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Growth Comparison and Intestinal Health in Broilers Fed Scent Leaf Meal (Ocimum gratissimum) and Synthetic Antibiotic

Authors : Adedoyin Akintunde Adedayo, Onilude Abiodun Anthony

Abstract : The continuous usage of synthetic antibiotics in livestock production has led to the resistance of microbial pathogens. This has prompted research to find alternative sources. This study aims to compare the growth and intestinal health of broilers fed scent leaf meal (SLM) as an alternative to synthetic antibiotics. The study used a completely randomized design (CRD) with 300 one-week-old Arbor Acres broiler chicks. The chicks were divided into six treatments with five replicates of ten birds each. The feeding trial lasted 49 days, including a one-week acclimatization period. Commercial broiler diets were used. The diets included a negative control (no leaf meal or antibiotics), a positive control (0.10% oxy-tetracycline), and four diets with different levels of SLM (0.5%, 1.0%, 1.5%, and 2.0%). The supplementation of both oxy-tetracycline and SLM improved feed intake during the finisher phase. Birds fed SLM at a 1% inclusion level showed significantly ($P<0.05$) improved average body weight gain (ABWG), lowered feed-to-gain ratio, and cost per kilogram of weight gain compared to other diets. The mortality (2.0%) rate was significantly higher in the negative control group. White blood cell levels varied significantly ($P<0.05$) in birds fed SLM-supplemented diets, and the use of 2% SLM led to an increase in liver weight. However, welfare indices were not compromised.

Keywords : Arbor Acres, phyto-biotic, synthetic antibiotic, white blood cell, liver weight
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