

THE PREVALANCE OF SALMONELLOSIS IN POULTRY FARMS IN AND AROUND DISTRICT KASUR, PAKISTAN (Report)

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ABSTRACT: *Salmonellosis is very important disease of poultry. This leads to great economic loss due to high mortality rates. Salmonellosis is a vertically transmitted disease. This study was conducted to estimate the prevalence of Salmonellosis in district Kasur. The chicks were examined through postmortem lesions and whole agglutination test. A total of 36 commercial flocks were examined and overall prevalence of Salmonellosis was found 20.78% in district Kasur. The prevalence of pollorum disease was found high in broiler breeder which was around 42.96 %. This study recommended that breeders free from Salmonellosis should maintain to get healthy chicks for more production of poultry products.*

Keywords: Poultry, Salmonellosis, Prevalence, Broiler Breeder, Kasur

INTRODUCTION:

Pullorum disease is an acute disease which generally causes high mortality in young chickens. The disease is caused by Salmonella Pullorum. All breeds of birds are susceptible. Young chicks under the age of 14 days are more susceptible and fetal whereas chronic form of this disease more common in adult birds [1]. Disease spread is by vertically through the infected breeder flocks and horizontally through contaminated incubators, hatchers, chick boxes brooder houses equipments [2]. Mortality in some of the chickens occurred early just after the hatching without exhibiting any sign other may show white diarrhea [3]. Pullorum disease in middle and mature aged flocks may cause diarrhea, depression, dehydration and less feed intake. The survived birds have reduced growth rate and poor development of feathers.

The death can happened from 5 to 10 days of age after hatching. The mortality rate is very high in this disease which can be up to 80%. The signs and symptoms of the disease went silence in adult birds. For the purpose of diagnosis the salmonella can be isolated from the body tissue of the diseased birds. This disease also has zoonotic importance as the consumption of the effected meat can cause salmonella infection in human beings [4]. Keeping in view the importance of the disease; the current study was conducted to examine the incidence of salmonellosis in different commercial poultry flocks maintained in and around district Kasur.

MATERIALS AND METHODS:

The study was conducted at the Disease Diagnostic Laboratory, office of the Deputy District Livestock Office Poultry Production Kasur. Around 36 poultry farms were surveyed in this study. The selected farms were visited fortnightly for recording the observations on the presence of salmonellosis. Poultry flocks were examined physically for the typical signs/symptoms of the pullorum disease. Postmortem examinations were also done of the sick/dead birds. Detailed histories of the flocks were recorded. The flocks were tested through the whole blood agglutination test by using the standard pullorum antigen [5]. The results were interpreted in Table1.

Table1. Whole agglutination Test observations of blood samples of suspected birds

Nature of Test	Observations
Positive test (+)	Clumping of antigen in the form of violet colored aggregates which surround by clear space
Doubtful test (±)	A less positive reaction or very weak reaction.
Negative test (-)	No clear agglutination.

The affected flocks were treated accordingly. The response of the medicine and control measures was observed in the follow up visits.

RESULTS AND DISCUSSION:

The totals of 98250 birds were surveyed from 36 commercial flocks in this study. The 582 birds were found positive for pullorum out of 2800 tested bird by blood agglutination test. The overall prevalence of pollorum disease was found 20.78%. The prevalence of pollorum disease was found high in broiler breeder which was around 42.96 % (58 out of 135) as compared to layer chicks, adult layers and broilers. This disease is being transmitted vertically to the young chicks therefore such a high occurrence of pullorum in the breeder flocks may be a risk of transmission of infection to the day-old chicks. The affected chick show high mortality rate as well as poor growth rate and poor feed conversation ratio. These diseased chicks also serve as source of contamination in the surrounding farms and other house hold birds. The findings of this study are in conformity with the studies of [6] and [7] who also report high prevalence of salmonellosis in poultry flocks.

It is confirmed through this study that the prevalence of the salmonella pullorum is very high in the poultry flocks in and around Kasur, especially the incidence was found very high in breeder flocks. So it is suggested that the breeders which are disease free should maintained to get healthy chicks. The

biosecurity measures should also be implemented to block the free spread of the disease in healthy flocks.

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