

Abstract:

Introduction and Aims: Today, as the population grows, there is a need for high quality food supplies and for this purpose, in poultry farming, oral antibiotics have been used to increase production and improve yield, which has been the subject of much research due to the adverse effects of antibiotics. To evaluation of the natural alternatives, including garlic. We did this project to survey about the effect of fresh garlic in the meal on immune system and biochemistry factors of blood serum including: cholesterol, Triglyceride and Total protein among broilers.

Materials & Methods: For doing this project we have used 105 broilers (308 tip) that had been already borne and was their first day of life. At the beginning of seventh day weak broilers had been removed and 96 broilers that had better condition had been chosen and then eventually had been divided into 3 equal groups with 2 repetitions. In every group 16 broilers had been existed and divided. These experimental group's meal had been squashed and mixtured with different amount of fresh garlic. The amount of fresh garlic in the first group's meal was 0% for the second group was 1% and for the third one was 2%. We daily have got the samples of squashed garlic and had mixtured with experimental group's meal as much as mentioned percentages. To examine broiler's immune system we have used Bursa of Fabricius, the amount of antibody that had been produced against injection of RBC and antibody titer against Newcastle virus (HI). At the 21th and 28th day, sheep's washed RBC had been injected in order to examine immune system and at the 35th day, 8 broilers from each repetition eventually had been chosen then their weight and blood sample had been afforded from vein of the wing. Then broilers had been killed and had been necropsied in order to survey weight of the Bursa. Antibody titer that had been produced against sheep's RBC (Antisrbc) in blood serum had been measured by microtiter method. In order to measure amount of antibody titer against Newcastle virus HI experiment had been used. The blood serum sample had been used in order to measure biochemistry factors of blood including Triglyceride and Total protein. For doing microbial reviews of *E-Coli* and *Coliform* sampling of the stool in the intestines had been done and had been cultivated. After that the amount of *E-Coli* and *Coliform* had been measured.

Results: The results showed that the effect of different percentages of garlic increased broiler immune response to red blood cells and HI titer Newcastle disease, decreased blood triglyceride and also increased stock weight and logarithm of coliform count but increased and total protein content. Cholesterol content, body weight, BMI and bowel number did not show significant differences between groups.

Key words: broiler, biochemistry factors, garlic, immune system



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**The effect of fresh garlic on the immune system and some
biochemical factors of blood serum in broilers**

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