

Effect of adding different levels of olive leaf powder to the diet on the production performance and some physiological characteristics of broilers

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ABSTRACT:

An experiment was conducted to investigate the effect of adding different levels of Olive Leaf Powder (OLP) to the diet on production performance and some physiological characteristics of broilers. This experiment carried out in one of the private poultry breeding fields in the Hit city of Anbar province and lasted for seven weeks (49 days) from 18th of September 2014 to the 2nd of November 2014. One hundred ninety two unsexed one day -old broilers (Ross 308) were reared with an average mean weight of 42.3 g. The chicks were distributed into four treatments with three replicates per treatment and 16 chicks per replicate. The experimental treatments involved T₁ (control), T₂, T₃, T₄ which were supplemental with basal diet in the levels of 5, 10, 15 g/kg of the Olive Leaf Powder (OLP) respectively. The results of this study showed that T₂, T₃ were significantly higher (P<0.01) compared with T₁ in the body weight at week seven. As for the feed conversion coefficient, T₂ had a significant superiority (P<0.05) on T₁ and T₄ at week six. Also, T₂ was significantly higher (P<0.05) compared with T₁ and T₄ at week seven in the relative growth rate. At week seven, the feed consumption was significantly higher (P<0.01) in T₂ and T₃ compared to T₁. Regarding to the effect of the addition of OLP on some blood characteristics, T₃ and T₄ were significantly increased (P<0.01) in the size of the blood cells and the level of hemoglobin compared to T₁ and T₂. For the total protein concentration, the lowest level was recorded in T₁ while T₃ was significantly higher (P<0.01) compared with T₁, T₂, and T₄. The addition of OLP showed a significant decrease (P<0.01) in the concentration of glucose, cholesterol and triglycerides in serum compared to T₁ and the lowest level was noted in T₄. A significant decrease in the level of LDL (P<0.01) and high levels of high density lipoproteins (HDL) for the addition of OLP compared to control treatment. Moreover, a significant difference in the concentration of enzymes Aspartate Amino Transferase (AST) and Alanine Amino Transferase (ALT) which carries the amine group in the blood serum of the broilers. A significant decrease (P<0.01) in the concentration of AST and ALT in T₂, T₃, T₄ compared with T₁ was detected.

Keywords:

Olive leaf powder, Broilers, Production performance.