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GROWTH PERFORMANCE OF WEANER RABBITS (*Oryctolagus cunniculus*) FED DIETARY LEVELS OF SHEA NUT KERNEL (*Vitellaria paradoxa*) CAKE MEAL

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ABSTRACT

This study was conducted using forty five weaner rabbits weighing 540.00g to 566.67g in a completely randomized design (CRD) to study determine the growth performance of weaned rabbits fed dietary levels of shea nut kernel cake meal. The animals are were randomly allotted to five treatment groups namely treatment T_1, T_2, T_3, T_4, and T_5 each consisting of three replicates and each replicate has had three animals. The animals were fed with varied levels of shea nut kernel cake meals (SNCM) viz; such that the animals were fed 0%, 1.5%, 3%, 4.5%, and 6%, SNCM for representing treatments T_1, T_2, T_3, T_4, and T_5 respectively. Growth performance parameters were monitored. The results of growth performance of weaned rabbits fed levels of shea nut kernel cake meal (SNCM) diets showed that initial body weight, final body weight, Ttotal body weight gain and total feed intake, were not significantly ($P> 0.05$) different. Although T_5 had numerically higher values for total feed intake, final body weight gain compared to other treatments, same trend was observed for total body weight gain. However, feed conversion ratio were significantly ($P< 0.05$) different across the treatments. From the result of the present study, it can concluded that the dietary inclusion of up to 6% SNCM in the diet of weanedr rabbits up to 6% can enhance their growth performance.

Keywords: Feed intake; feed conversion ratio; Shea nut cake meal; weanedr rabbits; weight gain

Introduction

In Nigeria, the scarcity and high cost of conventional feed ingredients and the absence of specially formulated feeds for rabbits in the market are the major constraints to the expansion of rabbit industry. Rabbit meat, compared to other meat sources, is still very scarce in the market and meat shops, requiring urgent intervention such as substitution of conventional feed ingredients with non-conventional feed ingredients particularly those that do not attract competition in consumption between human and livestock (Ayoade, *et al.*, 2000; Esonu *et al.,* 2006). It is on this premise that, this study was conducted to determine the growth performance of weaned rabbit fed varying levels of shea nut cake meal.

Materials and Methods

The research work was conducted at the Rabbitry Unit of the Ministry of Livestock and Fisheries Development, Livestock service Department, State veterinary Centre Bosso, Minna, Niger State. Forty five weaner rabbits it will be good if you can mention the breed(s) and or strain(s) of the rabbits weighing between 540.00g to and 566.67g fed *Tridax pubescen* and dietary levels of shea nut kernel cake meal were used in a completely randomized design (CRD) to study the growth performance. of weaned rabbits fed *Tridax pubescen* and dietary levels of shea nut kernel cake meal. The animals are were randomly allotted to five treatment groups; namely treatment T_1, T_2, T_3, T_4, and T_5 each consisting of three replicates and each replicate has had three animals. The animals were fed with varied levels of shea nut kernel cake meals (SNCM) at such that the animals were fed 0%, 1.5%, 3%, 4.5%, and 6%, SNCM for treatments representing

T_1, T_2, T_3, T_4, and T_5 respectively. The proximate composition of shea nut cake meal SNCM and experimental diets are shown in Tables 1 and 2 respectively. Feed intake and weight gain were monitored. All data generated were subjected to analysis of variance (ANOVA) using the General Linear Model (GLM) procedure of SAS (2008). Significantly different Mmeans were separated Using Least Significant Difference (LSD) test. of the same package

Table 1. Proximate composition of shea nut kernel cake meal

Composition	Shea nut meal (%)
Moisture	18.92
Ash contact	8.50
Crude protein	14.00
Crude fibre	12.67
Oil extract (EE)	43.00
Nitrogen free extract	2.91
Energy (kcal/kg)	4139

Table 2. Composition of the experimental diets

	Diet				
Ingredients	T1	T2	T3	T4	T5
Maize	54.71	52.71	50.68	48.86	46.91
GNC	24.29	24.19	24.09	23.99	23.89
SNC	0.00	1.50	3.00	4.50	6.00
Rice offal	15.00	14.90	14.80	14.70	14.60
Fish meal	2.00	2.00	2.00	2.00	2.00
Bone meal	2.00	2.00	2.00	2.00	2.00
Oysters shell	1.00	1.00	1.00	1.00	1.00
Salt	0,25	0.25	0,25	0.25	0.25
Methionine	0.25	0.25	0.25	0.25	0.25
Lysine	0.25	0.25	0.25	0.25	0.25
*. Premix	0.25	0.25	0.25	0.25	0.25
Total	100.00	100.00	100.00	100.00	100.00
Crude protein (%)	18.07	18..04	18.02	18.01	17.99
Energy(kcal/kg) ME	2749	2739	2727	2723	2714

*premix supplied per Kg diet .5mg retinol acetate(10000000 iu) Vit.3 D3(2000000 iu), Vit E(15000 iu), Vit. B (3000mg), niacin(15000mg), calcium panothenate (800mg), Vit .B6 (3000mg), Vit. B12(10mg), Vit. K3 (2000mg), biotin (20mg), folic acid (500mg), choline chloride (250,000mg), manganese (75000mg), iron (25000mg), copper (5000mg), zinc (70000mg) selenium (150mg), iodine (1300mg), magnesium (100mg), 500g ethoxyquin and BHT (700g).

RESULT AND DISCUSSIONS

The results of growth performance of weanedr rabbits fed varying levels of shea nut kernel cake meal (SNCM) diets showed that initial body weight, forget about initial body weight, it is not expected to be part of your results since you randomized and balnced for weights at the start of your experiment in order to avoid bias final body weight, Total body weight gain and total feed intake, were not significantly (P> 0.05) different. This result is in agreement with earlier work of Tsado and Akinwolere (2015) and

Idahor *et al*. (2018) Although T_5 had numerically higher values for total feed intake, final body weight gain compared to other treatments, same trend was observed for total body weight gain. However, feed conversion ratio were significantly ($P< 0.05$) different across the treatments. The significant ($P<0.05$) difference observed in feed conversion ratio efficiency could be attributed to the increase in the levels of shea nut kernel cake meal inclusion as was reported by Olorede *et al* (1997)

Table 3. Growth performance of weaned rabbits fed varying levels of shea nut kernel cake meal

Parameter	T1	T2	T3	T4	T5	P. Value	SEM
Initial body weight (g/rabbit)	175.67	147.67	147.67	147.67	171.67	0.01	23.13^{NS}
Final body weight (g/rabbit)	541.67	541.67	540.00	541.67	566.67	0.41	10.83^{NS}
Total body wt gain (g/rabbit)	366.00	394.00	392.30	394.00	395.00	0.74	17.60^{NS}
Total feed intake (g/rabbit)	2055.90	2129.20	2142.90	2096.70	2360.4	0.16	233.61^{NS}
Feed conversion ratio	5.62^{b}	5.38^{a}	5.45^{a}	5.31^{a}	3.43^{b}	0.03	0.44*

:^{a,b,} means in the same row with different superscripts differ significantly ($P<0.05$); P = Probability SEM= Standard error of means; NS = Not significantly different;*= Significantly differen

CONCLUSIONS

From the results of the present study, it can be concluded that the Up to 6% dietary inclusion of SNCM in the diet of weaned rabbits up to 6% can enhance their growth performance

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