

## **Effect of dietary supplementation of guinea hen weed (*Petiveria alliacea*) leaf and root meals on nutrient utilization and intestinal morphology of finishing broiler chicken.**

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### **Abstract**

A 56- day feeding trial was carried out to evaluate the effect of feeding guinea hen weed leaf and root meals as phytobiotics on nutrient digestibility and intestinal morphology of finishing broiler chickens using 192 day old chicks. Eight treatment groups were arranged in a 2 × 4 factorial arrangements of 2 plant parts; *Petiveria* leaf meal (PLM) and *Petiveria* root meal (PRM) at 4 levels (0mg/kg, 500mg/kg, 1000mg/kg and 1500mg/kg). Each group was replicated three times with 8 birds per replicate. Digestibility parameters were influenced ( $p < 0.05$ ) by *petiveria* plant parts. Crude protein, ash and NFE digestibility of birds fed diet containing PRM were higher compared to birds fed PLM. Birds fed 1500mg/kg had the highest value of crude protein digestibility compared to other dietary treatments. The interaction of plant parts and inclusion levels on the nutrient utilization showed that highest crude protein, ether extract, crude fibre and NFE values were observed in birds on 1500mg/kg PLM compared to other dietary treatments. Intestinal morphology of finishing broiler chickens revealed that duodenal apical width, basal width and Jejunal villi height values were higher ( $p < 0.05$ ) in birds fed diet containing PLM. It was observed that supplementation of finishing broiler diets elicited improved nutrient digestibility and intestinal morphology.

**Keywords:** Guinea hen weed, broiler, digestibility, gut morphology, root meal, leaf meal

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**Target audience:** Feedmillers, livestock farmers, extension agents, animal nutritionists