

## **POTENTIALITIES AND ACCEPTABILITIES OF LOCAL CHICKENS FOR SUSTAINABLE DEVELOPMENT IN NIGERIA**

**<sup>1</sup>Danwe, A.B; <sup>2</sup>Gbampo, C.S; A.A Liman, Innocent S.B and Frances Jassah.**

<sup>1</sup>Department of Animal Production, College of Agriculture P.M.B 1025 Jalingo, Taraba State.

<sup>2</sup>Department of Agricultural Extension and Management, College of Agriculture P.M.B 1025 Jalingo, Taraba State.

E-mail: [augustinedanwe0@gmail.com](mailto:augustinedanwe0@gmail.com)

---

### **ABSTRACT**

An investigation was carried out to determine the potentialities and acceptability of local chickens in Jalingo Local Government Area of Taraba State. The survey was conducted through questionnaire distribution in eight works of Jalingo metropolis. All the respondents (100%) raised local poultry. Local poultry production was mostly extensive (92.7%) with (7.3%) under semi-intensive system. The respondents (43.9%) accepted local chickens on the bases of nutritional qualities. There were no modern techniques of local chicken production amongst the respondents. However, local chickens' production could be improved through breed selection, good management and disease control methods currently in use.

**Keyword:** *Local Chickens, Affordable Protein, Palatable meat, Modern Management practices.*

### **INTRODUCTION**

The protein content of poultry meat is higher than any other meat (Oluyemi and Roberts, 1978). The poultry industry in Nigeria has undergone a significant transformation since the

early fifties, from a backyard, peasant and primitive household-oriented husbandry of in-descript breeds of semi-wild chickens, to the cash-oriented, modern and large scale poultry which dot over country-side and urban centers (Obioha, 1992). It can be said that poultry keeping has become a business in Nigeria. However, according to a recent National Livestock Survey, there are 88 million native chickens still under traditional husbandry. This is an indication that the potentialities of local chickens are yet to be fully exploited.

It is therefore clear that to accelerate this transformation to commercial poultry husbandry and sustain the interest of the local chicken farmers to modern poultry farming, the local poultry farmers must adopt the modern technology of poultry production. It has been said that chicken appears more frequently than any other animal as source of meat in the diet of people throughout the world. With the exception of strict vegetarians, there are few if any social or religious stigma attached to the use of local poultry meat in the diet. That is to say poultry out numbers all other forms of livestock in Nigeria and not surprising, it is found throughout the country whatever there is human settlement.

Therefore, local chickens are remains prominent in African villages; despite the introduction of exotic high-yielding chicken breeds since 1920's (Bourzat and sounders, 1990). This is largely due to the fact that farmers are not able to afford the higher input requirements of those high-yielding exotic breeds, and since 95% of the households in the rural areas are dependent on local chickens for their livelihoods despite the were low production of local chickens (Lebajoa,

2001). Unfortunately the huge potential of the local chickens has not been fully realized and utilized in rural areas, which would have found a "niche market" among poultry consumers in industrialized nations as the preferred meat.

## **MATERIALS AND METHOD**

### The study area

The survey was conducted in Jalingo Local Government Area of Taraba State. The study covered eight (8) wards in the local government, namely Mile six, Abuja, Kofai, Mayo-Dassa, Nukkai, Kona, Janbagbu and Sabon Gari. The questionnaire aimed at assessing the potentialities and acceptability of local chicken in Jalingo Local Government Area. The major source of information was obtained through questionnaires totally two hundred and five (205) randomly administered to the inhabitants; most of them were farmers with the exception of few who were civil servants and traders.

The questionnaires written in English were administered to farmers through extension agents and some well-wishers. For those who could not read and write, interpretations were implemented in their local languages such as Kona, Mumuye, Fulani, Hausa. The data were obtained through the questionnaires and oral interviews.

Jalingo the site of the study is located at Latitude 8°50' and 11°25' East with annual rainfall ranges from 1000-1500mm as from May-November. The temperature range is between 30°C AND 38°C depending on the season. It has an undulating topography with complete group of mountains and hills. The soil type range from sandy to loam which makes the rural inhabitants mostly farmers.

## Data Analysis

The results were subjected to simple percentage for interpretation and subsequent discussion of results.

