

CARCASS AND ORGANOLEPTIC PROPERTIES OF MEAT OF WEST AFRICAN DWARF BUCKS FED POULTRY LITTER-BASED SUPPLEMENTS WITH *Panicum maximum* AS A BASAL DIET

*ONIGBINDE Abiodun, ASAOLU Vincent Olajide, OKUNLOLA David Olufemi, OKEWOYE Abiola Temitope, SANNNI Muhammed Saliu, ADEYANJU Abigael Adejumo, ADEGBENRO Islamiyah Green, ALABI Taiwo Deborah, ADEYEMO Marvelous Adedoyin, OWOYEMI Muhammed Bolarinwa, and OYEGOKE Oluwaseyi Oluwabunmi

Department of Animal Nutrition and Biotechnology, Ladoke Akintola University of Technology, Ogbomosho, Oyo State Nigeria.

Corresponding Author: onigbindeabiodun@gmail.com.

ABSTRACT

This experiment was conducted to evaluate the supplemental effects of poultry litter-based supplements on carcass characteristics and organoleptic parameters of meat of West African Dwarf (WAD) bucks fed a basal diet of *Panicum maximum*. Five dietary supplements were formulated; namely, low-cost concentrate without cassava peels, corncobs, and poultry litter (0CP0CC0PL), two concentrates composed of cassava peels and poultry litter at 40:50 (40CP-50PL) and 50:40 (50CP-40PL), as well as two concentrates composed of corncobs and poultry litter at 40:50 (40CC-50PL), 50:40 (50CC-40PL), respectively. Thirty (30) growing WAD bucks weighing 5.00 ± 0.08 kg were used in a 92-day feeding trial. Six (6) animals, balanced for weight, were assigned to each diet in a Completely Randomized Design (CRD). Carcass characteristics and organoleptic parameters were determined. The data obtained were subjected to one-way analysis of variance of SAS (2006), and Duncan New Multiple Range Test (DNMRT) was used to separate the means. Statistical analysis indicated significant differences ($p < 0.05$) among dietary treatments in body weight, bled weight, dressing percentage, and the weights of the head, forelimbs, ribs, and hind limbs. There were significant ($P > 0.05$) differences across all parameters observed for organoleptic properties, with supplements 0CC-0CP-0PL (7.10) and 50CP-40PL (7.10) having the equal highest overall acceptability, indicating a high preference value for the meat. The Supplement (50CP-40PL) is recommended as a supplemental diet for WAD goats offered a basal diet of *Panicum maximum* with a poultry-litter-based supplement, as it showed no adverse effect on carcass yield or the organoleptic properties of the meat.

Keywords: Carcass, organoleptic, *Panicum maximum*, poultry litter, supplements.

Keynotes: *Smallholder, Farmers, Cassava, Participation, Value Addition*

INTRODUCTION

Small ruminant production is a vital component of livestock systems in developing countries, contributing to food security, rural livelihoods, and income generation, particularly in sub-Saharan Africa (Amejo *et al.*, 2018; Derbib, 2021). Among small ruminants, goats are highly valued due to their adaptability, prolificacy, and capacity to thrive under harsh environmental and nutritional conditions (Devendra, 2019; Mahgoub *et al.*, 2018). In tropical regions, the West African Dwarf (WAD) goat is one of the most important indigenous breeds, recognized for its tolerance to trypanosomiasis, adaptability to humid climates, and ability to efficiently utilize low-quality

forages (Adebambo *et al.*, 2019; Ozoje, 2020). These attributes make WAD goats particularly suited for smallholder systems where feed resources and management inputs are limited, allowing them to supply animal protein and generate income for rural households (Silanikove *et al.*, 2021; FAO, 2023).

In response to the increasing cost of conventional feeds such as maize and soybean meal, research has increasingly focused on non-conventional feed resources for ruminants (Owen *et al.*, 2019; Devendra, 2019). Poultry litter and corn cobs are alternative feeds that have attracted considerable interest due to their availability and nutritional content (Akinfemi and Doherty, 2020;

Aderinboye *et al.*, 2018).

