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Reproductive Performance of Rabbits Fed Diets Containing Varying Dietary Levels of two Varieties of Composite Sweet Potato Meal in A Palm Kernel Based Diet

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Abstract

Twenty-five rabbit does of mixed breeds (New Zealand White, California and Chinchilla) aged between 6-7 months were randomly allotted to five experimental diets; T1 as control, T2, T3, containing 25 and 50% of orange flesh CSPM, and T4, and T5 containing 25 and 50% white flesh CSPM in a completely randomised design to evaluate the reproductive performance of rabbits fed two varieties of composite sweet potato (Ipomoea batata) meal (CSPM). The diets contains 10.6-12.6% crude fiber, 16.4-17.6% crude protein and 2610-2788 Kcal Kg^{-1} metabolisable energy.

There was no significant difference in the total feed intake of does on the different treatments (P>0.05). The T5 (50% of white CSPM) does had the highest daily feed intake (103.75 g day^{-1}) followed by T1 (0% of CSPM) does (103.45 g day^{-1}) and T4 (25% of white CSPM) does (103.20 g day^{-1}), while T3 (50% of orange CSPM)and T2 (25% of orange CSPM) does had the lowest values of (99.65 g day^{-1}) and (97.95 g day^{-1}) respectively. T4 and T5 does had the highest litter size at birth of 5.00 (though not significantly different) from the other treatments. There was no significant difference in the initial average body weight and gestation length of the does on the different treatments as well as in the litter weight at birth.

Litter size at weaning was highest in T4 and T3 with values of 3.00 and 2.80 respectively. Litter weight at weaning was highest in T1 and T3 groups recording a weight of 569.9 and 553.0 g respectively. The average daily weight gains per kit were 11.14, 8.56, 10.83, 10.84 and 10.28 g day^{-1} for T1, T2, T3, T4 and T5 treatments, respectively. There were no significant differences (P>0.05) in average daily weight gain per kid and in milk yield across all the treatments. Milk yield was higher in T1, but not significantly different against T2, T3, T4 and T5 does. In conclusion composite sweet potato meal can replace maize without adverse effect on the reproductive performance of rabbits.

Keywords: Composite sweet potato meal, kits, Rabbits doe, Reproductive performance, Survivability

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