



TITLE: Effects of *Pichia Pastoris* Residue as a Protein Source on Growth Performance, Nutrients Digestibility, Plasma Amino acids, Biochemicals and Immunoglobulins in Weaned Piglets

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ABSTRACT

An experiment was conducted to study the effects of *Pichia pastoris* residue (PPR) supplementation diet on growth performance, nutrient digestibility, plasma amino acids, biochemical profile, and immunoglobulin of weaned piglets. A total of 48 piglets with an initial body weight of 8.99 ± 0.23 kg were allocated randomly to three (3) diets containing 0% (T0), 8.7% (T1), and 17% (T2) of PPR levels, for 28 days. The dose selection was based on protein quantity of Soybean meal (SBM) and PPR in diet. The average feed intake and daily weight gain decreased in T1 and T2 significantly ($P < 0.05$) compared to T0 (control). However, the feed gain ratio was not affected. The apparent total tract digestibility of crude protein and fiber reduced ($P < 0.05$) in treatment groups as compared to T0. The plasma concentration of lysine and threonine were not affected but methionine, isoleucine, phenylalanine, and valine decreased significantly in T1 and T2, whereas cysteine increased ($P > 0.05$). Blood total protein and albumin decreased in T2 in comparison to T0, whereas glucose, triglycerides and urea nitrogen remained unchanged. The diet with a low level of PPR improved the immunoglobulin IgG and did not affect IgM in piglets. In conclusion, only two biochemical parameters, glucose and triglycerides improved in both treatments, plasma immunity only in T2, although there was a significant depression on the growth performance.

BIOGRAPHY

Wilard Tuto Gica has completed his Master's degree at the age of 32 years from Jilin Agricultural University, China. He is the researcher and an assistant lecturer at the division of Agriculture, Animal Science, Zootechnical engineering department at ISPM, Mozambique. He has worked at Jilin Provincial Key Laboratory of Animal Nutrition, Feed Science and Technology; Jilin Provincial Swine Industry Technical Innovation Centre; Key Laboratory of Animal Production, Product Quality and Security of Ministry of Education, Jilin Agricultural University, Changchun 130118, P.R. China. He has 3 publications so far. He is a young new researcher.

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