-28-85-2007
Batch No.063-064

SUBMITTED TO

CENTRAL DEPARTMENT OF ZOOLOGY
INSTITUTE OF SCIENCE AND TECHNOLOGY
TRIBHUWAN UNIVERSITY
KIRTIPUR, KATHMANDU
NEPAL

2010

TRIBHUVAN UNIVERSITY

CENTRAL DEPARTMENT OF ZOOLOGY

Kirtipur, Kathmandu, Nepal

Ref. No:

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 u**nder our supervison 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**.

……

Supervisor
Mr. Janak Raj Subedi
Lecturer
CDZ, T.U. Kirtipur
Laboratory
Kathmandu, Nepal
Date: ……..

……

Co-Supervisor
Dr. Kedar Bahadur Karki
Veterinary officer
Central Veterinary

Tripureshwor, Kathmandu
Date: ……

TRIBHUVAN UNIVERSITY

CENTRAL DEPARTMENT OF ZOOLOGY

Kirtipur, Kathmandu, Nepal

Ref. No:

LETTER OF APPROVAL

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).

_____

Prof. Dr Ranjan Gupta
Head of the Department
CDZ, T.U., Kirtipur
Kathmandu, Nepal.

TRIBHUVAN UNIVERSITY

CENTRAL DEPARTMENT OF ZOOLOGY

Kirtipur, Kathmandu, Nepal

Ref. No.:

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.

Evaluation Committee

_____	_____
Research Supervisor	**Head of Department**
Janak Raj Subedi	Prof. Ranjana Gupta, Ph.D.
Lecturer	Central Department of
Zoology	Tribhuvan University
Central Department of Zoology	Kirtipur, Kathmandu.
_____	_____
Co-Supervisor	**External Examiner**
Dr. Kedar Bdr. Karki	
Veterinary Officer	_____
Central Veterinary Laboratory Tripureshwor,	**Internal Examiner**

TRIBHUVAN UNIVERSITY

CENTRAL DEPARTMENT OF ZOOLOGY

Kirtipur, Kathmandu, Nepal

Ref. No.:

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.

Date: _____

_____

Basanti Rizal

ACKNOWLEDGEMENT

I would like to express my profound gratitude to the under mentioned persons for their worthwhile untiring contribution, support, encouragement, inspection and constant guidance towards the completion of present dissertation work.

Lecturer, Mr. Janak Raj Subedi being very supportive and understanding supervisor and co-supervisor. Their critical evaluation suggestions and comments for improving dissertation manuscript, analyzing and interpreting data.

Co-supervisor, Dr Kedar B. Karki, Veterinary officer, central veterinary laboratory, Tripurshwor, Kathmandu for being a very accommodating advisor and for his brotherly advices. His advices, suggestions and flow of current internet information helped to attain the dissertation work successfully.

Dr. Ranjana Gupta, head of the department, central department of zoology for providing administrative support during the dissertation work. Dr. Vasanta K. Thapa, Dr. Tej K. shrstha, former head of the department.

Special thanks to Dr. Damoder Sedai, chief, central veterinary laboratory, Tripureshwor for providing the laboratory facility. Also sincere thanks and gratitude to laboratory staffs of the CVL for their kind support and help in the lab work.

My heart thanks to all the staff members of central department of zoology for their warm heartiness, support and co-operation.

My parents, and entire family members for sending me to such a distant place and for their everlasting support and confidence in me. I gratefully express my gratitude to my husband for their wholehearted support, inspiration, and encouragement and all others concerned to my whole academic career.

I also acknowledge my friends Radha giri, Radha gaire and senior sister Bimla bashire and Laxmi parajuli.

Thank you all.

Basanti Rizal

Exam Roll No.360

Regd No.5-3-28-85-2007

Batch No.063-064

ABSTRACT

Capra hircus (goat) being an important source of meat and livestock in Nepal has been considered in the present thesis world. 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 (¡ ^{2} = 54.81, P < 0.05, d. f. = 1)

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

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

LIST OF PHOTOGRAPHS

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