Cassava peel is an important by-product available from the processing of cassava (*Manihot esculentus*) root for food and starch, and has been used in feeding various classes of livestock (Akinfala and Tewe, 2004). However, the utilization of cassava products is hindered by potentially toxic substances, *cyanogenic glucosides*. Nevertheless, physical/mechanical, chemical, or biological treatment of cassava or cassava by-products has been shown to improve the performance of sheep and goats (Asaolu and Odeyinka, 2006; Cardoso *et al.*, 2016; Jiwuba and Udemba, 2019).

Poultry droppings are waste products (excreta) of broiler or laying birds, and have been used as a source of dietary crude protein to replace or supplement cottonseed cake and groundnut cake in ruminant diets (Bayemi *et al.*, 2004; Adegbola *et al.*, 2010). Approximately half of the CP is made up of true protein, and the remainder is non-protein nitrogen, which is primarily the uric acid excreted by poultry (Bhattacharya and Taylor, 1975). Utilization of poultry droppings in animal feeding systems is constrained by the presence of pathogenic micro-organisms (Balogun *et al.* 2016). It remains a valuable source of Non-protein nitrogen, minerals, and energy for ruminants (Abdel – Baset and Abbas, 2010) when properly processed. It was observed by Okah *et al.* (2014) that the use of poultry droppings as a dietary supplement in ruminant rations could have a considerable effect on reducing costs of feeding, insufficiency of protein in the diet, and solving disposal problems.

Corn cobs are crop residue used by livestock farmers to supplement fodder during the dry season (Shah *et al.*, 2025; Bhandari and Bahadur, 2019), and have been explored as carriers of antibiotics and vitamins in livestock feed. (Heuzé *et al.*, 2016). It has been reported that corn cobs have a low feeding value and poor palatability and are easily contaminated by toxic fungi such as *Aspergillus flavus* (Binuomote *et al.*, 2018).

Carcasses of goats are evaluated to give an estimation of the ratio of muscle to fat and bone or the amount of edible meat that will be obtained. To ensure long-term profitability, feed must also be efficiently digested and converted to body tissues that can be assessed as carcass, which translates to financial gains (Makkar, 2016). However, the yield of dressed carcass, sensory, and meat quality must be determined as it is the major economic interest to the farmers. Given the increasing need to develop cost-

effective and sustainable feeding strategies for goat production in the tropics, evaluating cassava peel, poultry litter, and corn cobs as dietary supplements is of considerable importance (Devendra, 2019; Owen *et al.*, 2019). Such strategies not only reduce feed costs but also promote recycling and efficient utilization of agricultural wastes into valuable livestock products (Aderinboye *et al.*, 2018; Akinfemi and Doherty, 2020). Therefore, this experiment was designed to evaluate the carcass characteristics and meat sensory qualities of WAD bucks fed poultry litter-based supplements with *Panicum maximum* as a basal diet.

MATERIALS AND METHODS

Experimental site

The experiment was carried out during the dry season at the Small Ruminant Unit (SRU) of Teaching and Research Farm, and the formulation and milling of the experimental diets were carried out at the feed mill unit, Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Oyo State, Nigeria.

Procurement of experimental dietary ingredients

Fresh guinea grass was harvested daily around 16.00 hours, and chopped to between 2 and 4 cm lengths. Cassava flour and dried cassava peels were purchased from Iluju market, a neighboring community to Ogbomoso; corn cobs were collected from the LAUTECH teaching and research farm, while dried broiler litter was collected from a poultry farm within Ogbomoso metropolis. Poultry litter, corn-cobs, and cassava peel were re-dried on polythene sheets spread on a clean concrete slab for 2 - 3 days to constant weight. The other experimental dietary ingredients were purchased from a reputable feed mill store within Ogbomoso. All the feed ingredients, except guinea grass, salt, and vitamin-mineral premix, were milled with a commercial hammer mill to a fine particle size (about 2mm) and bagged for subsequent use.

