

Comparative effect of honey, orange juice, glucose and milk as water additives on performance and carcass qualities of broiler chickens

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Abstract

A fifty-six day experiment was carried out to determine the effect of using honey, orange juice, glucose and milk as water additives on the performance and carcass qualities of broiler chickens. Water alone served as treatment 1 (control) while 100ml of honey, orange juice, glucose and milk each served as treatments 2, 3, 4 and 5 respectively in a completely randomized design. The treatments were replicated thrice during the eight weeks of the experiment. The final weight, and feed conversion ratio improved significantly ($P < 0.05$) in T5. The final weights of T2-T4 were similar ($P > 0.05$) but T5 is significantly ($P < 0.05$) greater than T1. The FCR of T1-T5 were similar ($P > 0.05$). T3 and T4 were similar ($P > 0.05$) while T5 is significantly better than T3. Feed intake was higher ($P > 0.05$) in T3 and T4 and lowest in T1. The water/additive intake of birds given T4 was significantly higher ($P < 0.05$) than those on T1, T2, T3 and T5. The carcass weight, thigh and drumstick of broiler given T4 and T5 were significantly better ($P < 0.05$) than other treatments. The breast weight, wing and back of T1 and T5 were similar ($P > 0.05$). However, T5 had better breast weight than others while wing and back were significantly better ($P < 0.05$) in T4. The liver of T1-T4 were not significantly different ($P > 0.05$) but T5 is higher than T3. The heart, proventriculus and intestines of T4 and T5 were not significantly different ($P > 0.05$) but were better ($P < 0.05$) than those of T1-T3 which were similar ($P > 0.05$). The kidney and lungs in T2-T5 were similar ($P > 0.05$) but significantly better than T1. The values of spleen and gizzard were generally not significant ($P > 0.05$) in all the treatments. Furthermore, the cost of production, cost/weight gain of birds given orange juice were significantly higher ($P < 0.05$) than others. The revenue generated from broilers given milk was significantly higher ($P < 0.05$) than those given orange juice but not significantly different ($P > 0.05$) from others. Gross margin (profit) of broilers given milk was significantly higher ($P < 0.05$) than those given water alone, honey, orange juice and glucose respectively. It is therefore recommended that milk be mixed in the water given to broilers for better growth rate, carcass values and profitability.

Keywords: Water additives, honey, glucose, orange juice, milk, water

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Target audience: Poultry Farmers, Additive Manufacturers, Processors, Researchers