

INDIGENOUS POULTRY PRODUCTION AMONG RURAL HOUSEHOLDS IN OGBA/EGBEMA/NDONI LOCAL GOVERNMENT AREA, RIVERS STATE, NIGERIA

<sup>1</sup>AJAYI, F.O., <sup>2</sup>ABOH, C.L., <sup>3</sup>SINGER, O. AND <sup>4</sup>ADESOPE, O.M.

<sup>1</sup> Department of Animal Science, University of Port Harcourt, Nigeria  
University of Port Harcourt, Nigeria

<sup>2</sup>Department of Agricultural Extension and Rural Sociology  
University of Calabar, Nigeria

<sup>3</sup>Department of Agricultural and Applied Economics/Extension,  
Rivers State University of Science & Technology, Port Harcourt,

<sup>4</sup> Department of Agricultural Economics and Extension  
University of Port Harcourt, Nigeria

**ABSTRACT**

*The study examined indigenous poultry production among rural households in Ogba/Egbema/Ndoni Local Government Area, Rivers State, Nigeria. The objectives were to: describe the socio-economic characteristics of indigenous poultry farmers; determine the benefits of indigenous poultry production; determine the status of indigenous poultry production and identify factors affecting production of indigenous poultry in the study area. Data were collected with structured questionnaire from 108 randomly selected poultry farmers out of which 81 questionnaires were found useful. Data were analyzed with the use of frequency, percentage, mean scores and chi-square tests. Findings show that benefits derived by respondents from indigenous poultry production were: cost intensive ( $\bar{x} = 3.81$ ), less cost feed ( $\bar{x} = 3.49$ ), hardly sick ( $\bar{x} = 3.32$ ), no disease problem ( $\bar{x} = 141.5$ ), no drugs needed ( $\bar{x} = 3.37$ ) and no vet needed ( $\bar{x} = 3.76$ ). The result of chi-square tests showed that, status vs. purpose of keeping poultry (0.66) and status vs. how much made (0.66) were significant at  $X^2_{cal} > X^2_{tab}$ . Factors affecting indigenous poultry production were: stealing ( $\bar{x} = 3.54$ ), lack of capital ( $\bar{x} = 3.69$ ), lack of information on price ( $\bar{x} = 3.24$ ), poor housing system ( $\bar{x} = 3.51$ ), poor management system ( $\bar{x} = 3.51$ ), lack of proper marketing structure for local birds ( $\bar{x} = 3.061$ ), predators ( $\bar{x} = 3.86$ ), price fluctuation ( $\bar{x} = 3.45$ ) and poor breeding stock ( $\bar{x} = 3.37$ ). The study recommends that since it has been confirmed that women dominate the production process, women's access to production inputs and adequate care facilities should be improved. All forms of barriers against women should be discouraged especially when it comes to the area of production.*

**Key words:** Indigenous Poultry Production, Rural Households

**INTRODUCTION**

Indigenous poultry production which is still important in low income food deficit is an appropriate system to support the fast growing human population with high quality protein. Indigenous poultry have been used in small scale indigenous poultry production in the regions, chicken production is important because of the divergent roles it plays. Sale of eggs and live birds in urban and rural market is perhaps the only source of cash earnings available to rural families chick also used in traditional caring

rituals, means of knowing the time, offered as gift and cementing marriages and friendship. In communities where food shortages are uncommon, chicken are kept to supplement the meals or to honour a guest (Nwagu, 2002).

Indigenous poultry is an important source of protein producing about 36.5% of total intakes of Nigerians (Okunlola and Olofinsawe, 2007). Indigenous poultry production provides diverse income earnings and employment for people in the rural areas (Alexander, 2001). Three quarters of the world's poorest people get their food and income from farming small plots of land, (Bill and Melinda Gate Foundation 2011). Common to these resource poor farmers, is the rearing of indigenous poultry that scavenge for feed and from kitchen waste (Okeno et al., 2011). Indigenous poultry production (IPP) is important for many rural households.

Indigenous chicken production contributes significantly in food security, poverty alleviation and ecologically sound management of natural resources. The scope for utilizing indigenous chicken as a source of poultry meat is high because consumers prefer it hard meat. This is a growing demand of indigenous chicken in restaurants because of its sizes, low price and its palatable meat when compared to exotic breed poultry. The total poultry population in Nigeria has been estimated at between 133-165 million (FLDPS/RIM, 1999). However, there is consensus that about 90% of the figure derived from indigenous poultry stock which is in turn composed of chicken (91%) guinea fowl (4%) duck (3%), turkeys and others (2%). Poultry which is next only to ruminants as a source of animal protein in Nigeria, accounts for almost 25% of indigenous meat production. Moreover, indigenous chicken production and management is easier than the broiler and pullet production particularly in areas where modern facilities including electricity supply are not available, and posed the exotic breeds of poultry to disease since indigenous chicken is essential.

