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Utilisation of Cassava Peel Based Diet Supplemented with or without Farmazyme® 3000 Proenx by Growing Pigs

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Abstract

The utilisation of cassava peel based diet supplemented with or without Farmazyme® 3000 Proenx multi-enzyme (fungal xylanase, fungal β -glucanase, endo β -glucanase, α -amylase, β -glucanase (pH 7.5, 30°C), β -glucanase (pH 5, 30°C), hemicellulase, pentosanase and pectinase) as a replacement for maize in diets of growing pigs was investigated using 36 growing pigs (average initial weight of 22.74±0.88 kg). The pigs were allotted to three dietary treatment groups. of (1) 30%-Maize based control diet, (2) 30%-cassava peel based diet and (3) Farmazyme® 3000 Proenx supplemented 30%-cassava peel based diet. Each treatment had three replicates of 4 pigs replicate⁻¹ (12 pigs treatment-1) in a complete randomised design. The pigs were allowed ad libitum access to the diets and water throughout the 42-day duration of the trial.

The replacement of the 30% maize in the control diet with cassava peel resulted in increased bulkiness and crude fibre contents of the cassava peel-based diets, hence, lowered energy content. There was also a reduction in the dry matter intake of the pigs and the cost of feed per kg by 19.6% and 23.5% for the cassava peel based diet with and without Farmazyme® inclusion respectively. The replacement of the maize content of the control diet with cassava peel resulted in 23–24% reduction in the cost of feed per kg live weight gain of the growing pigs. Farmazyme® resulted in enhanced utilisation ($p < 0.05$) of the cassava peel-based diet in terms of the daily and overall weight gains as well as the serum total protein, albumin, urea and cholesterol. While the haemoglobin and RBC of the pigs were significantly positively influenced by the inclusion of the enzyme, it had no effect on the PCV. The blood minerals (Na, Ca, Cl and P), relative organ weights and dressing percentage of the pigs were neither affected by the cassava peel replacement nor the enzyme inclusion but for the kidney, where lower values were obtained both for the control and Farmazyme® supplemented cassava peel-based diets. It could therefore be concluded that inclusion of Farmazyme® 3000 Proenx enhanced utilisation of the cassava peel-based diet thereby resulting in performance results comparable to pigs fed the maize-based control diet.

Keywords: Cassava peel, enzyme utilisation, nutrient utilisation, pig performance