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## Influence of Bitter Leaf and Ginger Supplementation on Growth and Haematological Indices of Broiler Chickens

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### Abstract

The increasing concern regarding anti-biotic resistance has elicited alternative usage of other substances including essential oils, herbs and spices, such as bitter leaf and ginger. This study was conducted to assess the effect of dietary supplementation of bitter leaf and ginger on growth performance, carcass, haematological and serum biochemistry of broiler chickens. Three hundred and twenty (320) one-week old Anak 2000 broiler chicks were divided into four equal groups and were randomly allocated to four dietary treatments in five replicates each. Four diets were formulated to meet the nutrient requirements for the two broiler phases. Diet 1 served as the control containing no test ingredient, while diets 2, 3 and 4 contained 0.25% of bitter leaf, ginger and a mixture of bitter leaf and ginger, respectively. Results showed that the final live weight and feed intake did not differ significantly ( $p > 0.05$ ). Birds fed the control diet were better ( $p < 0.05$ ) in terms of daily weight gain (90.0 vs 80.1, 85.4 and 81.3 g bird<sup>-1</sup>) and feed conversion ratio (2.24 vs 2.53, 2.33 and 2.49) when compared to the test diets. Mortality was significantly ( $p < 0.05$ ) reduced among the chickens fed on bitter leaf and ginger diets. The range was 0.48% in diets 3 and 4 to 1.68% in the control. Dressed weight, eviscerated weight and abdominal fats were significantly higher ( $p < 0.05$ ) in the control diet than in the test diets. Relative weights of other carcass cuts were statistically similar. Birds fed diets 2 and 3 had superior ( $p < 0.05$ ) haemoglobin content, packed cell volume and red blood cell values. Total cholesterol decreased significantly ( $p < 0.05$ ) in the bitter leaf and ginger diets with values decreasing from 2.50 mg per 100 ml in control diet to 1.60 mg per 100 ml (36% decrease) in diet 3. Creatinin and serum total protein were significantly higher in the bitter leaf and ginger diets. It could be concluded from the study that bitter leaf and ginger meals supplementation of diets can enhance growth and good health in broiler chicken.

**Keywords:** Bitter leaf, broiler chickens, ginger, haematology, performance