

**PREVALENCE OF FASCIOLIASIS PRESENT IN BUFFALOES OF
SLAUGHTERHOUSE IN KIRTIPUR MUNICIPALITY**

A

THESIS

SUBMITTED

**In Partial Fulfillment of the Requirements for the Degree of Masters of
Science in Zoology with special paper Parasitology**

Submitted By

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RECOMMENDATION

It is our pleasure to mention here that **Miss. Anju Shrestha** has completed her dissertation work entitled **“PREVALENCE OF FASCIOLIASIS PRESENT IN BUFFALOES OF SLAUGHTERHOUSE OF KIRTIPUR MUNICIPALITY”** 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 the partial fulfillment 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 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

200 slaughtered water buffaloes were examined. 100 were observed during the winter; from November 27, 2007 to February 10, 2008 and 100 were observed during the summer; from June 18, 2008 to July 26, 2008. Out of them, 93 (46.50%) were males and 107 (53.50%) were females. 54 (27%) of them were calves, 51 (25.50%) were adults and 95 (47.50%) were olds. Females were found more infected with fascioliasis. 38.05% of the females had fascioliasis as compared to 16.09% of males. The difference in sex-wise prevalence of fascioliasis was found significant ($\chi^2_{0.05, 1d.f.} = 11.63$). Old animals (35.78%) were infected with *Fasciola* more often than calves (14.81%) and (29.41%) adults. Difference in age-wise prevalence of *Fasciola* was significant ($\chi^2_{0.05, 2d.f.} = 7.45$).

35 and 22 positive cases of fascioliasis were observed out of 200 slaughtered animals observed, 100 each during winter and summer season. The season-wise prevalence of fascioliasis was found significant ($\chi^2_{0.05, 1d.f.} = 4.14$). Out of 35 positive cases of *Fasciola* infection observed during winter, 20 (57.14%) buffaloes had only *Fasciola hepatica* while 11 (31.42%) had only *F. gigantica* and 4 (11.42%) had both *F. hepatica* and *F. gigantica*. Similarly during summer, out of 22 animals that had fascioliasis, *F. hepatica* was found in 7 (31.81%) of them while *F. gigantica* was observed in 12 (54.54%) of them and 3 (13.63%) of them had both *F. hepatica* and *F. gigantica*. Infection with *Fasciola hepatica* (59.65%) was found slightly higher than *Fasciola gigantica* (52.63%).

Faecal sample of 55 (27.50%) buffaloes were found positive for fascioliasis, out of 200 slaughtered buffaloes observed. 33 and 22 positive cases of fascioliasis were observed out of 200 slaughtered animals observed, 100 each during winter and summer season. Females were found more infected with fascioliasis. 37.14% of the females had fascioliasis as compared to 16.84% of males. Old animals (33.68%) were infected with *Fasciola* more often than calves (14.81%) and (29.41%) adults.

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ACRONYMS AND ABBREVIATIONS

| | |
|--------|---|
| AGAL | Agriculture and Livestock |
| CBS | Central Bureau of Statistics |
| CDZ | Central Department of Zoology |
| CI | Confidence interval |
| CSFV | Classical Swine Fever Virus |
| CTVM | Centre for Tropical Veterinary Medicine |
| d.f. | Degree of Freedom |
| DFID | Department for International Development |
| DLS | Department of Livestock Services |
| Ed. | Edition |
| ELISA | Enzyme Linked Immunosorbent Assay |
| FAO | Food and Agriculture Organization of the United Nations |
| GDP | Gross Domestic Product |
| IAAS | Institute of Agriculture and Animal Sciences |
| IDRC | International Development Research Centre |
| IEP | Indirect Immunoelectrophoresis |
| IFT | Indirect Immunofluorescence Test |
| IHA | Indirect Haemagglutination Assays |
| IHAT | Indirect Haemagglutination Technique |
| IFAT | Indirect Immunofluorescent Technique |
| IMC | Ingested Metacercariae |
| NZFHRC | National Zoonosis and Food Hygiene Research Centre |

| | |
|------|-------------------------------|
| NRB | Nepal Rastra Bank |
| NMC | Normal Metecercariae |
| PI | Post Infection |
| n | Number |
| Spp. | Species |
| TU | Tribhuvan University |
| US | Ultrasound |
| VDC | Village Development Committee |
| WHO | World Health Organization |

ACRONYMS AND ABBREVIATIONS

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|--------|---|
| AGAL | Agriculture and Livestock |
| CBS | Central Bureau of Statistics |
| CDZ | Central Department of Zoology |
| CI | Confidence interval |
| CSFV | Classical Swine Fever Virus |
| CTVM | Centre for Tropical Veterinary Medicine |
| d.f. | Degree of Freedom |
| DFID | Department for International Development |
| DLS | Department of Livestock Services |
| Ed. | Edition |
| ELISA | Enzyme Linked Immunosorbent Assay |
| FAO | Food and Agriculture Organization of the United Nations |
| GDP | Gross Domestic Product |
| IAAS | Institute of Agriculture and Animal Sciences |
| IDRC | International Development Research Centre |
| IEP | Indirect Immunoelectrophoresis |
| IFT | Indirect Immunofluorescence Test |
| IHA | Indirect Haemagglutination Assays |
| IHAT | Indirect Haemagglutination Technique |
| IFAT | Indirect Immunofluorescent Technique |
| IMC | Ingested Metacercariae |
| NZFHRC | National Zoonosis and Food Hygiene Research Centre |
| NRB | Nepal Rastra Bank |

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| NMC | Normal Metecercariae |
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