Preparation of Experimental Supplement

There were five experimental supplements: namely, a low-cost concentrate without cassava peels, corn cobs, and poultry litter (0CPCCPL), as well as two concentrates composed of cassava peels and poultry litter at 40:50 (40CP-50PL) and 50:40 (50CP-40PL), as well as two concentrates composed of corn cobs and poultry litter at 40:50 (40CC-50PL) and 50:40 (50CC-40PL), respectively. Six (6) animals, balanced for weight, were randomly assigned to each supplement at 2 % of body weight and offered a

basal diet of *Panicum maximum* at 4 % of body weight. The *Panicum maximum* was offered to the animals between 07.30 and 08.30 hours, while the supplements were fed to the animals between 15.00 and 16.00 hours. Fresh and clean water was made available to the animals *ad libitum*. The experiment lasted for 92 days. The composition of the ingredients of the experimental diets is shown in Table 1.

Table 1: Percentage ingredient composition of cassava peel, corn cob, and poultry litter

Ingredients	Experimental supplements				
	0CPCCPL	40CP-50PL	50CP-40PL	40CC-50PL	50CC-40PL
Poultry litter	0.00	50.00	40.00	50.00	40.00
Corn cobs	0.00	0.00	0.00	40.00	50.00
Cassava peels	0.00	40.00	50.00	0.00	0.00
Wheat offal	60.00	3.00	3.00	3.00	3.00
PKC	25.00	0.00	0.00	0.00	0.00
GNC	8.00	0.00	0.00	0.00	0.00
Maize	5.00	0.00	0.00	0.00	0.00
Cassava flour	0.00	5.00	5.00	5.00	5.00
Premix	1.00	1.00	1.00	1.00	1.00
Limestone	0.50	0.50	0.50	0.50	0.50
Salt	0.50	0.50	0.50	0.50	0.50
TOTAL	100.00	100.00	100.00	100.00	100.00

0CPCCPL: No cassava peel, corncob and poultry litter; 40CP-50PL: 40 % cassava peels, 50 % poultry litter; 50CP-40PL: 50 % cassava peels, 40 % poultry litter; 40CC-50PL: 40 % corncobs, 50 % poultry litter; 50CC-40PL: 50 % corncobs 40 % poultry litter; PKC: Palm Kernel cake; GNC: Groundnut seed cake.

Experimental animals and their management

A total of thirty (30) growing West African Dwarf bucks weighing 5.00 ± 0.82 kg were randomly allotted to five (5) treatments. There were six (6) animals per treatment, purchased from a reputable local small ruminant market in Ogbomoso, Oyo state, that were used for the experiment, quarantined for 21 days, and subjected to prophylactic treatment. They were also vaccinated against PPR (*pests de petit ruminants*). Clean water was supplied *ad libitum*. The experimental design was a Completely Randomized Design (CRD).

Data collection

Slaughter performance, carcass, and organ evaluation

Two (2) bucks from each treatment, making a total of ten (10) goats, were slaughtered for carcass evaluation. Before slaughtering, the animals were starved but given water for twelve (12) hours and then weighed and slaughtered. The animals were bled by cutting the throat at the

jugular vein. Post-slaughter and dressing weights were carried out, respectively. Hot carcass weight was taken on the floor of the slab within 20 minutes post-mortem using a hanging scale, and dressing percentage was recorded. The dressing percentage was calculated as the weight of a dressed warm carcass to live weight before slaughter. A dressed warm carcass refers to the weight of the goat after the removal of the head, skin, contents of thoracic and pelvic cavities (including the diaphragm and kidney), and limbs distal to the carpal and tarsal joints. Carcass yield was determined using the procedures described by Aduku and Olukosi (2000). The gut in each case was weighed, and the gut content was cleansed and reweighed. The measured parameters were bled weight, skin weight, skinned weight, eviscerated weight, head weight, neck weight, fore and hind limb weight, and rib cage, which were weighed and recorded.

