PERFORMANCE OF BROILERS FED ON EXTRUDED SORGHUM (*Sorghum bicolor* (L.) Moench) MEAL AND EXOGENOUS PHYTASE-BASED DIET

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ABSTRACT

Sorghum (*Sorghum bicolor* (L.) Moench) is more drought-resilient and adapted to varying soil types, and its grain has a similar nutrient composition to maize. However, some varieties contain high levels of tannins, kafirins, and phytates which adversely affect broiler performance. This study investigated the effect of extruded sorghum meal (ESM) and exogenous phytase on the performance of broilers. In total, 108, mixed-sex, Cobb 500, day-old broiler chicks were used. The chicks were weighed in groups of six and randomly assigned to cages and each one of the six dietary treatments comprising; T1 (0% ESM + 0% phytase), T2 (0 % ESM + 0.035 % phytase), T3 (50 % ESM + 0% phytase, T4 (50 % ESM + 0.035 % phytase), T5 (100 % ESM + 0 % phytase), and T6 (100 % ESM + 0.035 % phytase). The grower diets were offered 1-21 d and finisher diets 22-42 d. The average daily feed intake, average daily gain and feed efficiency were recorded weekly. ESM at a 50% inclusion did not affect the feed efficiency at the grower phase. The exogenous phytase enzyme improved ($p<0.05$) the average daily feed intake and average daily gain in the grower phase. In conclusion, ESM adversely affected broiler performance while the incorporation of exogenous phytase enzyme in the feed enhanced the performance of broilers in the grower phase.

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