

Effects of Probiotics on Specific Immunity in Broiler Chicken in Syria

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Abstract : The main objective of this experiment was to study the impact of Probiotic compound on the specific immunity as the case study of infectious bursal disease. Total of 8000 one-day old Ross 108 broiler were randomly divided into two experimental groups; control group (4500 birds) and experimental group (3500 birds). Birds in two groups were reared under similar environmental conditions. Birds in control group received basal diets without probiotic whereas the birds in experimental one were fed basal diets supplemented with a commercial probiotic mixture) probiotic lacting k, which contains bacteria cells beyond to lactobacillus, Streptococcus and bifidobacterium genus that are isolated from gut microflora in healthy chickens(. The commercial probiotic were used according to the manufacturer instruction. 400 blood samples for each group were collected from wing vein every 5-7 days as interval period till 42 days old. Indirect Enzyme-Linked Immunosorbent Assay (ELISA) test was performed to detect the level of infectious bursal disease virus (IBDV) antibodies. The results clearly showed that the mean of immune titers was significantly ($p= 0.03$) higher in trail group than control one. The coefficient of variance percentages were 55% and 39% for control and trial groups respectively, this illustrates that homogeneity of immunity titers in the trail group was much better comparing with control group. The values of geometric means of titers in the control group and trial group were reported 3820 and 8133, respectively. The crude mortality rate in the experimental group was two times lower comparing with control group (14% and 28% respectively, $p = 0.005$)

Keywords : probiotic, broiler chicken, infectious bursal disease, immunity, ELISA test

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