

CASSAVA PEEL AS A POULTRY FEED INGREDIENT: NUTRIENT COMPOSITION, METABOLIZABLE NUTRIENTS, AND ANTI-NUTRIENT FACTORS

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The limited availability of maize for feed production has been a severe issue in providing adequate energy for poultry. Therefore, there is a need to identify cheaper local alternatives. Cassava (*Manihot esculenta*) is a widely cultivated crop in Sri Lanka and the peels are frequently accessible and inexpensive. Therefore, a study was conducted to examine the feasibility of sun-dried cassava peel (SDCP) as a poultry feed ingredient. The nutrients and anti-nutrients of SDCP were determined in triplicate samples. Six indigenous x brown shaver cockerels (age = 18±1 months, body weight = 2.5±0.2 kg) were used to estimate the metabolizable nutrients. The cockerels were kept in metabolism cages and fed with ground SDCP only, allowing them to adapt to the new feed in the first 5 days. For the next six days, they were fed with measured amounts of the same diet. The excreta were daily frozen until the faecal matter was totally collected from the six days feed. The faecal matter was analysed for nutrient composition and metabolizable nutrients were calculated. The moisture, ash, crude protein, crude fibre, ether extract, and carbohydrates of SDCP were 11.85±0.35%, 6.35±0.21%, 4.30±0.28%, 19.90±0.42%, 1.35±0.07%, and 76.2±0.42%, respectively. Further, a significant amount of gross energy (3715±8 kcal kg⁻¹) and metabolizable energy (2190±6 kcal kg⁻¹) is contained in SDCP. The digestibility coefficients of crude protein, crude fibre, ether extract, and carbohydrates were 13.81±7.08%, 69.61±0.36%, 60.65±6.39%, and 77.98±0.74%, respectively. Carbohydrate, crude fibre, and ether extract digestibility coefficients were higher in cassava peels. The cyanide, phytate, and oxalate contents (mg 100g⁻¹) of SDCP were 1.76±0.19, 3.09±0.88, and 17.33±4.19, respectively, and were within safe limits. Therefore, sun-dried cassava peels could be a potential alternative energy source in poultry diets. Further, studies are recommended on the inclusion levels, in rations for different growing stages of poultry.

Keywords: Alternative energy source, Anti-nutrients, Gross energy, Metabolisable energy, Sun-dried cassava peel