

STUDY OF NEMATODES IN INDIGENOUS CHICKENS IN SWAT DISTRICT

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ABSTRACT

Research was conducted on 100 indigenous chickens. Examination of guts revealed that out of 100 guts, 51 per cent were positive for nematodes. Mixed infestation was 16 per cent. Two species i.e., *Ascaridia galli* and *Heterakis gallinarum* were identified. The incidence rate of *Ascaridia galli* was higher (42 %) as compared to *Heterakis gallinarum* (9 %).

Keywords: Indigenous chickens, nematodes, *Ascaridia galli*, *Heterakis gallinarum*, Swat

INTRODUCTION

Poultry industry is the major field through which ever widening protein gap in the country can be met economically and effectively by increasing the number of table and lying birds in the shortest possible period of time. Moreover, the chickens are all time easily manageable source of animals protein available for human consumption.

In cities, the poultry farming is done by adopting latest modes of farming but due to lack of modern techniques and facilities in rural areas, people are still compelled to keep flocks of indigenous chickens which serve as one of their source of income and to some extent fulfils their meat and egg requirement.

Great economic losses have been attributed to intestinal parasites because they produce lesions ranging from dilation of intestine and nodule formation to severe enteritis, thus impairing the absorbing power of intestine in addition to the large amount of nutrients and vitamins, they absorb from the final host. This finally leads to the loss of weight, retarded growth, reduced egg production, weakened body resistance and even death. Helminths particularly nematodes come under this list of parasites.

The indigenous chickens being scavengers are more prone to parasitic infestations. Rasool (1971) reported that 84.60 per cent of birds from indigenous chickens suffered from one or more species of helminths. This study was carried out to know the incidence of nematodes in indigenous chickens of Swat.

MATERIALS AND METHODS

One hundred guts were collected from April to September, 1988 from various shops, where chickens

were brought for sale and slaughtered from different areas of Swat District. Complete alimentary canal was collected from oesophagus to cloaca in clean polythene bag and were brought to Veterinary Research and Diagnostic Laboratory, Balogram, Swat for detailed examination. This examination included identification through morphological characters, predilection site, taxonomy and worms burden per bird.

The portion of alimentary canal from oesophagus to rectum, and the caeca were collected and placed in a tray, incised longitudinally and examined. The opened intestine was washed thoroughly under running tap water and mucosal surface was rubbed carefully with the fingers to remove any worms adhering to it. The intestine was then discarded. The nematodes were thus freed from faecal material by repeated washings and decantations. Finally the worms were picked up by fine forceps and were transferred to normal saline solution. They were fixed with 70 per cent alcohol by heating at 70°C and then transferred to a bottle for preservation with fresh 70 per cent alcohol. Whole mounts were prepared and slides were secured. The parasites were identified according to keys and morphological characteristics as described by Soulsby (1982) and Hofsted *et al.* (1984).

RESULTS AND DISCUSSION

From a total of 100 guts examined 51 per cent were found positive for nematode parasites while 16 per cent had mixed infection with both nematodes and cestodes (Table 1). Incidence of *Ascaridia galli* was 42 per cent and *Heterakis gallinarum* was 9 per cent. The birds were infected by only these two nematode parasites because they do not require an intermediate

host to complete their life cycle. Therefore, the birds had more chances of picking up the infective eggs. The results were supported by the findings by Siddiqi and Riaz (1981), Shamsul-Islam (1985) and Safoora (1987). The variations in the infection recorded during the study may be due to seasonal variations, differences in managerial practices, housing/keeping systems, use of anthelmintics and differences in ecological conditions in the area of respective studies.

Table 1: Species wise incidence rate of nematode in indigenous chicks

| Species | Indigenous chickens | Total No. of Specimens | Per cent infestation |
|-----------------------------|---------------------|------------------------|----------------------|
| <i>Ascaridia galli</i> | 42 | 100 | 42 |
| <i>Heterakis gallinarum</i> | 09 | 100 | 09 |
| Total | 51 | 100 | 51 |

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