

EPIDEMIOLOGY OF GASTROINTESTINAL HELMINTHS IN GOATS OF BANKE , NEPAL



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RECOMMENDATION

This is to recommend that the thesis entitled **“EPIDEMIOLOGY OF GASTROINTESTINAL HELMINTHS IN GOATS OF BANKE, NEPAL”** has been carried out by Om Prakash Neupane for the partial fulfillment of Master’s 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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LETTER OF APPROVAL

On the recommendation of supervisor Lecturer “**Mr. Janak Raj Subedi**” this thesis submitted by Om Prakash Neupane entitled “**EPIDEMIOLOGY OF GASTROINTESTINAL HELMINTHS IN GOATS OF BANKE, NEPAL**” is approved for the examination and submitted to the Tribhuvan University in partial fulfilment of the requirements for Master’s Degree of Science in Zoology with special paper Parasitology.

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CERTIFICATE OF ACCEPTANCE

This thesis submitted by Om prakash Neupane entitled “**EPIDEMIOLOGY OF GASTROINTESTINAL HELMINTHS IN GOATS OF BANKE, NEPAL**” has been accepted as a partial fulfilment for the requirements of Master’s Degree of Science in Zoology with special paper Parasitology.

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DECLARATION

I hereby declare that 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 authors or institutions.

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ABSTRACT

Capra hircus (goat) is one of the most important species of domestic livestock in Nepal. This species is greatly affected by the helminth parasites. The current study was carried out to determine the prevalence of Gastrointestinal Helminths in goats of Banke. The fecal samples were examined qualitatively by differential floatation and sedimentation technique and quantitative (egg per gram) examination was done by Stoll's counting method. A questionnaire survey was conducted among 30 randomly selected goat owners regarding management practices and use of anthelmintics. A total of 315 fecal samples of which 165 in post rainy season and 150 in winter season were examined to determine the prevalence and intensity of helminths infection in goats. The study revealed 208 fecal samples out of 315 samples (66.03%) with significant EPG. The prevalence was higher in wet season (75.75%) than in dry season (55.33%) and was statistically significant ($\chi^2=5.311$, $P<0.05$). The most common parasites encountered were *Strongyloides* (24.39%), *Haemonchus* (20.97%), *Moniezia* (20.52%), *Trichostrongylus* (19.45%), *Trichuris* (17.65%), *Fasciola* (17.25%), *Nematodirus* (11.12%), *Paramphistomum* (9.28%), *Oesophagostomum* (8.91%), *Ostertagia* (8.35%), *Chabertia* (7.65%), *Dicrocoelium* (5.45%) and *Capillaria* (2.15%). Altogether 13 genera of helminth parasites were found in present study among them one was cestode (*Moniezia*), 3 were trematodes (*Fasciola*, *Paramphistomum* and *Dicrocoelium*) and 9 were nematodes. This study showed 45.67% trematode infection, 24.51% cestode infection and 82.21% nematode infection. The prevalence of helminths infection reflects a higher occurrence in the adults (70.54%) followed by the kids (63.38%) with young goats (62.60%) having the least. The prevalence was highest in Mahadevpuri (69.52%) followed by Khaskushma (68.57%) and least in Rajhena (60.01%). Out of 208 (66.03%) positive samples, 158 (75.95%) positive samples were found to have mixed infections. Most of the farmers are unaware of helminths parasite problems. There should be provision of adequate and appropriate control strategies and awareness programs for farmers to enhance the goat farming and increase productivity.

Keywords: Sedimentation, Floatation, Quantative, Trematoda, Cestoda and Nematoda.

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LIST OF ABBREVIATIONS

ADPCD	:	Animal Disease Protection and Control Division
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
EPG	:	Eggs Per Gram
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
PCV	:	Packed Cell Volume
RPM	:	Rate Per Minute
TU	:	Tribhuvan University
VDC	:	Village Development Committee
VEC	:	Veterinary Epidemiology Centre
WHO	:	World Health Organization