

SEASONAL PREVALENCE OF HELMINTH PARASITES IN BUFFALOES OF POKHARATHOK VDC IN ARGHAKHANCHI



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RECOMMENDATION

This is to recommend that the thesis entitled “**SEASONAL PREVALENCE OF HELMINTH PARASITES IN BUFFALOES OF POKHARATHOK VDC IN ARGHAKHANCHI**” has been carried out by Radha Devi for the partial fulfillment of Master’s Degree of in Zoology with special paper Parasitology. This is her 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 my institutions.

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LETTER OF APPROVAL

On the recommendation of supervisor Lecturer “**Mr. Janak Raj Subedi**” this thesis submitted by Radha Devi entitled “**SEASONAL PREVALENCE OF HELMINTH PARASITES IN BUFFALOES OF POKHARATHOK VDC IN ARGHAKHANCHI**” 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 work submitted by Radha Devi entitled “**SEASONAL PREVALENCE OF HELMINTH PARASITES IN BUFFALOES OF POKHARATHOK VDC IN ARGHAKHANCHI**” 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

Bubalus bubalis (buffalo) is one of the important species of domestic livestock in Nepal. This species is greatly affected by the helminthes parasites. The current study was carried out to find out the seasonal prevalence of intestinal helminth parasites in buffaloes. Sedimentation and floatation both technique were used during the detection of helminth parasites. The samples were collected in two seasons i.e. during summer and winter. A total of 250 stool samples were collected and examined during the study period i.e. 120 samples in winter and 130 samples in summer. The overall prevalence of helminth parasites during winter were (45.83%) and that in summer season were (88.46%). A huge difference in the prevalence of helminths parasites in the both seasons were observed. During winter season the buffaloes were found to be infected with trematodes 31.66%, cestodes 10% and 32.5% nematodes. Likewise 67.69%, 11.53% and 56.15% of infections were caused by Trematodes, Cestodes and Nematodes respectively during summer season. The overall prevalence percentage of identified genera of trematodes are as follows; *Fasciola* 29.41%, *Paramphistomum* 11.76%, *Dicrocoelium* 12.94%, *Schistosoma* 38.23%, *Gastrothylax* 2.35%, *Fischoederius* 1.17%, *Ornithobilharzia* 0.58% and *Skrjabinema* 5.29% respectively. Among cestode, the overall prevalence percentage of identified genera was found to be *Moniezia* 15.88%. Similarly the genera included in nematodes are *Strongyloides* 13.52%, *Trichostrongylus* 5.88%, *Toxocara* 34.11%, *Ascaris* 18.23%, *Chabertia* 1.76%, *Trichuris* 5.88%, *Dictyocaulus* 0.58%, *Oesophagostomum* 1.17%, *Capillaria* 1.17%, *Haemonchus* 1.76%, *Ostertagia* 2.94%, and *Cooperia* 0.58%. Single infection was found in 40% samples during winter and during summer it was found in 14.78% samples. Mixed infections was observed in 60% and 85.21% in the samples of winter and summer respectively. The difference in the prevalence of helminth parasites during both seasons were found statistically significant. ($\chi^2 = 740.15$, $P < 0.05$, d.f. = 21).

Key words: Helminth, Trematodes, Cestodes, Nematodes, Parasite, Prevalence, Sedimentation, Floatation

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LIST OF ABBREVIATIONS

ADPCD	:	Animal Disease Protection and Control Division
CBS	:	Central Bureau of Statistics
CVL	:	Central Veterinary Laboratory
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
rpm	:	rate per minute
VDC	:	Village Development Committee
VEC	:	Veterinary Epidemiology Centre
IAAS	:	Institute of Agriculture and Animal Science