Information on the status of Indigenous Poultry Production is scarce. Improvement programmes cannot be checked out due to lack of accurate data on production of Indigenous poultry and possible variation in type of data available. However, the cause of this variation is not known. This study was undertaken to provide data which will help to overcome the paucity of information regarding the status of indigenous poultry production in rural households through poultry rearing in the study area. It is on this background the study will find answers to the following research questions. What are the socio-economic characteristics of the respondents? What is the status of Indigenous Poultry Production? What are the benefits of indigenous poultry production? What are the factors affecting indigenous poultry production in the study area? The major objective of the study is to examine indigenous poultry production among rural households in ONELGA Rivers State.

The specific objectives of the study are to:

- i. describe the socio-economic characteristics of indigenous poultry farmers in the study area.
- ii. determine the benefits of indigenous poultry production in the study area.
- iii. determine the status of indigenous poultry production in ONELGA Rivers State,
- iv. identify the factors affecting production of indigenous poultry in the study area.

### **Hypothesis of the Study**

There is no significant relationship between socio-economic characteristics and the status of indigenous poultry production in the study area.

### **METHODOLOGY**

The study area is Ogba/ Egbema /Ndoni Local Government Area (ONELGA) of Rivers State, Nigeria. It is one of the 23 Local Government Areas in Rivers State. It was created out of the former Ahoada Local Government Areas recognized by the 1999 Constitution of the Federal Republic of Nigeria, with headquarters at Omoku mainland. It occupies a land mass of 1,621sq. km with a projected population of 350,000 people residing across the various communities.

Ogba/Egbema/Ndoni Local Government Area (ONELGA) is bounded on the North by Ogbaru LGA of Anambra State; on the North-East by Ogwuta and Ohaji/Egbema LGAs of Imo State; on the west by Sagbama/Yenegoa LGAs of Bayelsa State and Ndokwa-East LGA of Delta State; on the South by Ahoada-West LGA and Emohua LGA of Rivers State on the East located on the Eastern bank of the River Niger and in the heart of the Niger Delta region, ONELGA has topography of flat plains netted in a web of rivers - the Niger, Sombreiro (Nkisa), Onita and their tributaries as well as dotted creeks – Idia, Omoku, Onita, utuegwe, Otuah, Ndoni, Igburu, Osil, etc. ONELGA has three (3) major ethnic/culture groups (Ogba, Egbema and Ndoni) speaking distinct but familiar languages with their unique and peculiar self-sustaining cultures. The presence of good climate, vast arable land and vegetation, fertile soil, hospitality and peaceful disposition make the people predominantly farmers, fishermen and a few traders while others engage in business, politics and white collar jobs to balance her economy. About 57.3% of ONELGA communities reside on the river banks leaving the rest in the hinterland connected to one another through a network of roads making transportation and communications not too difficult. She is blessed with abundant natural endowments including human and the mineral deposits of the world's sustaining natural resources – oil and Gas. She is the heart of the hydrocarbon industry and contributes the highest chunk feeder of natural gas to the Nigeria Liquefied Natural Gas project resulting in Nigeria's foreign earnings, hence earned it the name – 'Land of Black Gold', (Jerrybless Integrated Services, 2007).

Population of the study comprises of all the indigenous poultry farmers in Ogba/ Egbema/ Ndoni Local Government Area. This research was carried out in the three clans of ONELGA. The clans are Ogba, Egbema, and Ndoni. Three villages from each clan were selected. Secondly, random sampling was used to select twelve (12) respondents from each of the selected villages in the three clans. The selected villages were: Omoku(12), Ikiri(12) and Erema(12) for Ogba clan; Ukwuzi(12), Ebocha(12) and Mgbede(12) for Egbema clan; Umuedi(12), Ogboukwu(12) and Umu-Ajie(12) for Ndoni clan giving a total of ninety(108) respondents that were used for the study.

This study involved the use of primary data. The primary data was gathered through the administration of questionnaire to respondents in the study area. The primary data consist of both qualitative and quantitative data which were collected at the level of the households in nine (9) villages. A four point like-type scale: strongly agreed (4) Agreed (3) Disagreed (2), and (1) strongly disagreed was used to obtain

information from the respondents. A mid-point of 2.5 was obtained, which served as decision rule. Based on this, any mean score  $\geq 2.5$  suggested agreement while mean scores below 2.5 suggested disagreement. Data collected were analyzed using percentages, frequencies, mean score and chi-square test.

