

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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Introduction:

- Rabbit breeders are increasingly incorporating non-conventional feedstuffs, particularly to improve the energy and feed intake which is a limiting factor to achieve a balance of energy during lactation.

Objective:

- To access the dietary effects of varying levels of two varieties CSPM on the reproductive performance of rabbits.

Material and methods:

- Two varieties of sweet potato root, leaf and vines were collected from National root crops research Institute, Umudike, Nigeria and processed.
- Seven-months old doe (n=25) were allocated to one of five dietary treatments (n=5 per treatments) containing CSPM of the two varieties.

Table 1. Experimental Layout

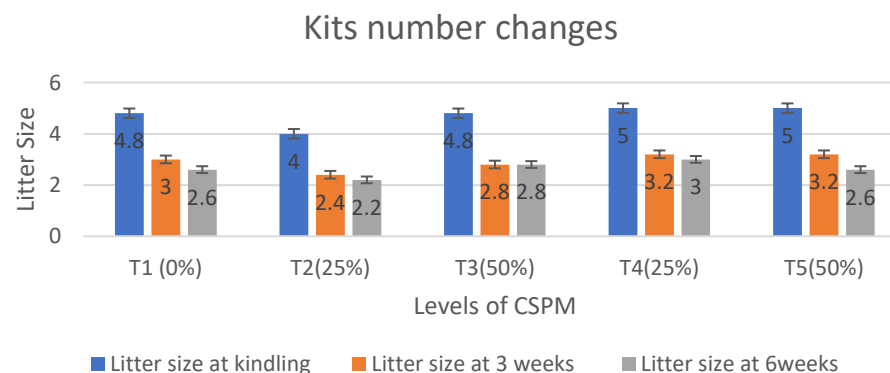
Control Diet	CIP440293		TIS 87/0087	
0	25 %	50%	25 %	50%

Results: The findings showed that the two varieties of CSPM at up to 50% replacement for maize has no negative effect on all reproductive performance of does except the survivability of the litters.

Table 2. The reproductive performance of rabbits fed diets containing varying levels of composite sweet potato meal

Parameters	T1 (0%)	Levels of orange flesh CSPM(CIP440293)		Levels of white flesh CSPM(TIS 87/0087)		SEM	PValue
		T2(25%)	T3(50%)	T4(25%)	T5(50%)		
Feed intake/day(g)	103.45	97.95	99.65	103.20	103.75	1.18	0.28
Gestation length (days)	31.40	31.80	32.00	32.40	31.80	0.16	0.78
Litter weight at birth (g)	35.31	32.47	33.26	29.44	34.53	1.02	0.79
Litter size at kindling	4.80	4.00	4.80	5.00	5.00	0.19	0.94
Litter size at 3 weeks	3.00	2.40	2.80	3.20	3.20	0.15	0.69
Litter size at 6weeks	2.60	2.20	2.80	3.00	2.60	0.13	0.70
Survival rate (%)	70.24	45.90	63.57	61.24	52.00	4.31	0.48
Litter weight at 3 weeks (g)	264.03	204.13	252.13	251.45	246.57	10.29	0.47
Litter weight at 6weeks (g)	569.94	440.1	553.00	552.82	527.97	23.16	0.41
Feed Conversion Ratio	2.13	1.78	1.27	1.62	2.36	0.19	0.49
Total milk yield(kg/rabbit)	2.14	2.12	2.12	2.12	2.11	0.004	0.60

a,b,cMeans with different superscripts on the same row are significantly different (P<0.05)



Conclusion: The comparable reproductive performance of dietary levels of CSPM from the selected varieties indicate the potential of the CSPM as a feed ingredient. CSPM can be incorporated in the diets of breeding rabbits up to 50 % level for comparable reproductive performance.