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“Development on the margin”

Sustainable Utilisation of Cassava Plant for Feeding Monogastric Animals

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Abstract

Cassava plant meal (CPM) which had 9.0% crude protein (CP) comprising of unpeeled cassava tubers, leaves and tender-stems was developed to replace maize in the diets of rabbits, pigs, cockerels and broilers. Different growth studies were conducted with an eight weeks period with rabbits, eight weeks with pigs, sixteen weeks with cockerels and four weeks with broilers. In broiler study, three experimental diets were formulated. Diet 1 was a maize basal diet of 22 % CP. Diets 2 and 3 had 25 and 50% of maize in diet 1 replaced with CPM. 153 one week old broiler chicks were randomly distributed into diets. In the study with rabbits, 15 ten-week old new zealand white waener rabbits were randomly allotted to three diets formulated to contain about 15 % CP with CPM replacing 0,50 and 100% of maize in the diets. In the study with cockerels, 150 day old cockerel chicks were randomly distributed to three experimental diets formulated to contain 16 % CP. CPM replaced 0,50 and 100% of maize in the diets. 24 growing pigs were used in the pig study and they were randomly distributed into three diets that contained about 18 % CP. CPM was used at 0,50 and 100% of maize in the diets. The design of the study was completely randomised design.

Results of these studies showed that growth rate decreased and feed to gain ratio deteriorated as the proportion of CPM in the diets of broiler was increased. In the study with pigs, growth rate and feed to gain ratio were not negatively affected by the inclusion of CPM. In the study with cockerels, growth rate and feed to gain ratio were negatively affected with the inclusion of CPM in the diets. The inclusion of CPM to replace maize in the diets of growing rabbits resulted in improved performance of the animals in terms of daily gains, feed intake and feed to gain ratio.

Findings from these studies suggest the suitability of CPM to replace maize completely in the diets of pigs and rabbits. Partial replacement of maize with CPM gave satisfactory performance with cockerels and broilers.

Keywords: Broilers, cassava plant meal, cockerels, feed to gain ratio, growth rate, maize, pigs, rabbits, week diet