## RESULTS AND DISCUSSION

It was found during the study that local chicken laid 10-15 eggs per clutch in most cases, with productive life of three (3) years and 32 weeks of age of point of lay mostly managed under extensive system.

**Table 4:1: Number of eggs laid per clutch/household**

No. of eggs/cutch Percentage%	No. of household	
1-6	25	12.2
7-9	45	21.9
10-15	125	61.0
16-20	10	4.9
Above 20	0	0
<b>Total</b>	<b>205</b>	<b>100</b>

Source: Field Survey 2019

Table 4.1 above showed that 61.0% of the households responded that their local chickens laid 10-15 eggs per clutch and 4.9% of the households responded that their hens lay above 15 eggs.

The study also indicated that local chicken possess high potential for egg lay. The variation in number of eggs per clutch is an indication that if improved up on, there may be birds that could lay more than 100 eggs. The statement agrees with Nwosu (1979) that local chickens could lay up to 128 eggs/year on deep liter system. A figure that is

much higher than the 40-50 eggs produced by local chickens raised extensively (Hill and Modebe, 2006).

Despite the fact that local chickens were the most predominant in the study area, the local chicken production system has been ridiculed because of the low biological productivity (Egg and meat) relative to the commercial/industrial poultry production system. This was not surprising in view of the fact that, compared to broilers and exotic layers, local chickens require and are given very little expert care or any form of management. Their inherent ability to scavenge makes them the "ideal" poultry to keep under rural management (Scoones, 1992; Kusina and Kusani 1999). Therefore, local poultry improvement must be directed toward commercialization of local chickens using modern technology and introduction of specialized or exotic breed, crossbreeding and management intensification (NAERLS(2000).

**Table 4:2: Number of clutches laid per house hold**

No. of eggs/cutch Percentage%	No. of household	
2	30	14.6
3	115	56.1
4	60	29.3
<b>Total</b>	<b>205</b>	<b>100</b>

Source: Field Survey 2019

Table 4.2 indicated that four (4) clutches of lay can be obtained from local chickens and that they can lay throughout the year with an average of 3.0 clutches. The range which spread from 2-4 clutches of lay per year. The result of the

survey showed that despite the poor feeding and housing of local birds, the birds still provide fertile eggs that gives a high percentage of Clutches. This survey agrees with (Mwalusanya, 1998). Who found that the low productivity of local chickens was partly due to poor management practices, in particular the lack of proper health care, poor nutrition and poor housing.

**Table 4:3 Management Systems/Household**

<b>Management Systems</b>	<b>No. of household</b>	
<b>Percentage</b>		
Extensive system	190	92.7
Semi-intensive system	15	7.3
Intensive system	0	0
Total	205	100

Source: Field Survey 2019

The table 4.3 above discovered that 92.7% of the local chickens were kept on extensive system by the rural poultry raisers. Not even housing were provided at night. This findings agrees with (Huchzemeyer, 1986), who also discovered that housing in local poultry was at a rudimentary stage, and field survey have shown cases where no housing or shelter was provided. As there was no proper management of the birds, feeding in most cases not even supplemented, yet the local chickens brood and wean successfully, because local birds are adapted for survival under scavenging free-range conditions due to their involvement from the same conditions. However, there still is a considerable and largely unexploited potential for increased production for local birds through improved management (FAO, 1995). Importantly local chickens

possess unique adaptive traits that permit them to survive and reproduce under harsh climate, nutritional and management conditions typically associated with low input-output production systems. Above all, most rural local poultry raisers do not vaccinate their chickens and yet the local chickens were able to produce. There should be increasing awareness of proper feeding and tendency towards confinement rearing of local chickens to obtain maximum productivity. This survey is in line with (Mburu and Ondwasi, 2005), who found that local chickens perform well when extra feed, proper housing and disease free environment are provided.

