

## Analysis of Local and Improved Chickens Consumption in Olamaboro Local Government Area of Kogi State, Nigeria

Gyanden Peter KUGHUR\*

Patience Igbele OMALE

Chubyojo Christopher OKODO

Department of Agricultural Extension & Communication, Federal University of Agriculture P.M.B 2373 Makurdi, Benue State, Nigeria.

\*[ORCID: https://orcid.org/0000-0003-0143-3775](https://orcid.org/0000-0003-0143-3775),

[ORCID: https://orcid.org/0000-0002-2371-305X](https://orcid.org/0000-0002-2371-305X),

[ORCID: https://orcid.org/0000-0002-6970-8598](https://orcid.org/0000-0002-6970-8598)

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**Abstract:** The study analyzed local and improved chicken consumption in Olamaboro local government area of Kogi State, Nigeria. Multi-stage sampling technique was adopted for data collection. Data were gathered from primary source using structured questionnaire administered on 120 poultry consumers. The data collected were analyzed using both descriptive and inferential statistics. Results showed that both males and females (50%) consumed chickens, people age between 20-40 years were more involved in consumption of chickens, 61% were married, 59.2% had household size of between 6-10 people, 55% had annual income of about ₦300,000.00, 69% were Christians and 35% were civil servants. Consumption preference showed that 59% choose improved chickens because of the quantity of meat. Results of multinomial logistic regression of socio-economic characteristics on choice of chicken for consumption showed that sex ( $W = 4.242$ ,  $\text{sig} = 0.039$ ), age ( $W = 20.107$ ,  $\text{sig} = 0.00$ ) significantly and positively affected the tendency of respondents to choose a type (improved or local) of chicken for consumption at 5% and 1% level of significant respectively and annual income ( $W = 21.918$ ,  $\text{sig} = 0.00$ ) significantly and positively affected the respondents' choice of chicken for consumption at 1% level of significant. The Chi-square statistics ( $\chi^2$ ) value of the multinomial logistic regression model is 81.70 and is significant at 1%. The paired sample t-test indicates difference in consumption of improved chickens (1.62) and t (2.618) was statistically significant ( $P < 0.01$ ) at 1%. It is recommended that producers of improved chickens should be encouraged to produce more.

**Keywords:** Consumption, between, local, improved, chickens.

### INTRODUCTION

Worldwide, the consumption surveys indicate that chicken is the second largest consumed meat (FAO, 2012). According to the FAO (2012), poultry accounts for approximately 33% of world meat intake serving as the chief meat in consumer diets in many low to middle income countries. In Nigeria, poultry accounts for about 30.28% of the total livestock production (Kughur et al., 2014). The traditional poultry production systems are mainly based on free-range indigenous chickens which are kept at the subsistence level and are found in almost all rural households. To the rural folk, there is general preference for local chickens over their improved counterparts because of the belief that they are tastier and have no drug residues. This put marketing of local chickens in a check as to how their demand and supply could interplay. Traditionally, indigenous

chickens are mainly sold when there is a need for money by a farmer. In some places, the chickens are sold in village markets to hawkers or middlemen who subsequently assemble and transport them to urban traders (Emuron et al., 2013).

The review of empirical studies show that on consumer side strong preferences for improved chicken meat exist, which is mainly due to its convenience and low prices (Al-Hassan, 2014; Banson et al., 2015; Kwadzo et al., 2013). Studies indicate that price is the most important factor in purchase decision regarding improved chicken meat, there is also consensus about the importance of the convenience attribute. Chicken parts sold frozen or chilled are seen as most convenient in contrast to chicken sold as dressed whole or live birds (Woolverton & Frimpong 2013).

The consumer's taste and preferences surrounding chicken appears to be changing at a faster pace than domestic producers can match. Consumers now prefer convenient forms of chicken that are pre-cut or ready-to-cook or even ready-to eat and of certain sensory characteristics. In many countries without import restrictions, price competitive imports are filling this demand (Woolverton & Frimpong, 2013).

According to the FAO (2010), approximately 50% of the poultry surges registered in developing countries have occurred in Africa, with 24% reported in West Africa, 11% in central Africa and 10% in southern Africa. Nigeria has witnessed an increasing prevalence of poultry import surges over the past 6 years with imported quantities far exceeding domestic once. As a result the local market has become uncompetitive and lots of local poultry farmers have already left the industry for alternative business. Concerns about the negative effects of Nigeria's poultry imports on domestic poultry prices have raised the concern of local farmers, consumers and governments. Import surges of poultry products in Nigeria have risen to a mainstream debate at the national level in recent years undermining domestic poultry production (Banson et al., 2015).

