Tropentag, September 19-21, 2012, Göttingen - Kassel/Witzenhausen

"Resilience of agricultural systems against crises"

Evaluation of Growth Indices, Dry Matter Digestibility and Economic Implications of Feeding Rabbits with Millet Offal

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Abstract

A 56-day feeding trial was carried out to evaluate the potential of replacing maize in the diets of rabbits with millet offal, an agricultural waste, on the performance indices and cost benefit of growing rabbits. Fifty growing rabbits of cross breeds and mixed sexes were allotted to five dietary treatments of 10 rabbits per treatment in a completely randomised design. A rabbit was taken as a replicate. Millet offal was used to replace maize grain at 0, 25, 50, 75 and 100 % in diets 1, 2, 3, 4 and 5, respectively. The response criteria included growth indices, carcass cuts, haematology, serum metabolites, apparent digestibility and economic benefit. The final body weight of 1.72–1.81 kg and total weight gain of 0.99–1.04 kg of rabbits on the control diet was not significantly ($p > 0.05$) different from those fed the millet offal diets. The total feed consumption was significantly ($p < 0.05$) affected by the dietary treatment with rabbits fed the control diet having the highest value (4.02 kg) and rabbit fed the 75 % millet offal diet having the lowest value (3.31 kg). Compared with the control group, rabbits fed on 25–100 % millet offal diets had an improved feed converion ratio of 10.5, 12.5, 17.5 and 18.3 % over those fed the control. The apparent digestibility values suggested that millet offal could be tolerated by rabbits even up to 100 % (*i.e.* 47.46 g per 100 g in the gross feed composition) inclusion level, as this level considerably decreased cost of feed per kilogram weight gain and improved relative cost benefit by up to 52.3 %. The slaughter weight, fasting loss and carcass 'fast cuts' were not significantly different b etween groups ($p > 0.05$). Of the entire haematological variables measured, only the WBC, MCH and MCV were significantly ($p < 0.05$) influenced by the test diets; increased serum protein and blood glucose and decreased total cholesterol were observed in the animals fed on 50–100 % millet offal diets. Thus, replacing maize with millet offal could lead to better affordability of rabbit meat by resource poor people, better animal protein production/consumption and ultimately improved savings of rabbit farmers.

Keywords: Digestibility, economic implications, maize, millet-offal, rabbit

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