Organoleptic parameters

Meat samples were taken from the thigh region of each sacrificed experimental goat for comparison after cooking. The fresh meat portions were cut into pieces of small cubes of equal size, approximately 2.5 cm^3 , before cooking without any salt or seasoning. The cooking was done at 80°C for approximately ten (10) minutes and offered to a 9-man panel of evaluators. The following organoleptic parameters: appearance, tenderness, juiciness, flavour and overall acceptability were determined by a nine-point Hedonic scale as developed by Mahendraka *et al.* (1988).

Chemical Analyses

Panicum maximum and the experimental supplements were analyzed for their proximate components by the standard methods of AOAC (2005). Neutral Detergent Fibre, Acid Detergent Fibre, and Acid Detergent Lignin were determined by the methods of Van Soest *et al.* (1991). Predicted metabolizable energy was determined by the Ponzenga equation (1985) expressed as:

$$\text{ME (kcal/kg)} = 37 \% \text{ CP} + 81 \% \text{ EE} + 35.5 * \% \text{ NF}$$

Where:

ME:

Metabolizable energy

% CP: Crude protein

% EE: Ether

extract

% NFE:

Nitrogen-free extract

Statistical Analyses

Values obtained for each parameter were subjected to one-way analysis of variance using the SAS (2000) procedure. Significant means were separated using the Duncan New Multiple Range Test (DNMRT) of the same package at ($p < 0.05$).

RESULTS AND DISCUSSION

Proximate, fiber composition, and predicted metabolizable energy of *Panicum maximum* and the experimental supplements.

Proximate and fiber components, as well as the predicted metabolizable energy contents of *Panicum maximum* and the experimental supplements, are presented in Table 2. Dry matter contents ranged from 91.17% (0CP0CC0PL) to 94.35% (50CP:40PL). Diet 40CP:50PL recorded the highest values for crude protein and ash content (9.36% and 25.41%). The crude fiber content ranged from 11.40% (50CP:40PL) to 32.65% (50CC:40PL). In the ether extract content, *Panicum maximum* (2.75%) was the highest, while diet 40CC:50PL (1.41%) recorded the lowest value. Nitrogen-free extract content had the highest value for *Panicum maximum* at 58.01% and the lowest recorded for 33.80% (50CC:40PL). Neutral Detergent Fiber, Acid Detergent Fiber, and Acid Detergent Lignin vary from 54.95% (0CP0CC0PL) to 61.00% (*Panicum maximum*). 27.95% (0CP0CC0PL) - 43.02% (*Panicum maximum*) and 8.00% (50CP:40PL) - 11.15% (*Panicum maximum*), respectively. The predicted metabolizable energy contents ranged between 6.68 MJ/kg/DM (50CC:40PL) and 32.30 MJ/kg/DM (0CP0CC0PL).

Dry matter (DM) contents of the supplemental diets (91.17%–94.35%) showed that they would not be easily prone to deterioration associated with high moisture content. Moisture levels of 10.00 to 12.00% are generally considered safe for storing livestock feed without the risk of deterioration from bacteria, mold growth, insect damage, and sprouting (Alengadan *et al.*, 2013). The crude protein (CP) contents of the supplemental diets, 6.91 - 9.36 %, were higher than the values of 4.88 % (Babale *et al.*, 2018) who offered Sokoto red goats with maize cobs replacing maize bran with cowpea husk basal

diet; slightly lower than the range of (10.30 – 13.47 %) reported by Yusuf *et al.* (2025) who fed *Philiostigma reticulatum* pods to red Sokoto bucks. However, the CP contents of the two supplements containing corncobs, 8.27 % (40CC -50PL) and 6.91 % (50CC-40PL), were close to the result of Hamad *et al.* (2010) who replaced corncobs with corn for concentrate feed mixture in pregnant ewe's rations. This indicates that the experimental supplements had no negative effect on the experimental bucks and were also within the CP requirements of ruminants (8.00 %CP) for maintenance and rumen function (Ibhaze *et al.*, 2016). The crude fiber (CF) contents (11.40–32.65%) were adequate to meet the fiber requirements needed for effective microbial fermentation and nutrient digestion in the rumen (Li *et al.*, 2021; Ibhaze *et al.*, 2016).