Chickens in Nigeria have more diverse use and benefits to households. The use of chickens in Nigeria varies from region to region and community to community (Mahendra, 2016). Dorji et al. (2011) reported that small holders keep chickens for their socio-economic functions. This is because the commitment of an individual or community to a particular spiritual being, deity or season and traditional or religious festival is evaluated by the quality of the offering that satisfies special morphological features of the chicken demanded by the receiver.

Alewi et al. (2012) reported that chickens (both improved and local types) are part of a balanced farming system and have vital role in rural households as a source of high quality protein and emergency cash income and play a significant role in the socio-cultural life of the rural community. The poultry subsector offers the quickest returns to investment outlays in livestock enterprise by virtue of its short reproductive period, high feed conversion ratio alongside being one of the cheapest, commonest and best sources of animal protein in Nigeria (Ojo, 2002).

The Nigerian chicken industry, particularly broiler production is in a difficult situation, as it has been described by some key industry players as 'virtually dead'. The 'apparent slump' in demand for locally produced chicken can be attributed to the inability of producers to compete on price and product differentiation. Thus in 2013-2014, domestic producers were able to supply only about 10,000MT of broiler meat and 12,400MT of spent layers, which constitutes 10% of total chicken consumed (Opoku-Mensah et al., 2014).

Although the livestock industry grew significantly in 2014, the chicken subsector declined by 12.81% (Opoku-Mensah et al., 2014). The broiler sub-sector of the chicken

industry appears to be the hardest hit as production and output has decreased to an all time low of about 10% in the last decade. There are a number of factors that accounts for the slowed growth in the industry which include lack of processing infrastructure with proper packaging units, value-addition through processing of chicken is minimal, lack of quality assurance, lack of cold storage and refrigerated trucks for effective handling and distribution of processed meat has been a major drawback to the competitive strength of local chicken industry. Other factors are weak networking between the chicken chain actors such as farmers, processors, supermarkets, chicken input dealers and financial institutions and the level of agribusiness linkages within the chicken sector appears to be under-developed or weak. Indeed, contract arrangements in the chicken sector are either few and sporadic or non-existent (Opoku-Mensah et al., 2014).

Individual farmers make private arrangements to source for their own inputs and output markets. Another major constraint is the fact that chicken production in Nigeria is relatively high cost, capital intensive enterprise which requires sustainable supply of good and affordable credit. The inability of the chicken producers to adopt improved production technologies and modern trends in production has all together adversely affected the economic efficiency of the enterprise. This has translated to the rather high cost of locally produced improved chickens in country and hence the over-dependence on cheap imported broiler meat to the extent that Nigeria has witnessed a dramatic switch in the trend of chicken meat supply from domestic supply base of 70% to the current situation where local supply is only 10% of consumer demand (Opoku-Mensah et al., 2014).

Despite being disregarded through limited provision of feeds, shelter, limited protection against predators and above all against infectious and parasitic diseases which cause high mortalities, indigenous chickens have invaluable characteristics that are not found in the improved/exotic strains. These characteristics are appropriate to the traditional low input/low output farming systems in Nigeria.

## MATERIAL and METHOD

The study was carried out in Olamaboro Local Government Area, Kogi State, Nigeria. Olamaboro is one of the 21 Local Government Areas (LGAs) in Kogi State. The LGA is made up of three districts Imane, Okpo and Ogugu with a population of 116,692 (NPC, 2006). It is located at the South east of Kogi State, bordering Enugu and Benue States. Its headquarters is at Okpo which is about 80km from the state capital. Kogi State shares common boundaries with Niger and Nasarawa States and the Federal Capital Territory to the North and Benue State to the East. To the West, it is bounded by Kwara, Ekiti and Ondo States and to the South by Enugu, Anambra, and Edo States.

