Growth Performance of Broiler Chicken Influenced by Hog Plum Leaf Meal

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Introduction

Since high-quality animal protein is a major contributor to human and animal nutrition, growth, physiological development, and health, current commercial hybrid chickens (especially broiler chickens) with high-performance need diets would allow the maximum expression of their genetic potential. Most of the conventional feedstuffs used in broiler chicken diets are expensive and also in competition with human food thus there is a need for alternatives. The cost of producing monogastric animals can be effectively reduced by using feedstuff from unconventional sources because they are cheap, readily available and have both nutritional and medicinal benefits, they include leaves of some legumes, browse plants or agro by-products. This study therefore evaluated the effect of feeding hog plum leaf meal on the growth performance of broiler chicken.

Materials and Methods

A feeding trial of 21 days was carried out on broiler chicken to evaluate the effect of Hog Plum meal on their growth at the Federal Polytechnic, Ilaro. Fresh hog plum leaves (*Spondias mombin*) were harvested from the Polytechnic community, dried under room temperature, and then ground into powder using a blender ("Pyramid® PM-B999") after which it was stored in air tight container and used for the study. Ninety-six (96) broiler chickens, aged three (3) weeks were procured and randomly assigned to four dietary treatment (T) groups, with each group containing 24 birds in a completely randomized design manner. Each treatment group was further divided into three replicates, with 8 birds per replicate and were fed *Spondias mombin* leaf meal; **T2**: 50 g of hog plum powder, **T3**: 75 g of hog plum powder, **T4:** 100 g of hog plum powder while **T1** was fed 0g of hog plum powder per 25 kg of commercial broiler finisher feed respectively. Data on feed intake, weight gained and feed conversion ratio (FCR) were collected and analyzed using One Way Analysis of Variance (ANOVA).

Result

The result showed that T1 had the highest feed intake of 2566.67 g which is significantly ($P < 0.05$) higher than others while T4 had the lowest value of 2490 g. The weight gained and FCR were not statistically significant ($P > 0.05$) but T3 had the highest numerical weight gain value of 1308.00 g while T4 had the best FCR value of 1.86 respectively. Results of previous studies where hog plum leaf meal was included as an additive in the ration of broiler chicken and an outcome of improved weight gain was reported corroborate the result of this present study.

Conclusion

It was concluded that the incorporation of *Spondias mombin* into broiler diets enhances feed efficiency at 100 g per 25 kg of feed. Further research is warranted to explore optimal inclusion rates and longer-term effects on the growth performance of broilers fed diets supplemented with *Spondias mombin* leaf meal.

Keywords: feed, herb meal, nutrient, weight gain