

## SEASONAL INFECTION OF *HAEMONCHUS CONTORTUS* IN GOATS AT KANPUR, INDIA

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The present study deals with the seasonal infection of *Haemonchus contortus* in goats in Kanpur region. On post-mortem examination of 400 abomasums from the slaughtered goats aged between 1-2 years collected from the largest slaughter house Bazaria, Kanpur during the period from July 2002 to February 2004, a total 16 (4%) goats were observed affected with *H. contortus*. Seasonal infection and severity of infection, both were found higher in rainy season in comparison to winter and summer seasons. But the number of worms counted as per abomasum was not found more than 10,000 to assess the severity of haemonchosis to be hyper-acute form in any affected goat in any season.

### INTRODUCTION

*Haemonchus contortus* is the only an important blood sucker nematode parasite under the family Trichostrongyloidea worms which live in the abomasums of goats, sheep and cattle. The present study relates to goat, which is most precious animal for milk and meat products. The cost of meat is Rs. 120 per kg at present in Kanpur. The heavy infection of this genus causes to produce severe anemia, edema, emaciation, loss of body weight and digestive disturbances among the infected goats. Some work on seasonal incidence of haemonchosis in goats is available in India (Sahoo, 1984; Gupta *et al.*, 1987; Yadav & Tandon, 1989; Bandopadhyay, 1999; Katoch, 2000; Laha *et al.*, 2001). According to Basith (2002) in chronic form of haemonchosis 100% loss of weight occurs and in acute form sudden death occurs. Keeping in view loss due to such pathogenic parasite the present study is still essential to alarm the veterinarians for timely treatment and necessary preventive measures to protect valuable breed and products.

### MATERIALS AND METHODS

To record the seasonal infection and severity of infection of haemonchosis caused by *H. contortus* 400 abomasums from slaughtered goats collected randomly from the largest slaughter house Bazaria, Kanpur city were examined in the laboratory and processed for worm recovery. Abomasal contents and mucosal digests were washed with lukewarm water on a 300-mesh sieve. And some of them were fixed in hot alcohol : glycerol (95 : 5), and mounted in lacto-phenol for temporary preparations for their identification. Counting of *H. contortus* worms present in each infected abomasum was done seasonwise and noted to determine the percentage of infection and quality of infection (Laha *et al.*, 2001).

### RESULTS AND DISCUSSION

Seasonal intensity of *H. contortus* infection in goats have been shown in Table I. In the present study 400 abomasums from slaughtered goats aged between 1-2 yrs were randomly collected from the largest slaughter house during the period from July 2002 to February 2004, and brought to the laboratory. On post-mortem examination and counting of total worms present in each infected abomasum out of 400 only 16 (4%) were observed infected with this genus. In first rainy season (July 2002 to October 2002) out of 80 examined goats 5 (6.25%) were recorded infected. In first winter season (November 2002 to February 2003) out of 80 examined goats 2 (2.5%) were noted infected. In summer (March 2003 to June 2003) out of 80 examined goats 3

Table I : Seasonal infection of *Haemonchus contortus* in goats at Kanpur (U.P.).

Seasons	GE	GI	%	Worms count	Mean worms	Ist mild form (1-100)	IIInd chronic form (100-1000)	IIIrd acute form (1000-10000)	IVth hyperacute form (10000-50000)
Rainy July 2002-October 2002	80	5	6.25	10000	2000	Nil	18.75% (3)	12.5% (2)	Nil
Winter Nov. 2002-February 2003	80	2	2.50	180	90	12.5% (2)	Nil	Nil	Nil
Summer March 2003-June 2003	80	3	3.75	1500	500	6.25% (1)	12.5% (2)	Nil	Nil
Rainy July 2003-October 2003	80	4	5.0	8000	2000	Nil	12.5% (2)	12.5% (2)	Nil
Winter Nov. 2003-February 2004	80	2	2.5	160	80	12.5% (2)	Nil	Nil	Nil
Total 20 months	400	16		19840	4670	31.25%	43.75%	25%	Nil

GE=Goats examined 400; GI=Goats infected 16 (4%).

(3.75%) were found infected. In second rainy season (July 2003 to October 2003) out of 80 examined goats only 2 (2.5%) were noted infected. The highest 6.25% and 5% infections were recorded in two rainy seasons and lowest 2.5% were noted in two winter seasons and 3% was in summer. The result indicated that the rainy seasons are more favourable for increasing the infection and number of worms. But in winter and summer the temperature being cool and hot resists the infection and increasing the number of worms. According to Laha *et al.* (2001) the condition of hyper-acute, acute, chronic forms of haemonchosis depends upon the number of parasites present in the affected animals. They have also discussed that the number of worms present below 100, above 100-1,000, above 1,000-10,000 and above 10,000-50,000 produce mild, choronic, acute and hyper-acute form of haemonchosis, respectively.

On the basis of the said scale and mean worms count out of 16 infected goats 31.25% were found suffering from mild form haemonchosis 43.75% from choronic form and 25% from acute form. But no such worms found in any goat in any season in the present study to produce hyper acute form of disease.

### ACKNOWLEDGEMENTS

The authors are thankful to the Officer-in Charge, Slaughter House, Bazaria, Kanpur for the help rendered in supplying the material and to Department of Zoology, A.N.D. College, Kanpur for providing necessary research facilities in the laboratory.

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