Olamaboro LGA lies between latitude 100 N and Longitude 120 E. There are three major ethnic groups in the

LGA namely Igala, Ebira and Yoruba. The area is predominantly occupied by Igala people; other tribes residing in the area include Idoma, Igbo and the Hausa. Two distinct seasons dry and rainy seasons are experienced in the area. Dry season last from November to February and rainy season last from March to October. The climate favours the cultivation of wide range of crops including including yam, oil palm, cashew, cassava, cocoyam, maize, sorghum, cowpea, millet and vegetables. The major cash crops produce in the area are oil palm and cashew (Kughur et al., 2017)

Olamaboro Local Government Area has eleven (11) council wards namely: Okpo I, Okpo II, Adeh, Igah, Ogugu I, Ogugu II, Adupi, Ofante, Imane I, and Imane II. Olamaboro The topographical landform of Olamaboro Local Government Area varies from undulating hills with valley and plain lands. The population of the study consists of all poultry consumers in Olamaboro Local Government Area of Kogi State. Because of the large population, a multi-stage sampling technique was used to select 120 respondents. In the first stage, Olamaboro LGA was purposively selected because of intensity of consumption of both improved/exotic and local chickens. In the second stage, five (5) out of eleven (11) council wards were purposively selected viz: Okpo I, Igah, Ogugu II, Ofante and Imane II. In each of the council wards selected, sample random sampling was used in selecting (24) respondents, making a total of 120 respondents.

Data for the study were collected from the primary sources using structured questionnaire. The data collected were analyzed using both descriptive and inferential statistics. Descriptive statistics like frequencies, percentages and mean scores and inferential statistics such as student t-test and multinomial logistic regression.

**Model Specification**

**Multinomial Logistic Regression Model**

The multinomial logistic regression analytical technique was used. The consumption rate of chicken is qualitative in nature and was measure at two levels as dummy variable (1= consumed and 0 = not consumed). The multinomial logistic regression model is chosen as the best approach used for handling multinomial dependent variable. In estimable form, the model is expressed as;  $\text{Log } Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + u_i$

The unknown parameters  $\beta_i$  are usually estimated by maximum likelihood. Thus, model is explicitly express as:  $\text{Log } Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + u_i$

Where,

$Y = (\text{Probability of consuming chicken where exotic} = 1, \text{local} = 0)$

$X_1 = \text{Sex: (1, if male and 0 if female)}$

$X_2 = \text{Age (years)}$

$X_3 = \text{Household size}$

$X_4 = \text{Educational level (Number of years spent acquiring formal education).}$

$X_5 = \text{Income (estimated annual income)}$

$\beta_0 = \text{Constant term}$

$\beta_i (i = 1, 2, \dots, 5)$  parameters to be estimated

$U_i = \text{Independent distributed error term.}$

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

T-test of the form:

t = the value by which the statistical significance of the mean difference will be judged

$\bar{x}_1$  = the mean of improved/exotic chickens

$\bar{x}_2$  = the mean of local chickens

$s_1^2$  = the variance of improved/exotic chickens

$s_2^2$  = the variance of local chickens

$n_1$  = the number of improved/exotic chickens

$n_2$  = the number of local chickens

**Measurement of Variables and Assumptions.**

i. **Sex:** Male = (1) and female = (0). Sex of household head looks at the role played by the individuals in providing household needs including purchasing of meat. Female headed households have higher dependency ratios which hinder household capacity to allocate resources for either local or exotic chicken meat consumption. The expected effect of this variable is positive

ii. **Age:** Continuous 1, 2, 3, 4, 5 etc. in years. The age of the household head is expected to impact on his or her supply for chicken meat consumption. Young and energetic household heads are expected to consume all the two types of chicken meat than older household heads. The expected effect of this variable is negative.

iii. **Household size:** Continuous 1, 2, 3, 4, 5 etc. The size of household determines the chicken consumption status of the household. The expected effect of this variable is positive

iv. **Level of education:** Number of years spent in acquiring formal education. As the level of education increases, the quantity of chicken consumption increases. This is expected to have positive influence.

v. **Income** = Naira (N) Continuous 1, 2, 3, 4, 5 etc. The higher the household earns income the more the quantity of chicken meat consumed. The expected effect of this variable is positive

The result in Table 1 showed that males (50%) and females (50%) were involved in the consumption of poultry meat in the study area. This indicates that both males and females consumed poultry meat in the study area. This implies that poultry meat consumption in the study area was not based on sex of individuals as both males and females consumed it at equal proportion. The availability and the low cost of poultry meat in all locations in Nigeria could be associated with its consumption by both male and females as

it is reared in most places in the country both in township and in rural areas. This finding is similar to Banson et al. (2015) who reported that consumption of poultry meat by male and female is not significantly different. The result further showed that the age of between 21-40 years (43.3%) had the highest number of poultry consumers. The ages of between 41 and 60 years (39.2%) also had a significant number of poultry consumers, while the ages of above 61 (17.5%) years were least in terms of consumption. This implies that a major proportion (43.3%) of the poultry consumers were young people. Consumption of fresh meat is dominated by young people; aged people due to one ailment or the other do not consume fresh meat in the same way and manner it is consumed by the young people.

