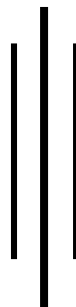
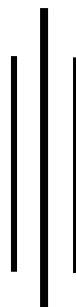


**A PRELIMINARY COPROLOGICAL STUDY ON  
HELMINTH PARASITES IN CATTLE (*Bos sp.*)  
OF  
'ANARMANI VDC 02' JHAPA**



**A DISSERTATION  
SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER'S IN SCIENCE  
(ZOOLOGY)**



**BY  
KRISHNA PRASAD DHAKAL  
TO  
THE CENTRAL DEPARTMENT OF ZOOLOGY  
INSTITUTE OF SCIENCE AND TECHNOLOGY  
TRIBHUVAN UNIVERSITY  
KIRTIPUR, KATHMANDU**

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**2008**

## RECOMMENDATION

This is certified that **Mr. Krishna Prasad Dhakal** has completed his dissertation work entitled “**A PRELIMINARY COPROLOGICAL STUDY ON HELMINTH PARASITES IN CATTLE (*Bos sp.*) OF ‘ANARMANI VDC 02’, JHAPA**” as a partial fulfillment of Master's Degree of Science in Zoology with special paper Parasitology under our supervision. To our knowledge his work has not been submitted for any other degree.

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Supervisor

Mr. Janak Raj Subedi

Lecturer

Central Department of Zoology

Date: 24<sup>th</sup> Dec., 2008

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Co-Supervisor

Mr. Pitamber Dhakal

Lecturer

Central Department of Zoology

Date: 24<sup>th</sup> Dec., 2008

## ACCEPTANCE

The dissertation work entitled “**A PRELIMINARY COPROLOGICAL STUDY ON HELMINTH PARASITES IN CATTLE (*Bos sp.*) OF ‘ANARMANI VDC 02’, JHAPA**” submitted by Mr. **Krishna Prasad Dhakal** has been accepted for the partial fulfillment of the Master’s Degree in Zoology with Parasitology as specialization paper.

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## LETTER OF APPROVAL

On the recommendation of supervisor **Mr. Janak Raj Subedi** and Co-supervisor **Mr. Pitamber Dhakal**, this dissertation of **Krishna Prasad Dhakal** has been approved for examination and is submitted to the Tribhuvan University in partial fulfillment of the requirements for Master's Degree of Science in Zoology with parasitology as a specialization paper.

Date: 24<sup>th</sup> Dec., 2008

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## **DECLARATION**

I hereby declare that the work presented in this dissertation 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: 24<sup>th</sup> Dec., 2008

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**Krishna Prasad Dhakal**

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Krishna Prasad Dhakal

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## ABSTRACT

Altogether 200 dung samples of cattle (*Bos* sp.) were collected within two seasons viz, summer and winter from "Anarmani VDC 2" of Jhapa district. The samples were collected equally from two seasons and both the sexes. Present study revealed prevalence of 55.55% nematodes, 33.33% trematodes and 11.11% cestodes among 151 (75.5%) positive samples. 49 numbers (24.4%) of samples remains negative. Prevalence differs between ages, seasons and sexes to some extent. In general maximum infection was found by nematode genera viz, *Trichostrongylus* sp., *Strongyloides* sp., *Toxocara* sp. trematode genera viz, *Fasciola* sp., *Dicrocoelium* sp, *Schistosoma* sp. etc and cestode genera viz. *Dipylidium* sp. and *Moniezia* sp. **Trematode genera *Histophilus* sp. was reported for the first time in Nepal among cattle, buffaloes, goats and sheep.** Among the total positive samples 14% were found to have single infection and rest 86% have multiple infection by 2 – 5 different genera. The prevalence in general percentage follows as : **Nematodes:** *Trichostrongylus* sp. (23.63%), *Chabertia* sp. (2.54%), *Strongyloides* sp. (7.77%), *Toxocara* sp. (4.93%), *Ostertagia* sp. (4.11%), *Trichonema* sp. (6.43%), *Bunostomum* sp. (0.82%), *Dictyocaulus* sp (1.34%), Hookworm (0.89%), *Haemonchus* sp. (3.66%), *Ascaris* sp. (0.89%), *Trichuris* sp. (1.78%), *Cooperia* sp. (0.074%), *Capillaria* sp. (0.29%), *Oesophagostomum* sp. (0.37%), **Trematodes:** *Dicrocoelium* sp. (5.38%), *Fasciola* sp. (6.13%), *Paramphistomum* sp. (4.11%), *Gastrothylax* sp. (1.27%), *Skrijabinema* sp. (2.46%), *Schistosoma* sp. (5.38%), *Histophilus* sp. (2.24%), *Fischoederius* sp. (0.074%) and *Ornithobilharzia* sp. (1.12%). **Cestodes:** *Moniezia* sp. (3.88%), *Taenia* sp. (0.14%) and *Dipylidium* sp. (8.15%). Significant difference was found in prevalence among three classes of intestinal helminths.

