

Investigation on feed quantitative restriction duration and intensity on performance, carcass quality, blood parameters and immune system of broiler chickens

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This study was conducted to evaluate the effect of two feed restriction periods (7 and 14 days) with four different levels of feed restriction (5, 10, 15, and 20% less than guidance guidelines for breeding strain Ross 2007) on yield, carcass characteristics, Blood and immunity parameters of male Ross 308 broiler chickens were performed in a completely randomized design with a factorial experiment (4 × 2) with a control treatment, including 270 Ross male broiler chicks. Chickens were divided into 9 treatments, each treatment with 3 replicates and 10 chicks per replicate, and chicks were harvested for 42 days. Chickens were subjected to food restriction for one or two weeks the age of eight days. After the end of the period, until the end of the rearing period (42 days old), chicks different treatments were fed freely ($P \leq 0.05$). The results showed that the feed intake was influenced throughout the course of the experiment, the effects of duration and severity of food restriction and were significant ($P \leq 0.05$). During the breeding period, the weight gain was significant, and the total weight gain was higher among the treatments than the control group ($P \leq 0.05$). In the whole period of breeding, the conversion factor of feed in the control treatment was higher and meaningful ($P \leq 0.05$). The comparison of the final weight of chicks in this study showed that chicks under dietary restrictions were able to reach the weight of the control group at 42 days of age and even had a higher final weight than the control group (free nutrition), although significant results Not yet The production index in the present study was higher in treatments under the food restriction, although it was not significant, and the fourth treatment was numerically highest in production (356) ($P > 0.05$). In particular, the carcass characteristics and

the comparison of different parts of the digestive system, the cavity fat Abdominal distension has been reduced by 14 days to 7 days, although not significant ($P>0.05$). The percentage of weight of ileum, right coronary mass, right wrist mass percentage, left ventricular diameter and left ventricular diameter were higher in control treatment compared to other treatments and were significant ($P\leq 0.05$). In the study of blood metabolites in restricted groups, the results were not statistically significant ($P>0.05$). However, the seven-day limit of four days increases the total cholesterol ($P\leq 0.05$). There was no significant difference in antibiotic titers in food restricted groups as well as in organs involved in immune system ($P>0.05$). However, liver weight was higher in the seven days period than the fourteen day period ($P\leq 0.05$). Also, the weight Bursa of Fabricius stock was higher in number of treatments than control treatment ($P>0.05$).

Keywords : Food restriction, Compensatory growth, Performance, Carcasses, Blood parameters, Immune system, Broiler chicks.

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