**Table 1.** Socio-Economic Characteristics of Poultry Consumers (n=120)

Variable	Frequency	Percentage	Mean
<b>Sex</b>			
Male	60	50.0	
Female	60	50.0	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Age (years)</b>			
20-40	52	43.3	46.57
41-60	47	39.2	
Above 61	21	17.5	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Marital status</b>			
Married	74	61.7	
Single	25	20.8	
Widows	20	16.7	
Divorced	1	0.8	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Household size</b>			
6-10	71	59.2	6.73
≤5	39	32.5	
11-15	10	8.3	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Level of education</b>			
Tertiary	55	45.8	
Secondary education	29	24.2	
Non formal education	27	22.5	
Primary education	9	7.5	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Income</b>			
Above 300, 001	66	55.0	216159.76
100, 000 – 200, 000	27	22.5	
200001 – 300, 000	16	13.3	
<100, 000	11	9.2	
<b>Total</b>	<b>120</b>	<b>100.0</b>	
<b>Religion</b>			
Christianity	83	69.2	
Muslim	37	30.8	
<b>Total</b>	<b>120</b>	<b>100</b>	
<b>Major Occupation</b>			
Civil service	42	35.0	
Farming	35	29.2	
Artisan	29	24.2	
Students	8	6.7	
Petty trading	6	5.0	
<b>Total</b>	<b>120</b>	<b>100</b>	

The results in Table 1 depicted that majority (61.7%) of poultry consumers were married. Married people have a larger family size and consume more meat than other category of people like singles and widows. In Nigeria, the extended family system is largely practiced by most people and this has made many families to have large number of people in their household. A family with a large number of people consume meat more than the one with few persons. Meat consumption is directly proportional to the number of people in the household. This confirms Grossman (1972) who reported a direct relationship between marital status and age of meat consumers and health consciousness.

Results in Table 1 indicated that a large proportion (45.8%) of the respondents/poultry consumers were

educated. Education plays a prominent in human life as it creates awareness generally; health and nutritional benefits of consuming poultry meat, facilitates adoption of innovations among others. An educated person also understands the importance of (meat) poultry consumption as source of protein essential for proper functioning of the body. Education also widens the horizon of an individual, also in dealing with matters that have to do with meat consumption.

Results of annual income showed that majority (55.0%) had above N300, 000, 22.5%. The finding revealed that the poultry consumers were small income earners. This implies that their small income earning may likely affect their meat consumption especially as it relate to improved/exotic chickens which cost little higher above the local chicken. Consumption by the household is directly related to income, the higher the income the better the status of the household and the higher the quality of items consumed including meat (local and exotic chickens). People with high income live a better quality of life which is exhibited by the kind of meat they consume. In Nigeria, many people do not know the importance of consuming vegetables hence take a lot of meat ignoring vegetables. This confirms Damisa and Hassan (2009) who reported that consumer preference of chicken was influenced by income level, household size, age and educational status of consumers. The distribution of respondents according to religion showed that majority (69.2%) of the respondents were Christians and 30.8% were Muslims. This showed that the study area was predominantly occupied by Christians. The results on major occupation of the respondents revealed that (35.0%) were civil servants, 29.2% farmers, 22.4% were petty traders and 5.0% were artisans. A reasonable proportion (35%) were civil servants, this means the area was dominated by people in the civil service.

**Table 2.** Preference between improved and Local Chickens Consumption.

Breed	Frequency	Percentage
Improved	71	59.2
Local	49	40.8
<b>Total</b>	<b>120</b>	<b>100</b>

The results in Table 2 showed that majority (59.2%) of the respondents have preference for improved chicken. There are many factors associated with consumers' preference for chicken consumption which include taste, affordability, availability, level of freshness/type of storage, presentation form/package form, convenience and certain sensory characteristics among others.

