

Incidence of ectoparasites in poultry in Palam valley of Himachal Pradesh

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Abstract

A total of 517 non descript village birds and 396 farm birds of White Leghorn (WLH) breed in and around Palampur were screened for ectoparasites for a period of one year. In village 59.76% (309/517) and in farms 42.42% (168/396) birds were found infested with ectoparasites. Four species of lice *Menopon gallinae*, *Menacanthus stramineus*, *Goniocotes gallinae* and *Lipeuris caponis* and one species of mite (*Ornithonyssus bursa*) were detected in both village and farm birds. Lice were recorded throughout the year whereas the mites were mainly prevalent during rainy season. The incidence of *Menopon gallinae* was recorded to be highest in the village (49.5%) as well as in farm birds (32.82%). The overall incidence of ectoparasites was highest during rainy season in both villages (78.80%) and farm (65.27%) managed birds followed by the summer season. Lowest incidence of ectoparasites in village (42.10%) and farm (20.45%) was recorded in the winter season.

Keywords :

Introduction

Various workers in India (Jagannath *et al.*, 1974; Mir *et al.*, 1993; Saxena *et al.*, 1995) and other countries (Fabiyyi, 1980; Abeba *et al.*, 1997; Khan *et al.*, 2003) have studied the prevalence of ectoparasites in poultry but no comprehensive studies on the prevalence of ectoparasites in poultry have been carried out in Himachal Pradesh. The present study was conducted to record the prevalence of ectoparasites in different seasons in village and farm birds.

Materials and Methods

A total of 517 village birds (non descript type) and 396 farm birds (WLH) in and around Palampur were screened for a period of one year (July 2000 - June 2001). The mites found on the feathers of birds as well as those crawling on the walls of poultry houses were picked up with a camel hair brush moistened with water and transferred to a glass vial containing 70% alcohol. The collected lice and mites were further processed as per the standard procedure.

Results and Discussion

In the present study, 59.76% village birds and 42.42% farm birds were found infested with ectoparasites. In village and in farm birds four species of lice, *viz.*, *Menopon gallinae*, *Menacanthus stramineus*, *Goniocotes gallinae* and *Lipeuris caponis* and one species of mite *Ornithonyssus bursa* were record (Table 1) and Table 2). Different workers have reported

the prevalence of these ectoparasites from different places (D'Souza and Jagannath, 1982; Bettiah and Gouder, 1969; Singh and Chhabra, 1973). In the village birds, *O. bursa* was recorded in rainy (5.97%) and summer (3.28%) season whereas in farm birds it was recorded in rainy season (12.5%) only. The incidence of *Menopon gallinae* was recorded to be highest in the village (49.5%) and farm birds (32.82%) throughout the year in comparison to other ectoparasites. The lice were observed throughout the year, however, mites were mainly prevalent in the rainy season.

In the village birds, higher incidence (59.76%) of ectoparasites was recorded as compared to farm birds (42.42%). Season-wise analysis of the data revealed the highest incidence of ectoparasites in the rainy season (Table 2). During this season, the overall incidence of ectoparasites was 78.80% in village birds and 65.27% in farm birds. Reasonably high temperature and heaviest rainfall during the rainy months in this region favours the multiplication of ectoparasites and as a result maximum number of birds were found infested with lice and mites in this season followed by summer season. During summer, 56.79% village birds were found harbouring ectoparasites whereas the incidence of ectoparasites in the birds of organised farms was low (39.16%) in this season also. Lowest incidence of ectoparasites was recorded in winter months in both village (42.10%) and farm birds (20.45%) probably due to low temperature, low humidity and shorter light hours in winter.

Table 1: Incidence of ectoparasites in village birds

Season	No. of birds screened	Positive for ectoparasites %	<i>O. bursa</i> %	<i>Menopon gallinae</i> %	<i>Menacanthus stramineus</i> %	<i>Goniocotes gakkubae</i> %	<i>Lipeurus caponis</i> %
Rainy Jul-Oct 2000	184	145 (78.80)	11 (5.97)	135 (73.36)	58 (31.52)	49 (26.63)	19 (10.32)
Winter Nov-Feb	171	72 (42.10)	Nil (0)	57 (33.43)	37 (21.63)	18 (10.52)	Nil (0)
Summer Mar-Jun 2001	162	92 (56.79)	5 (3.08)	64 (39.50)	41 (25.30)	19 (11.72)	2 (1.23)
Total	517 (59.76)	309 (3.26)	17 (49.5)	256 (26.30)	136 (16.63)	86 (4.06)	21

Figures in parenthesis represent per cent.

Table 2: Incidence of ectoparasites in farm birds

Season	No. of birds screened	Positive for ectoparasites %	<i>O. bursa gallinae</i> %	<i>Menopon stramineus</i> %	<i>Menacanthus gakkubae</i> %	<i>Goniocotes caponis</i> %	<i>Lipeurus</i> %
Rainy Jul-Oct 2000	144	94 (65.27)	18 (44.44)	64 (43.75)	63 (20.83)	30 (8.33)	12
Winter Nov-Feb	132	27 (20.45)	Nil (19.69)	26 (9.09)	12 (6.06)	8 (0)	Nil
Summer Mar-Jun 2001	120	47 (39.16)	Nil (33.82)	40 (25.83)	31 (14.16)	17 (0)	Nil
Total	396 (42.42)	168 (4.5)	18 (32.82)	130 (26.76)	106 (13.8)	55 (3.03)	12

Figures in parenthesis represent per cent.

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