**KEY WORDS:** Nematodes, Cestodes, Cattle, Trematodes, Prevalence & Jhapa.



# CONTENTS

	Page No.
ABBREVIATIONS	i
LIST OF TABLES	ii
LIST OF FIGURES	ii
LIST OF MAPS	iii
LIST OF PLATES	iii
LIST OF PHOTOGRAPHS	iii
ABSTRACT	iv
<b>CHAPTER ONE</b>	
<b>INTRODUCTION</b>	<b>1-9</b>
) Background	1
) Species of Cattle	2
) Research site – A Brief Profile	3
) Statement of the Problem	4
) Parasites and Parasitism	4
) Significance of the Study	9
<b>CHAPTER TWO</b>	
<b>OBJECTIVES</b>	<b>10</b>
) General Objectives	10
) Specific Objectives	10
) Hypothesis	10
<b>CHAPTER THREE</b>	
<b>JUSTIFICATION</b>	<b>11</b>
<b>CHAPTER FOUR</b>	
<b>LIMITATIONS</b>	<b>12</b>
<b>CHAPTER FIVE</b>	
<b>LITERATURE REVIEW</b>	<b>13-20</b>
) Global Context	13

) Context of Nepal	18
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## **CHAPTER SIX**

<b>MATERIALS AND METHODS</b>	<b>21-23</b>
) Study Area	21
) Sample Size and Sampling Technique	21
) Instrumentation	22
) Laboratory Tools	22
) Chemicals Required	22
) Dung Examination	22
) Sedimentation Technique	23
) Method	23
) Study Period	23
) Key for Trematodes, Cestodes & Nematodes	23

## **CHAPTER SEVEN:**

<b>RESULTS</b>	<b>24-51</b>
) Class-wise Prevalence of Helminthes	24
) Season wise Prevalence of Helminthes	26
) Sex-wise Prevalence of Helminthes	29
) Age-wise prevalence	31
) General Prevalence of Helminthes	32
) Identification of Eggs of Helminthes	36
) Single and Multiple Infections	51

## **CHAPTER EIGHT:**

<b>DISCUSSION AND CONCLUSION</b>	<b>52-55</b>
----------------------------------	--------------

## **CHAPTER NINE:**

<b>RECOMMENDATIONS</b>	<b>56</b>
------------------------	-----------

<b>REFERENCES</b>	<b>57-63</b>
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<b>ANNEX</b>	<b>64-65</b>
--------------	--------------

## LIST OF TABLES

Table No.		Page No.
1.	Helminth Parasites with their host	9
2.	Class-wise Prevalence of Helminth Parasites	25
3.	Prevalence of Helminth Parasites in Summer season	26
4.	Prevalence of Helminth Parasites in Winter season	27
5.	Prevalence of Helminth Parasites in male hosts	29
6.	Prevalence of Helminth Parasites in Female hosts	30
7.	Comparison of Dominant Helminth Parasites Between the same age groups of two seasons summer and winter	32
8.	Prevalence of Nematode genera in cattle	33
9.	Prevalence of Trematode genera in cattle	34
10.	Prevalence of Cestode genera in cattle	35

## LIST OF FIGURES

Table No.		Page No.
1.	Life cycle of <i>Fasciola</i> sp.	6
2.	Life cycle of gastrointestinal roundworms	7
3.	Life cycle of <i>Taenia saginata</i>	9
4.	Classwise prevalence of Helminths	26
5.	Prevalence of Helminths in Summer season	27
6.	Prevalence of Helminths in winter season	28
7.	Prevalence of Helminths in male hosts	30
8.	Prevalence of Helminths in Female hosts	31
9.	Prevalence of Nematodes in cattle	34
10.	Prevalence of Trematodes in cattle	35
11.	Prevalence of Cestodes in cattle	

## LIST OF MAPS

1. Map of Nepal
2. Map of Jhapa District
3. Map of Anarmani VDC 2 of Jhapa

## LIST OF PLATES

- |         |   |
|---------|---|
| PLATE 1 | Cattle at the field                         |
| PLATE 2 | Collecting the Dung sample                  |
| PLATE 3 | Adding chemical to the sample               |
| PLATE 4 | Preparing for sedimentation Technique       |
| PLATE 5 | Examining Under Microscope                  |
| PLATE 6 | Doctor Explaining to Identify the Parasites |

## LIST OF PHOTOGRAPHS

1. Egg of *Fasciola* sp.
2. Egg of *Paramphistomum* sp.
3. Egg of *Dicrocoelium* sp.
4. Egg of *Moniezia* sp.
5. Egg of *Taenia* sp.
6. Egg of *Haemonchus* sp.
7. Egg of *Ostertagia* sp.
8. Egg of *Strongyloides* sp.
9. Egg of *Trichostrongylus* sp.
10. Egg of *Chabertia* sp.
11. Egg of *Oesophagostomum* sp.
12. Egg of *Cooperia* sp.
13. Egg of *Trichuris* sp.
14. Egg of Hookworm
15. Egg of *Capillaria* sp.
16. Egg of *Toxocara* sp.
17. Larvae of *Dictyocaulus* sp.
18. Egg of *Schistosoma* sp.
19. Samples ready to observe
20. Egg of *Trichonema* sp.
21. Doing Lab work with friend

## ABBREVIATIONS

ADPCD	-	Animal Disease and Parasite Control Division
AGDP	-	Agriculture Gross Domestic Product
CBS	-	Central Bureau of Statistics
CDZ	-	Central Department of Zoology
CVL	-	Central Veterinary Laboratory
DNR	-	Department of National Resource
DLSO	-	District Livestock Service Office
FAO	-	Food and Agricultural Organisation
GI	-	Gastro Intestinal
IAAS	-	Institute of Agriculture and Animal Science
LS	-	Livestock
LP	-	Livestock Production
LARC	-	Lumle Agricultural Research Centre
PCR	-	Polymerase Chain Reaction
rpm	-	rate per minute
RADIL	-	Regional Animal Disease Investigation Laboratory
TU	-	Tribhuvan University
VISSAN	-	Fast Food Company
VDC	-	Village Development Committee
VEC	-	Veterinary Epidemiology Centre
WN	-	Ward Number
WHO	-	World Health Organization