Efficacy of Hog Plum on Growth Performance of Broiler Chickens Exposed to Aflatoxin-Contaminated Feed

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Introduction
Aflatoxin contamination within poultry feed is a critical problem because this toxin damages broiler growth characteristics through decreased weights, impaired feed conversion, and increased mortality. The agricultural sector investigates the properties of hog plum (*Spondias mombin*) which helps counteract aflatoxicosis occurring in feed. Researchers studied the significance of hog plum supplementation as poultry feed protection against aflatoxins. These become a major problem when they cause broiler growth performance declines that result in weight reduction decreased feed utilization and increased mortality rates. Farmers throughout the agricultural sector study the medicinal properties of hog plum *(Spondias mombin*) to treat feed-related aflatoxicosis. Scientists investigated how adding hog plum to feed influenced the performance of aflatoxin-exposed broiler chickens through measurements of weight management and dietary consumption along with FCR evaluation.

Materials and Methods
One hundred and fifty (150) day-old broiler chickens were used for this study. The experiment was divided into 5 treatments, each treatment was replicated thrice to contain 10birds/replicate contained each treatment group was divided as follows;
T1 (Control): 0 µg/kg aflatoxin + 0 ml hog plum.
T2: 35 µg/kg aflatoxin + 0 ml hog plum.
T3: 1 mL/L Hog plum + 0 µg/kg aflatoxin
T4: 1 mL/L Hog plum + 35 µg/kg aflatoxin
Aflatoxin was added to the feed of the birds while Hog plum was included in the water. Data regarding growth performance involved monitoring initial weight, and final weight along with average weight gain feed intake, and FCR were taken weekly. All data collected in this study were subjected to one-way Analysis of Variance (ANOVA) as contained in the Minitab software Version 17.1.0. Significantly, ($P < 0.05$) different means among variables were separated using a Tukey test contained in the same software.

Results
The weights exhibited substantial differences ($P< 0.005$) during the initial measurement where T4 (262.38 g) was the highest value. The final weights showed the highest results in T4 (1,766.33 g) while the least ($P < 0.005$) significance was obtained in T3 (1,547.00 g). The utilization of hog plum during simultaneous exposure to aflatoxin in T4 resulted in substantially greater weight gains of 1,567.81 g. Supplementing hog plums to the birds did not affect their daily feed consumption because they consumed the most feed in T1 (3,410.40 g) and the least in T4 (3,223.86 g). The FCR results indicated that T4 (2.056) showed better efficiency ($P < 0.005$), thus proving that hog plum enhanced feed utilization among aflatoxin-exposed birds.

Conclusion
The research established that administering hog plum to contaminated feed positively affected growth performance in aflatoxin-exposed broilers. Hog plum supplementation along with aflatoxin administration during T4 produced the highest weight gain together with improved FCR results.

Keywords: Broiler, Aflatoxin, Hog-plum, weight gain, feed