Growth response and carcass characteristics of broiler chickens fed diets supplemented with garlic (*Allium sativum*)

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Abstract

This study was conducted to determine the effects of garlic (*Allium sativum*) as a phytogenic feed additive (PFA) on growth and carcass characteristics of broiler chicken. One hundred and fifty day old Marshal Strains of broiler chicken were assigned to five dietary treatments with thirty birds in a Completely Randomized Design with the following inclusion levels of Treatment 1, 0.0% of garlic (without oral antibiotics medication for birds), Treatment 2, 0.0% garlic (with the use of antibiotics for the birds), T3 – 0.2% of garlic, T4 – 0.4% of garlic, T5 – 0.8% of garlic. The thirty chicks were subdivided into 3 replicates of 10 birds each. Feed and water were offered ad libitum and mortality was recorded as it occurred. Data were obtained on the growth performance parameters such as body weight, feed intake and liveability while feed conversion ratio was calculated. Carcass parameters measured were live weight, bled weight, eviscerated weight, dressed weight, primal cuts (thigh, drumstick, breast and wing) and internal organs (Gizzard, Liver, and Heart). The result of the growth performance showed that there were significant differences \((P<0.05)\) in the average feed intake of the birds and the body weight gain of the birds, the values obtained for feed intake ranged from 4100.98g – 4907.31g. However, broilers fed with 0.4% inclusion level of *Allium Sativum* had the best liveability (96.67%). On carcass traits, there was significant difference \((p<0.05)\) in the carcass parameters of the birds, however, no significant difference were observed \((p>0.05)\) in the values of the organs (liver, heart and gizzard) and the primal cuts. This study revealed that the inclusion of garlic (*Allium sativum*) in the diets of broiler chicken has no detrimental effect on growth performance, organ weight and primal cut values of the experimental birds but improved the average body weight and liveability of the birds at the inclusion level of 0.4% /100kg of feed.

Keywords: Broiler, Phytogenic, *Allium sativum*, marshal strain, growth performance, carcass characteristics,