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Table 2. Performance characteristics of the experimental birds fed with diets containing

HQCP.						
Parameter	T 1	T2	Т3	T4	Т5	SEM
Initial body Weight (kg/bird)	0.57	0.57	0.63	0.56	0.56	0
Final body Weight (kg/bird)	1.74 ^{ab}	2.08 ^a	1.80 ^{ab}	1.94ª	1.55 ^b	1.01
Weight gain(kg/bird)	1.16 ^{ab}	1.46ª	1.17 ^{ab}	1.38 ^a	0.99 ^b	0.1
Feed intake (kg/bird)	2.36 ^a	2.36 ^a	2.40 ^a	2.40^{a}	2.17 ^b	0
Feed conversion ratio (FCR)	2.06^{ab}	1.63 ^b	2.05 ^{ab}	1.78 ^{ab}	2.24 ^a	0.08
Feed Efficiency ratio (FER)	0.49 ^{ab}	0.61ª	0.49^{ab}	0.58^{ab}	0.45 ^b	0
Mortality (%)	0	0	O	0	O	0

T1, T2, T3, T4 and T5 are as defined in the above table

Table 3. Economics of feeding broilers with diets containing HQCP.

Parameter Treatments					SEM	
	1	2	3	4	5	
Total feed intake, kg	2.36ª	2.36ª	2.40 ^a	2.40 ^a	2.17 ^b	0.003
Total feed cost, \$ /kg	0.8ª	0.79ª	0.8ª	0.8ª	0.72 ^b	0.02
Total weight gain, kg	1.11 ^{ab}	1.42ª	1.13 ^{ab}	1.33ª	0.95 ^b	0.029
Feed cost per kg gain, \$	0.96 ^{ab}	0.74 ^b	0.93 ^{ab}	0.80 ^{ab}	1.05ª	0.07
Cost savings, \$	-	0.22	0.02	0.15	-0.09	-

Our innovative approach

Objective: To evaluate the effect of isonitrogenous and isocaloric diets containing varying levels of high-quality peel (HQCP) fine mash on broilers' cassava performance, carcass characteristics, and cost benefit.

Approach: A feeding trial was carried out using four hundred (400) 21-day-old Arbor Acres broiler chicks weighing 570 – 630 g (live weight). The chicks were randomly allocated to five dietary treatments (T); (T1-0 kg/t of HQCP, T2- 150 kg/t of HQCP, T3- 200 kg/t of HQCP, T4- 250 kg/t of HQCP and T5- 300 kg/t of HQCP) for 21 days in a completely randomized design.





Growth performance, carcass characteristics and cost benefit of feeding broilers with diets containing high-quality cassava peel (HQCP)

A. B. Adekeye, T. A. Amole, S. O. Oladimeji, A. A. Raji, T. E. Odekunle, O. Olasusi, O. Bamidele and A. A. Adebayo

- Productivity and profitability of poultry can be increased greatly with integrated innovation/technology options involving feed
- The use of locally available alternative feed resources that can replace maize at a lower cost without any deleterious impact on the production and performance of the broiler chicken through promotion of utilization of the agri-produce waste materials for livestock feed is key in this regard
- Utilization of high-quality cassava peel (HQCP) in broiler feed can significantly mitigate the effect of the high cost of feed in the poultry industry
- HQCP can efficiently replace maize in the diet of broiler chicken and thereby increase the profitability
- Production of HQCP can remarkably create a profitable value chain link in the livestock industry, especially among the youth and women.

Significance and scaling potential

- Production of broiler chicken with diets containing HQCP is possible at 42 days with average live weight ranging from 1.55- 2.08kg.
- The inclusion of HQCP in the diets positively influenced the percentages of shank, and thigh while saving cost of production and without compromising the animal performance.
- Production of broiler diet with the inclusion of about 150 kg of HQCP in a ton of broiler finisher feed, could be a better energy replacement for maize for increasing productivity in broiler production.





Outcomes

- The results showed significant (P<0.05) differences in</p> live weight, feed conversion ratio/feed efficiency ratio (FCR/FER), dressing percentage, total feed cost, and feed cost per weight gain across the treatments. T2 and T4 produced birds with the highest live weights of 2.08 and 1.98 kg, respectively.
- The dressing percentage ranged from 63.2% (T5) -70.0% (T1). T5 had the lowest total feed cost (0.97 \$/kg) while T2 had the lowest feed cost per body weight gain (\$0.74), and best cost savings (\$0.22). It was concluded that replacement of maize with 150 kg/t high quality cassava peel (HQCP) in broiler finisher diets improved production performance and save cost.

Table 2. Chemical composition of the experimental diets

Diets	Dry matter	Crude Protein	Crude Fibre	Total Ash	Ether Extract	NFE	ME (kcal/kg)
T1	89.57	19.03	5.13	8.47	7.29	49.65	3,024.95
T2	89.28	19.05	5.11	8.55	7.58	48.99	3,025.94
T3	89.26	19	5.19	8.09	7.93	49.05	3,054.95
T4	89.51	19.01	6	7.71	7.76	49.03	3,040.68
T5	89.57	19.02	5.63	7.14	7.24	50.54	3,052.10
SEM	0.07	0.01	0.18	0.26	0.13	0.3	6.3
HQCP	95.7	4.9	6.49	1.96	0.73	nd	2,987.57

T1= (control- no HQCP), T2 = (HQCP 150 kg/ton), T3 = (HQCP = 200 kg/ton), T4= (HQCP = 250 kg/ton), T 5 = (HQCP= 300 kg/ton), NFE=Nitrogen Free Extract, ME=Metabolizable Energy, nd=not determined

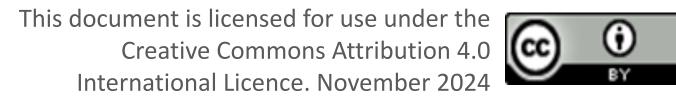




Next steps

Evaluation of HQCP on other poultry species including layers

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Mean with different superscript on the same row are significantly different (p<0.05) SEM=