The ether extract (EE) contents (1.41–2.75%) fell within the acceptable range for ruminant diets, contributing to energy density and aiding the absorption of fat-soluble vitamins (Aregheore, 2000). All the statistical parameters recorded for Nitrogen Free Extract (NFE), except 33.80% (50CC-40PL), were higher than the 39.80% reported by Babale *et al.* (2018), indicating good energy availability for the bucks. Ash content recorded in the experiment was higher than the 3.18% reported by Yusuf and Garba (2020) and 7.9% by Babale *et al.* (2018), suggesting a high mineral content in the supplements. Neutral detergent fiber (NDF) values and acid detergent fiber (ADF) values from the experiment indicated good intake potential of 27.95–43.02%, reflecting moderate digestibility. The acid detergent lignin (ADL) values are within the limit that ensures moderate digestibility in ruminant diets. Elevated lignin levels may hinder fiber digestibility by forming indigestible complexes (Getachew *et al.*, 2004; Van Soest, 1994). The metabolizable energy (ME) values (6.68–32.30 MJ/kg DM) observed across the diets suggest varied energy supply potential. Diets with higher ME enhance microbial activity and growth performance in ruminants (Newbold, 2020).

Table 2: Proximate fiber composition and metabolizable energy of *Panicum maximum* and the experimental supplements

Nutrients (%)	<i>Panicum maximum</i>					
	0CP0CC0PL	40CP-50PL	50CP-40PL	40CC-50PL	50CC-40PL	
DM	91.17	93.58	94.35	94.04	93.53	
% of DM						
CP	8.29	8.70	9.36	7.77	8.27	6.91
CF	22.34	13.86	14.89	11.40	31.05	32.65

EE	2.75	2.18	1.74	1.99	1.41	1.46
Ash	8.61	20.93	25.41	22.97	18.24	25.19
NFE	58.01	54.33	48.60	55.87	41.02	33.80
Fibre components (%)						
NDF	61.00	54.95	58.78	55.90	57.05	59.55
ADF	43.02	27.95	36.25	32.90	34.60	38.40
ADL	11.15	8.40	9.25	8.00	8.50	10.60
Predicted parameter						
ME (MJ/kg DM)	26.20	32.30	28.57	23.81	6.76	6.68

0CPCCPL: No cassava peel, corncob and poultry litter;
40CP-50PL: 40 % cassava peels, 50 % poultry litter;
50CP-40PL: 50 % cassava peels, 40 % poultry litter;
40CC-50PL: 40 % corncobs, 50 % poultry litter
50CC-40PL: 50 % corncobs 40 % poultry litter
DM: Dry matter; CP: Crude protein; CF: Crude fiber; EE: Ether extract; NFE: Nitrogen free extract; NDF: Nitrogen digestible fiber; ADF: Acid detergent fiber; ADL: Acid detergent lignin; ME: Metabolizable energy\

Carcass characteristics of WAD bucks fed a basal diet of *Panicum maximum* supplemented with cassava peel-poultry litter base supplements.

The results from Table 3 show the carcass characteristics of WAD bucks fed a basal diet of *Panicum maximum* supplemented with cassava peel-poultry litter base supplements. Statistical analysis reveals that body weight, bled weight, dressing percentage, head, forelimbs, rib, and hind limb were significantly different ($P < 0.05$). Body weight mean value obtained from the research ranges from 6.35 % (50CC-40PL) to 7.51 % (0CP0CC0PL). Diet 0CP0CC0PL was significantly ($p < 0.05$) higher in body weight (7.51 %) and dressing percentage (35.17 %) and lowest in skin weight (4.31 %), neck weight (2.49 %), and whole organ weight (22.55 %). The mean value of the rib weight varies from 3.06 % (40CC-50PL) to 8.15 % (50CP-40PL). Statistical analysis of variance revealed that the mean value of the flap was not significantly different ($P > 0.05$), with 3.34 % (40CP-50PL) having the highest value and the lowest value recorded for 2.57 % (40CC-50PL). Analysis of variance also showed that the hind limb weights were significantly different ($P < 0.05$), with bucks in 11.15 % (50CP-40PL) being the highest and bucks in 8.17 % (0CP0CC0PL). Also, the whole organ weight value ranged from 22.55 % (0CPCCPL) to 27.60 % (50CP-40PL).

