

DIETARY GARLIC (*Allium sativum* L.) SUPPLEMENTATION ON PERFORMANCE, MEAT QUALITY AND LIPID PROFILE IN BROILERS

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Feed additives are used in broiler rations to reduce feed cost, enhance broiler performance and quality of product. Garlic is one of the natural feed additives, which reduces serum cholesterol and improve performances of broilers. This study was carried out to investigate the effect of garlic powder as a feed additive in broiler rations on growth performance, carcass quality and lipid profile. Four diets were prepared by mixing garlic powder at different levels; 0, 0.5, 1 and 2 kg/ton with a commercial broiler ration. Two hundred, day-old broiler chicks were randomly assigned to four treatment diets with three replicates of sixteen birds each. Growth performances were observed weekly and carcass quality parameters and lipid profile of blood were measured after feeding the diets for 42 days. Data were analyzed using one way Analysis of Variance. Feed intake, weight gain and feed conversion ratio of birds were significantly different ($p < 0.05$) among the treatment diets. The highest feed intake occurred for birds fed with zero garlic level. The highest weight gain and the lowest feed conversion ratio were observed in birds fed with 1 kg/ton of garlic ($p < 0.05$). However, there were no differences ($p > 0.05$) in dressing percentages among birds fed with different diets. The lowest total serum cholesterol was reported for birds fed with 2 kg/ton garlic in diet followed by those fed with 1 kg/ton garlic in diet. Muscle protein contents were significantly higher ($p < 0.05$) in birds fed with 1 kg/ton and 2 kg/ton levels of garlic in diet compared to zero and 0.5 kg/ton garlic levels. In conclusion, garlic powder is an excellent feed additive at the rate of 1 kg/ton to improve the broiler performances and meat quality while reducing their blood cholesterol.

Keywords: Broiler chicks, Feed additive, Garlic, Lipid profile, Performances