In places where the cost of meat is high, consumers have no preference; rather affordability is the major factor in determining the type of meat people consumed. Another factor that influences poultry meat consumption is culture. Many people are deeply rooted in cultural beliefs that whatever is forbidden by their culture they do not go against it. People who are deeply rooted in culture use local chicken to perform rituals and to carry out certain cultural exhibitions among others. Exotic chickens are readily available even in the interior villages with good finishing, attractive outlook which make consumers to patronize them for meat. Local chickens are

reared in such a way and manners that does not guarantee good finishing attractive to consumers for meat. The result confirms Sehbo (2015) that the demand and consumption of improved/exotic chicken is on the increase in Nigeria because imported/exotic chickens produce higher number of eggs and more meat. Similarly, Jahan et al. (2005) pointed out that consumers most time consume improved/exotic chickens because it can be cooked in many ways such as deep frying, grilling and roasting which are not appropriate for local chicken meat.

In contrast, (Kwakwa, 2013) reported that a survey among rural Ghanaians showed that 76.6% of respondents prefer local chicken meat over improved/exotic ones because of differences in respondents' circumstances (e.g., urban versus rural living, purchase done at traditional versus modern market). Another explanation was that the reasons for buying poultry meat strongly differ between improved and domestically produced chicken meat and that the purchase decisions are rather independent from each other.

The results in Table 3 showed that for improved/exotic chickens (42.5%) of the respondents preferred it because of quantity of meat, while (34.2%) preferred local chickens for its taste. In most standard markets meat is sold in Kilograms which is an indication that quantity is a very important variable in determining how meat is bought by a consumer. For local people rearing chickens, weight is use as a measure to identify if a chicken has attained market value. Weight of a chicken is also a measure of quantity. Similarly, quantity of meat bought by a household play an important role in sharing among family members especially where extended family system is practised and the house has a large number to draw from the meat that is bought by the household. Since the meat is expected to be shared among all members of the household, the larger the quantity of meat the more the quantity of meat meant for each family member. If the quantity is very small it may not be able to reach all members of the family, therefore; quantity of meat is very important especially for large family members.

**Table 3.** Distribution of Respondents based on Reasons for Preference.

Reason	Imported Chickens		Local Chickens	
	Frequency	Percentage	Frequency	Percentage
Quantity of meat	51	42.5	20	16.7
Taste	20	24.2	41	34.2
Quality of meat	20	16.7	34	28.3
Others (convenience, etc)	15	12.5	7	5.8
Cost	5	4.2	18	15.0
<b>Total</b>	<b>120</b>	<b>100</b>	<b>120</b>	<b>100</b>

For local chickens, respondents prefer it for its taste (34.2%). Consumer preference for consumption of chicken is based on many attributes including taste, quality and quantity. Taste is also one of the important attributes for chosen a particular meat. If consumers do not like the taste of a particular meat its patronage will be low, in contrast, a meat with a good taste may attract high patronage by many consumers. This corroborates Kwadzo (2013) who analyzed domestic and imported broiler meat attributes within a consumer ranking and found that local broiler meat is rated higher in regard to the taste attribute than imported meat, whereas imported broiler meat get higher scores in regard to the attributes price, packaging, form of the meat, availability and proximity of access. Similarly, Banson et al. (2015) reported that freshness and taste are the reasons for preferring

local chickens, whereas improved chickens are preferred for its offering as pre-cut pieces.

**Table 4.** Difference in Price between Improved and Local Chickens.

Cost	Mean	Std Deviation
Improved	2340.42	463.286
Local	1773.75	342.811
<b>Total</b>	<b>4114.17</b>	<b>806.097</b>

T-statistics = 16.097

Result in Table 4 showed the paired sample t-test showing difference in price (mean) cost of improved (2340.42) and local (1773.75) shows that t (16.097) is statistically significant (P<0.01) at 1%. This indicates that the cost of improved chicken is significantly higher than the cost of local chicken. Cost of a chicken is directly proportional to its live weight, improved chickens are properly fed/taken care of than the local chickens, therefore, the live weight of improved/exotic chicken in most cases is higher than that of the local ones and the corresponding price. The finding contradicts FAO (2010) that the inability of the local chicken producers to adopt improved production technologies and modern trends in production has altogether adversely affected the economic efficiency of the enterprise which has translated to the rather high cost of locally produced chicken in Nigeria and hence the over-dependence on cheap imported/exotic chickens.

