



## EFFECT OF DIFFERENT LEVELS OF CHARCOAL IN THE DIET ON THE PRODUCTIVE AND PHYSIOLOGICAL PERFORMANCE OF BROILERS

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Article info	Abstract
<b>Received:</b> 2024-11-24 <b>Accepted:</b> 2025-01-17 <b>Published:</b> 2025-06-30	This study investigated the effect of including different amounts of charcoal in broiler diets on their growth performance, feed conversion ratio (FCR), carcass traits, intestinal microbiota, and blood biochemical traits. A total of 324 unsexed day-old Ross 308 broiler chicks weighing 41.6 g on average were randomly distributed into four groups comprising a control (T1) with a standard diet, and three treatment groups whose diets were supplemented with charcoal at 1.5% (T2), 3% (T3), and 4.5% (T4), respectively. The results showed that the T3 group had the highest average weekly weights and cumulative weight gain, significantly better growth rates and feed efficiency, and the best FCR rates compared to other treatments. Carcass analysis showed that adding charcoal resulted in higher breast and thigh meat percentages, improving fresh meat quality. Moreover, it notably favored an enteric epithelial microbiota by decreasing pathogenic <i>Salmonella</i> and <i>E. coli</i> while promoting beneficial <i>Lactobacillus</i> . This improvement was clearly seen in their enhanced health status as indicated by higher packed cell volumes, hemoglobin, and total protein levels in the blood. These results suggest that charcoal supplementation in broiler diets improves growth performance, feed efficiency, and health status,
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