ILEAL DIGESTIBILITY OF CPU CHICKEN DEVELOPER FEEDS WITH NATURAL SOURCE OF METHIONINE AMONG THE FOUR-TO FIVE-MONTH OLD NATIVE CHICKENS

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ABSTRACT

Advancing knowledge in poultry industry is still a need in today's generation in terms of cultural management, flock health management and machinery. This is due to the exclusion of essential amino acid isolates particularly the methionine in the compounded rations. Methionine is a sulfur containing amino acid and is recommended for normal metabolic process. Chicken developer feeds mixed with semi-synthetic ingredients at 50% inclusion level was provided to the experimental birds on *ad libitum* at the 146th day to 149th day. The chickens were slaughtered through manual bleeding and the abdominal cavities were dissected. The small intestine from the vitelline/ Markel's diverticulum to approximately 2cm proximal to the ileocecal junction was removed. The digesta was cleansed, filtered, and oven-dried at 60°C until dried and sent to the laboratory for amino acid profile analysis. Results of the amino acid profile revealed that of all amino acids, only four namely, tryptophan, lysine, phenylalanine and histidine were found to have values that exceeded the recommendation of the National Research Council. Amino acids such as isoleucine, leucine, methionine, threonine, tryptophan, valine, serine, glutamic acid, proline, glycine, alanine, cystine, and tyrosine were found to be undetected on both apparent ileal amino acid digestibility (AIAD) and ileal endogenous amino acid flow (IEAAF). Moreover, aspartic acid had the highest standardized ileal amino acid digestibility (SIAAD) value followed by phenylalanine,

lysine, arginine and histidine. It can be concluded that the CPU non-fermented developer feeds have low AIAD values for fifteen amino acids but five amino acids gained higher digestibility values that was shown in the values using the SIAAD assay. Hence, the non-fermented developer feeds is not ideal for chickens at this age.