**Table 5.** Multinomial Logistic Regression of Socio-Economic Characteristics of Respondents on Choice of Chicken for Consumption.

Variables	B	S.E	Wald	df	Sig.	Exp(B)
Sex	-1.269	0.616	4.242	1	0.039**	0.281
Age	-0.180	0.040	20.107	1	0.00*	0.835
Household size	-0.147	0.122	1.452	1	0.228	1.863
Level of education	0.368	0.363	1.030	1	0.310	1.445
Annual income	0.000	0.000	21.918	1	0.000*	1.000
Constant	5.249	1.375	14.584	1	0.000	190.425

Cox & Snell R<sup>2</sup> = 0.494,

Chi-sq = 81.70

Nagelkerke R<sup>2</sup> = 0.666

-2 loglikelihood = 80.593

\*\* , \* = significant at 1% and 5%

B = Value obtained from regression

S.E = Standard error

df = Degree of freedom

The results in Table 5 showed the multinomial logistic regression of socio-economic characteristics on choice of chicken for consumption. Sex significantly and positively (4.242) affected the tendency of respondents to choose a type (improved or local) of chicken for consumption at 5% level of significant (sig = 0.039). Age significantly and positively (20.107) affected the propensity of respondents to decide on a category (improved or local) of chicken for consumption at 1% level of significant (sig = 0.00). This implies that older respondents were able to choose a type of chicken meat for consumption because they have tasted the two different types of chicken's meat and have decided stick to a particular one. This is in line with our prior expected. Annual income significantly and positively (21.918) affected the tendency of respondents to choose a type of chicken for consumption at 1% level of significant (sig = 0.00). This is in

line with our prior expected. This implies that the respondents with higher annual are able to decide on a type of chicken meat for consumption. Income determines spending capacity of a person, the higher the income the more the spending and by extension the more the consumption of meat generally and then chicken meat in particular.

The Chi-square statistics ( $\chi^2$ ) value of the multinomial logistic regression model is 81.70 and was significant at 1%. This implies that the socio-economic characteristics of the respondents have significant effect on deciding on a type (improved or local) of chicken for consumption. The Cox and Snell  $R^2$  value of the multinomial logistic regression model indicate that 49.4% of the variations of the dependents variables were explained by the logistic regression model. The result also shows that Nagelkerke  $R^2$  for regression is 0.666 indicating that the variables tested accounted for only 66.6% of the variation of the dependents variables. The remaining 33.3% is attributed to the error term.

**Table 6.** Differences in Consumption Rate between Improved and Local Chickens.

Cost	Mean	Std Deviation
Improved	1.62	0.488
Local	1.38	0.488
<b>Total</b>	<b>3</b>	<b>0,98</b>

T-statistics = 2.618

Result in Table 6 showed the paired sample t-test depicting difference in rate of consumption of improved (1.62) and local (1.38) shows that t (2.618) is statistically significant ( $P < 0.01$ ) at 1%. This indicates that the consumption of improved chickens is significantly higher than that of local chickens. The improved chickens are available both in urban and rural areas, however, the local chickens are predominantly found in the rural area, also the scale of production of the local chicken is not as large as the improved chickens hence, this limit their consumption to people that are residing mostly in the rural areas. The exotic chicken are mostly sold in the township and some of them are made ready for cooking which is good for very busy people who may not have the time to buy and prepare it before the meat is ready for cooking.

## CONCLUSION

Poultry with its socio-economic importance plays a major role in providing the highly needed animal protein for the increasing population. This is because the poultry meat and eggs can be produced more economically and quickly when compared with other sources of meat. The local chickens are well adapted to the environment, resistant to poor management, feed shortages and tolerate some of the most common disease and parasites. On the other hand, improved chickens produce higher number of eggs and more

meat than the indigenous chicken but unfavourable climate is a great challenge to them. People prefer improved chicken because of quantity of meat, thought it cost more the local chicken. It is recommended that people producing improved chickens should be encouraged to produce more to meet the demand for it.

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**\*Corresponding author's:**

Gyanden Peter KUGHUR

Department of Agricultural Extension & Communication,  
University of Agriculture P.M.B 2373 Makurdi, Benue State,  
Nigeria.

✉E-mail: [gyandenkughur@gmail.com](mailto:gyandenkughur@gmail.com)

ORCID: <https://orcid.org/0000-0003-0143-3775>