

Investigation of the growth of Broiler Chicken Fed with Azolla Supplement

R. Thusanthi¹, M.G. Mohamed Thariq²

^{1,2}Department of Biosystems Technology, Faculty of Technology, South Eastern University of Sri Lanka

¹Thusaraja12@gmail.com, ²mgmthariq@seu.ac.lk

Abstract

Broiler chicken plays an important role to meet the protein requirement of the growing population with low production cost. The study aimed to enhance broiler chicken weight gain using alternative feed, specifically dry Azolla supplement to contribute the sustainable feeding management. 90 chicks from Cobb-500 breed were randomly and equally divided into two groups with three replicates and each consisting of 15 chicks for the experiment. One group of chicks was given commercial feed (T1) and the second group was fed with feed containing 90% commercial feed and 10% of dry Azolla (T2). The feeding trial was conducted for eight weeks and the data were analysed statistically. The results on weight gain showed that weekly mean weight gain between T1 (54.50±44.32g) and T2 (54.67±43.36g) was not significantly different ($p < 0.05$) throughout the feeding trial. Similarly, weekly mean FCR between T1 (1.48±0.20) and T2 (1.46±0.19) was not significantly different ($p < 0.05$). The results on sensory evaluation of cooked broiler meat showed that chicken meat T2 group had a greater appearance (7.03±0.85), colour (7.16±1.01), odour (6.8±1.42), texture (7±7.17), tender (6.73±1.41), delicious (6.6±1.42), firmness (6.13±1.79), uniformity (6.86±1.13) and overall acceptability (6.9±1.51) than T1 group. Having the findings on the positive effects on sensory meat quality of the birds fed with the Azolla mixed feed (T2), it is concluded that the Azolla can be promoted in feeding broiler chickens even though no effects were found on weight gain and FCR. It is recommended that further studies are needed on the cost effectiveness of the Azolla feeding.

Keywords: Sustainable feeding, Weight gain, FCR, Sensory meat quality