**Table 4:4: Preferences of Local Chickens meat than other poultry meat**

<b>Management Systems</b>	<b>No. of household</b>	
<b>Percentage</b>		
Local chickens	90	43.9
Guinea fowls	50	24.4
Exotic breeds	40	19.5
Ducks	25	12.2
Total	205	12.2

Source: Field Survey 2019

Table 4.4 above showed that most of the households (43.9%) responded that local chickens are acceptable on the account of flavor which is good, desirable, palatable, and pleasant taste, as well as the pleasant appearance. Results obtained from the performance of these birds in captivity indicate its potentials as a good protein in Nigeria. Infact, of all poultry species found in Nigeria today, the local chickens surpass the entire domestic fowls as a supplier meat and eggs. This finding agrees with Ayorinde, (1988). That the yield and

quality of local chicken's meat ranked first among those of other domestic birds. However, local chickens are still untapped. There is certainly, the need to develop internal measures to make Nigeria self-sufficient in animal protein production.

## CONCLUSION

The survey revealed that 98% of the households visited produced local chickens. And that local chickens laid 10-15 eggs per clutch and 4.9% of households responded that their hens laid above 15 eggs per clutch. This variation in number of eggs per clutch. This variation in number of eggs per clutch showed that if improved upon; there may be birds that could lay more than 100 eggs or more per year. In a nutshell, this survey indicated that there is a vast potential for moving up the local chickens ladder and expanding their modest enterprises to a profitable commercial size through modification of the current breeding, housing, management and disease control methods currently in use.

## REFERENCES

- Ayorinde, K.L (1988). *Poultry for Protein African Farming for Food Processing*. Pp. 187-210.
- Bourzat, D. and Sounders, M. (1990). *Importance of Traditional Methods of Poultry Production in Burkina Faso*. In: Proc., CTA Seminar, 3<sup>rd</sup> Int. Symp. *Poultry production in Hot Climates, Hameln, Germany, 12<sup>th</sup> June, 1987*.
- Food and Agricultural Organization (1995). *Utilization of Poultry, Feed Resources by Small Holders in Villages in Developing countries*. Food and Agricultural Organization



of the United Nations, Rome, Italy.  
<http://faosta.fao.org>.

Hill, A. and Modebe, N.A (2006). *Poultry Production at University College Ibadan*. Technical Bulletin No.2 Fac Agric. U.C Ibadan. Pp. 6-12.

Huchzermeyer, F.W and De Ruyck, A.M.C (1986). *Pulmonary Hypertension Syndrome Associated with as cites in Broilers*. Vet. Rec. 119:94.

Lebajoa, F.B (2001). Country Report - Lesotho In: *SADC Planning Workshop on Newcastle disease control in Villages Chicken*. Eds. Alders, R.G. and Spradbrow, P.B, Aciar Proc. No. 103, Maputo, Mozambique, 6-9 March 2000. Pp. 1-10.

Mburu, B.M and Ondwasi, H.O (2005). *Growth Performance, Carcass Yield and Meat Quality of Local Chickens*. Pp. 15-20.

Mwalusanya, N.A. (1998). *Productivity and Nutritional Status of Local Chickens under Village Management Conditions*. Unpublished Dissertation for award of MSc. Degree at the Royal Veterinary and Agricultural University, Copenhagen Denmark. Pp. 56.

NAERLS, (2000). *Improving the Performance of Local Chickens*. Extension Bulletin No.92 Poultry Series No.6. Pp. 3-6.

Nwosu, C. (1979) Characteristics of the local chickens of Nigeria and its potentials for egg and meat production proceedings of National Seminar on poultry production A.B.U Zaria Pp 198-220

Obioha, F.I (1992) Rural poultry production and productivity  
in Nigeria Livestock research for rural Development  
14,2-5

Oluyemi, J.A and Robert, F.A (1978) Poultry production in the  
warm wet climates Macmillan press limited London Pp2-  
10

Scoones, I (1992) Kusina, J.F and Kusina, N.T (1999) Land  
degradation and Livestock production, in Zimbabwe in  
Feasibility study of agricultural and households  
activities as they relate to livestock production in  
curuve district of Mashona land province with emphasis  
on poultry production report for the household  
agricultural support programme (HASP), Zimbabwe  
September 1999.

---

References to this paper should be made as follows Danwe, A.B. et al., (2019),  
Potentialities and Acceptabilities of Local Chickens for Sustainable  
Development in Nigeria. *J. of Agriculture and Veterinary Sciences*, Vol. 11, No.  
3, Pp. 1-10

---