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Economics of Production of Weaner Rabbits Fed Graded Levels of two Varieties of Composite Sweetpotato (*Ipomoea batatas*[L.] Lam) Meal in A Palm Kernel Based Diet

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Abstract

Whole sweetpotato (*Ipomoea batatas*[L.] Lam) plant plays a significant role in crop-live-stock farming systems in Africa. In this study the economic efficiency of inclusion of orange fresh (CIP 440293) and white flesh (TIS 87/0087) varieties of composite sweetpotato meal-CSPM (65 % root and 35 % leaf and vine) as replacement for maize and their economic implications for sustainable rabbit production in South western Nigeria.

Eighty-four young doe of mixed breeds aged between 6–8 weeks, weighing between 550–600 g were used to determine the effect of feeding levels of two varieties of composite sweetpotato (*Ipomoea batatas*) meal on the profitability of rabbit production. The rabbits were randomly allocated to seven treatments T1-T7. T1 as control (without sweetpotato), T2, T3, T4, containing 25, 50 and 75 % of CIP 440293 (orange flesh), respectively, and T5, T6 and T7 containing 25, 50 and 75 % TIS 87/0087 (white flesh), respectively CSPM with four replications per treatment in a complete randomised design (CRD). The diets contains 10.6–12.6 % crude fiber, 16.4–17.6 % crude protein and 2610 - 2788 Kcal Kg⁻¹ metabolisable energy. The diets were formulated to meet the nutrient requirements of growing rabbits.

There was significant different across the dietary treatment. The research showed that the diet affected the economics of production such that feeding dietary treatments containing the CSPM compares well in terms of cost of feed to gain 1 kg weight in the rabbit for nine weeks i.e. T1 (₦380.00 kg⁻¹), T2(₦325.81 kg⁻¹), T3(₦335.82 kg⁻¹), T4(₦259.55 kg⁻¹), T5(₦266.56 kg⁻¹), T6 (₦326.55 kg⁻¹) and T7 (₦275.76 kg⁻¹). This research shows that both varieties of CSPM can serve as a substitute for maize in female rabbits diets up to 75 % and would the help save as much as 20 % cost of production, hence positively affects the economics of production parameters. The usage of the sweet potato composite meal will help to reduce cost, scarcity of rabbit feeds and also reduce dependency on conventional feed ingredients such as grains that bring competition between man and animals.

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Keywords: Composite sweet potato meal, Economic Variables, Profit Margin, Rabbits