**Effect of Exogenous Carbohydrase Enzymes on Energy Utilization of Cassava Chip-based Diet in Broiler Chickens**

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**Abstract**

Cassava is a potential alternative to conventional cereal grains in poultry diets. The objective of this study was to determine the effect of different exogenous carbohydrase enzymes on energy utilization of cassava chip-based diet in broiler chickens. Chicks were fed normal starter diet from day 1 to 15 d of age and then switched to experimental diets from day 16 to 24 of age. The basal diet containing 80% of cassava chip was supplemented with or without different carbohydrase enzymes alone or in combination (amylase and two multi-enzyme preparations) to constitute 5 experimental diets. Each diet was assigned to 6 replicate cages with 8 birds per cage. Titanium dioxide at 0.3% was included in diets as indigestible marker. Total excreta collection was performed during three consecutive days (day 21 to 23) followed by ileal content collection after slaughter. Lab analysis showed that the cassava chip contained 87.47% dry matter, 71.44% starch, 2.88% crude fiber, 3.48% crude protein, and 14.93 MJ/kg of gross energy, and the calculated N-corrected apparent metabolizable energy (AMEn) value for cassava chip was 12.56 MJ/kg as fed. The supplementation of different enzyme separately or together improved ileal digestible energy (IDE) values which ranged from 0.28 to 0.57 MJ/kg and AMEn values from 0.29 to 0.37 MJ/kg for cassava chip-based diet. It was concluded that the energy value of cassava chip-based diet for broilers can be improved by exogenous carbohydrase enzymes individually or in combination, offering potential economic benefits to poultry production.