

Effect of Bread Fruit (*Artocarpus altilis*) Flour on Growth Performance and Meat Quality Parameters of Broiler Chickens

N.K.P.K. Dayarathna¹, G.G.N. Jayarathna¹, D.D. Jayasena¹, S.P. Dissanayake² and N.M.N. Nambapana^{1*}

¹*Department of Animal Science, Uva Wellassa University, Badulla, Sri Lanka*

²*Gold Coin Feed Mills (Lanka) Limited, Colombo 15, Sri Lanka*

Breadfruit flour (BFF) is considered as an energy rich food ingredient which provides an excellent source of calories for the diet. The study reported herein was conducted to determine the effect of breadfruit (*Artocarpus altilis*) flour on growth performance and meat quality parameters of broiler chickens. Ninety-day old Cobb 500 broiler chicks were randomly assigned into three dietary treatments as control (0% BFF), treatment 1 (5% BFF), and treatment 2 (10% BFF) in a booster, starter and finisher diets, respectively. Each treatment replicated three times with 10 birds per replicate. Body weight, feed intake and feed conversion ratio (FCR) were recorded for 5-weeks. On day-36, two birds from each replicate were randomly selected and were slaughtered for carcass analysis. Data were analysed using a one-way analysis for a variance by using Minitab 17 software. Tukey multiple range test was used to determine the significant differences between experimented groups at $p < 0.05$. There was no significant difference ($p > 0.05$) on feed intake of broilers fed different dietary treatments. Birds fed 10% BFF achieved the highest ($p < 0.05$) weight gain and the lowest FCR compared to other treatments. The highest ($p < 0.05$) dressing percentage and the relative weights ($p < 0.05$) of heart, liver, and intestines were recorded from the birds fed the diet having 10% BFF. No significant effect ($p > 0.05$) was observed in proximate composition and meat quality parameters tested. Sensory attributes were higher in birds fed treatment 2 and the highest ($p < 0.05$) overall acceptability was recorded by the birds fed with 10% BFF. In conclusion, breadfruit flour can be incorporated into broiler diets at a 10% level to enhance body weight, good carcass yield, and to improve meat quality parameters of broiler chickens without any negative effects.

Keywords: Breadfruit flour, Broiler chickens, Growth performance, Meat quality