EFFECT OF BROILER STARTER AND FINISHER FEED REPLACEMENT TIME ON THE PERFORMANCE OF BROILER CHICKEN

BY

Mr. ATHAM BAWA THASLEEM

FACULTY OF AGRICULTURE

EASTERN UNIVERSITY

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ABSTRACT

Broiler meat is the most consumed meat in Sri Lanka as an animal protein source. However, the cost of producing broiler meat is high due to higher feed cost. Therefore, an experiment was conducted to find out the optimum time of broiler starter and finisher feed replacement on the growth performance, carcass quality and organ size of broiler chickens.

The experiment was conducted at the Livestock farm of the Department of Animal Science, Faculty of Agriculture, Eastern University, Sri Lanka for a period of 42 days beginning from June17 to July 29, 2015.This experiment was carried out using Complete Randomised Design (CRD). A total of 120, unisex, day-old chicks of Indian River strain were purchased from the Prima (Pvt) Ltd., Sri Lanka. The birds were allocated into four treatment groups such as T_1,T_2,T_3,T_4.The treatments were replicated thrice and each replicate consisted of ten birds. Feed and water were provided *ad libitum* and proper litter management, sanitation and vaccination were adopted. Commercial starter and finisher diet were used throughout the experimental period.

The growth performance results revealed that the birds fed starter diet up to day 18 (T_2) gained the highest body weight ($P \leq 0.05$) while the birds fed starter diet up to day 21 (T_3) gained the lowest. Therefore, it could be concluded that increasing the starter diet period would not increase the body weight gain of broiler chickens.

The feed intake was significantly higher in the birds fed starter diet up to day 15 (T_1) and 21 (T_3) while it was lowest in the birds fed starter diet up to day 24 (T_4). Increasing the starter diet period up to day 24 reduced the feed intake in the birds.

Even though, the FCR of bird fed starter diet up to day 21 was significantly higher when compared to those in other treatments, the values reported for FCR in all treatment groups were less than two. . Live weights of birds fed starter diet up to day 18 (T_2) and day 24 (T_4) were significantly highest while it was lowest in those fed starter diet up to day 21 (T_3).

Dressing percentage was significantly highest in the birds fed starter diet up to day 21 (T_3) while it was lowest in those fed up to day 18 (T_2). Increasing the duration of feeding starter diet increased the dressing percentage up to day 21.

Increasing the duration of feeding starter diet up to day 24 reduced the relative weights of gizzard, heart and liver. In addition, the period of feeding starter diet did not influence the immune organ spleen in broiler chickens.

Significant difference was recorded for the broiler performance efficiency factor in which the birds fed starter diet up to day 18 (T_2) recorded the highest BPEF while those fed up to day 21 (T_3) recorded the lowest.

The findings of the present study showed that the broiler feed cost per bird is keep on increasing significantly with the prolonging of starter diet period from day 15 up to day 24.

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