Dressing percentage recorded was lower than 39.11 – 44.08 %, 49.24 – 52.15 %, 61.24 % and 52.33 – 55.50 % reported by (Raimi *et al.* 2021; Omunizua *et al.* 2021; Alih *et al.* 2021; and Okpara *et al.* 2024). Control supplement (0CP0CC0PL) had a dressing percentage of 35.17 %, which was within the range of 32.94 to

55.35 % reported by (Ozoemelum *et al.*, 2014; Ifut *et al.*, 2015; Ukanwoko and Okpechi, 2016; Jiwuba *et al.*, 2018) as a baseline reported for WAD goats (Ifut *et al.*, 2015). Lower dressing value indicates inefficient nutrient utilization and reduced economic return. Head proportion values were slightly higher than the (7.00 – 7.45 %) reported by Alih *et al.* (2021), while hind limb for all the diets except for 0CPCCPL exceeded the (8.55 – 9.00 %) range reported by Alih *et al.* (2021). Neck proportion, forelimbs, and ribs were all lower than the corresponding 3.86 – 4.05 %, 7.60 – 8.10 %, and 10.00 – 10.50 % values reported by Alih *et al.* (2021). Skin values were lower than 6.79 – 8.58 % reported by Omunizua *et al.* (2021).

Sensory evaluation of meat from West African Dwarf bucks fed a basal diet of *Panicum maximum* offered poultry litter supplement.

The organoleptic properties of the meat of West African Dwarf goat fed a basal diet of *Panicum maximum* offered poultry litter supplement are presented in Table 4. Statistical analysis shows significant ($P < 0.05$) differences among the entire organoleptic properties across the dietary supplements. Overall acceptability ranged from 5.85 (50CC-40PL) to 7.10 (0CPCCP and 50CP-40PL), for colour; 6.00 (40CP-50PL) had the lowest value, and 6.95 (50CC-40PL) was the highest. Flavour values ranged from 3.50 (40CP-50PL) to 6.45 (40CC-50PL). Tenderness was highest in 6.90 (50CP-40PL) and lowest in 5.30 (50CC-40PL). Juiciness ranged from 5.40 to 6.50 for (40CC-50PL and 50CP-40PL), respectively. 5.60 (40CP-50PL) to 6.65 (50CP-40PL) range values were recorded for texture. Overall acceptability, which integrates consumer perception of flavour, tenderness, juiciness, texture, and colour, is a critical determinant of meat quality (O'Quinn *et al.*, 2018; Miller, 2020). Overall acceptability for 0CP0CC0PL (7.10) and 50CP-40PL (7.10) indicates that these two treatments were equally preferred by the panelists.

However, 50CP-40PL recorded the higher values for flavour (6.40), tenderness (6.90), juiciness (6.50), and texture (6.65), showing a more consistent sensory advantage compared to 0CP0CC0PL. Flavour and tenderness are widely reported as the most influential factors in consumer liking, jointly accounting for over 80% of the variation in overall palatability scores (O'Quinn *et al.*, 2018). This explains why the superior flavour and tenderness of 50CP-40PL

translated into high overall acceptability. Similar findings were reported by Bekhit *et al.* (2021), who observed that diets enhancing flavour precursors improved meat acceptability regardless of colour variation. The relatively low score for overall acceptability of 50CC-40PL (5.85) reflects its lower tenderness (5.30) and juiciness (5.55) and could be attributed to the type of supplements offered to the treatment group, which invariably confirmed the importance of balanced sensory attributes for consumer satisfaction (Miller, 2020).

