

Evaluation of Lawalu (*Chrysophyllum roxburghii*) fruit meal as a feed ingredient for broilers

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Abstract

Cereals have a greater demand both by the human food industry and by animal feed industry. Therefore, alternative feed ingredients suitable for the feeding of livestock including poultry have to be identified. Lawalu (*Chrysophyllum roxburghii*) is an under utilized tree fruit grown naturally in many tropical and sub tropical regions. Objective of this study was to evaluate lawalu fruit meal (LFM) as a feed ingredient for broilers. Giving completely randomized design, ninety broilers chicks in 30 pens received one of the five broiler finisher diets containing five levels of LFM; either 0 (control diet), 5, 10, 15 or 20%. Experimental diets and water were given *ad libitum* from day 21 to 42. In ration formulation, only the CP contents of LFM and metabolizable energy value (assumed to be as 0.75 x gross energy) were considered. The final live weights on day 42 and weight gains from day 21-42 of the birds given LFM were not significantly different ($p>0.05$) from those of the birds given control diet. Birds given control diet consumed significantly lesser amount of feed compared to the birds given 5 or 10 or 20% dietary LFM. Water intake was not significantly affected by the dietary LFM levels. The feed conversion ratio of the birds fed control diet was significantly lower than that of birds given other diets. The weights of the gizzard, crop, liver, pancreas, small intestine and the length of the small intestine in relation to empty carcass weight were not significantly different between treatments. Birds fed either 10 or 15% LFM gave significantly lower abdominal fat pad percentage compared to the birds given control diet. It was concluded that, even though the LFM could be included in broiler finisher diet up to 20% without any adverse effect on health and on final live weight and weight gain, the conversion efficiency of feed reduced when LFM was included in broiler diets.

Keywords: Lawalu Fruit Meal, Broiler feed, Alternative feed