Table 3. Carcass characteristics of West African Dwarf bucks fed a basal diet of *Panicum maximum*, offered a poultry litter-based supplement

Parameters	0CP-0CC-0ACP	40CP-50PL	50CP-40PL	40CC-50PL	50CC-40PL	SEM	P-Value
Body weight (Kg)	7.51 ^a	7.33 ^a	6.41 ^a	6.50 ^a	6.35 ^a	0.14	0.00
% OF BODY WEIGHT							
Bled weight	64.83 ^b	71.62 ^b	71.18 ^{ab}	75.81 ^{ab}	76.71 ^{ab}	1.89	0.14
Dressing Percentage	35.17 ^a	28.28 ^b	28.82 ^{ab}	24.19 ^{ab}	23.29 ^b	1.69	0.04
Skin	4.31	4.33	5.33	4.66	4.80	0.19	0.46
Head	7.09 ^b	7.49 ^b	8.43 ^b	8.26 ^{ab}	8.39 ^a	0.20	0.10
Neck	2.49	2.78	3.40	2.72	2.81	0.18	0.66
Forelimbs	5.45 ^c	6.15 ^c	7.05 ^c	2.69 ^b	6.33 ^a	7.13	0.00
Rib	6.03 ^c	7.00 ^c	8.15 ^c	3.06 ^c	6.11 ^a	7.84	0.00
Flap	2.65	3.34	3.05	2.57	2.71	0.14	0.52
Hind Limb	8.17 ^c	9.06 ^c	11.15 ^a	10.00 ^b	9.95 ^c	0.45	0.04
Whole Organ	22.55	25.49	27.60	26.84	27.18	0.94	0.49

^{abc} Means with different superscripts are significantly different at (p<0.05), SEM = Standard error of mean. 0CPCCPL: No cassava peel, corncob, and poultry litter; 40CP50PL: 40 % cassava peels, 50 % poultry litter; 50CP-40PL: 50 % cassava peels, 40 % poultry litter; 40CC-50PL: 40 % corncobs, 50 % poultry litter; 50CC-40PL: 50 % corncobs, 40 % poultry litter

Table 4 Organoleptic properties of meat of West African Dwarf goats fed a basal diet of

Parameter	0CC-0CP OPL	40CP-50PL	50CP-40PL	40CC-50PL	50CC-40PL	SEM	P-Value
Colour	6.60 ^a	6.00 ^a	6.55 ^a	6.85 ^a	6.95 ^a	0.14	0.00
Flavour	6.30 ^a	3.50 ^a	6.40 ^a	6.45 ^a	5.05 ^b	0.38	0.00
Tenderness	6.35 ^b	5.85 ^c	6.90 ^a	6.05 ^c	5.30 ^d	0.18	0.00
Juiciness	6.10 ^b	5.50 ^c	6.50 ^a	5.40 ^c	5.55 ^c	0.14	0.00
Texture	6.00 ^b	5.60 ^c	6.65 ^a	6.50 ^a	6.15 ^c	0.13	0.00
Overall Acceptability	7.10 ^a	6.20 ^b	7.10 ^a	6.15 ^b	5.85 ^c	0.18	0.00

^{abc} Mean with difference superscripts are significant different at (p<0.05), SEM = Standard error of mean, 0CPCCPL: No cassava peel, corncob and poultry litter; 40CP-50PL: 40 % cassava peels, 50 % poultry litter; 50CP-40PL: 50 % cassava peels, 40 % poultry litter; 40CC-50PL: 40 % corncobs, 50 % poultry litter; 50CC-40PL: 50 % corncobs 40 % poultry litter

CONCLUSION AND RECOMMENDATION

All the experimental diets resulted in comparable carcass and organoleptic properties of chevon; supplements (0CPCCPL) and (50CP-40PL) have an equally high overall acceptability value. However, the supplement (50CP-40PL) produced meat of better flavour, tenderness, juiciness, and texture. The present findings therefore suggest that 50CP-40PL offers the best combination of sensory traits to achieve high

acceptability, and may serve as the optimal dietary supplementation strategy for improving goat meat quality. Supplement (50CP-40PL) can be recommended as a supplemental diet to WAD bucks offered *Panicum maximum* as a basal diet due to its high preference value and no adverse effect on carcass and organoleptic properties of meat.

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