## **RESULTS AND DISCUSSION**

Data in Table 1 indicates that majority (81.5%) of the respondents were female. This reveals that females are more involved in indigenous poultry production in Ogba/Egbema/Ndoni than their male counterparts (18.5%). Akinleye, et al (2011), Abubakar, et al. (2007) and Halima (2007) also observed that females are the major owners and are more knowledgeable about indigenous poultry production. About 48% of the respondents are between the ages of 31 – 40 years followed by 30.9% of the respondents who were between 21 – 30 years with mean age range of 36 years. This is an economically active age bracket. The people in this age brackets are energetic, innovative, vibrant and adaptable. This shows that those engaged in poultry keeping in the study area are mainly adults. Also, Table 1 shows that majority (71.6%) of the respondents are married. The study shows that 41.9% of the respondents had between 1 and 3 children, 39.5% have 4 – 7 children. The mean number of children is 3. This indicates moderate number of children.

It was found that 43.2% of the respondents had no formal education, 22.2% had primary education, 18.5% had secondary education, and 16.0% had tertiary education. This implies that greater proportion of the respondents have some form of education to enable them adopt skills that will improve their income in poultry production. Data in table 1 indicate that majority (51.9%) of the respondents had farming experience of between 1-5 years, with mean farming experience of 7 years. This indicates that most of these farmers had been in the farming profession for quite some time.

**Table 1: Distribution of respondent by socio-economic characteristic (n=81)**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>
<b>Sex</b>			
Male	15	18.5	
Female	66	81.5	
<b>Total</b>	<b>81</b>	<b>100.0</b>	
<b>Age</b>			
21 – 30years	25	30.9	
31 – 40years	39	48.1	
41 – 50years	8	9.9	36 years
51years and above	9	11.1	
<b>Total</b>	<b>81</b>	<b>100.0</b>	
<b>Marital Status</b>			
Single	14	17.3	
Married	58	71.6	
Widow	6	7.4	
Divorced	3	3.7	
<b>Total</b>	<b>81</b>	<b>100.0</b>	
<b>Number of Children</b>			
None	15	18.5	
1 – 3	34	41.9	3
4 – 7	32	39.5	
<b>Total</b>	<b>81</b>	<b>100.0</b>	
<b>Educational Level</b>			
No formal education	35	43.2	
Primary education	18	22.2	
Secondary education	15	18.5	
Tertiary education	13	16.0	
<b>Total</b>	<b>81</b>	<b>100.0</b>	
<b>Time Farming</b>			
1 – 5years	42	51.9	
6 – 10years	26	32.1	
11 – 16years	5	6.2	
16 – 20years	6	7.4	7 years
22 – 26 years	2	2.5	
<b>Total</b>	<b>81</b>	<b>100.0</b>	

Results in Table 2 shows that the respondents have benefited from indigenous poultry production. Using a mean of 2.50, it shows that no disease problem ( $\bar{x}=3.32$ ), cost intensive ( $\bar{x}=3.81$ ), no vet needed ( $\bar{x}=3.76$ ), less cost feed ( $\bar{x}=3.49$ ), no drugs needed

( $\bar{x}$  =3.37) and hardly sick ( $\bar{x}$  =3.32). This implies that there are high rate of benefits or achievements attained from indigenous poultry production. Indigenous poultry production has contributed greatly to the rural people in the study area by providing means of livelihood for rural household thereby reducing poverty among rural people as through indigenous poultry production, the rural people were able to meet the family basic needs such as food, clothing and shelter.

**Table 2: Mean Distribution of benefits derived by respondent from indigenous poultry production**

<b>Benefits</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>Mean</b>	<b>Remark</b>
Cost intensive	66 (81.5)	15 (18.5)	0 (0)	0 (0)	3.81	Agreed
Less cost feed	46 (56.8)	29 (35.8)	6 (7.4)	0 (0)	3.49	Agreed
Hardly feel sick	33 (40.7)	41 (50.6)	7 (8.6)	0 (0)	3.32	Agreed
No Disease problem	32 (39.5)	43 (53.1)	6 (7.4)	0 (0)	3.32	Agreed
No drugs needed	39 (48.1)	33 (40.7)	9 (11.1)	0 (0)	3.37	Agreed
No vet needed	62 (76.5)	19 (23.5)	0 (0)	0 (0)	3.76	Agreed

Table 3 shows the status of indigenous poultry production based on number of birds. The Table shows that the mean numbers of birds kept by the respondents were eight (8) birds. Majority (71%) of the respondents had 6-10 birds, followed by 11.1% that have 11-15 birds and 1.2% having 16-20 birds. Akinleye et al (2011) reported larger flock sizes of indigenous chickens among farmers in their study. NAERLS (2000) noted that the local chicken flocks usually comprise between 5 and 20 birds kept by one family.

**Table 3: Status of Indigenous Poultry Production**

<b>Status</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>
6-10	71	87.7	
11-15	9	11.1	8
16-20	1	1.2	
<b>Total</b>	<b>81</b>	<b>100</b>	

Table 4 shows the factors affecting indigenous poultry production. Using a mean of 2.50, it shows that stealing ( $\bar{x}$  =3.54), lack of capital ( $\bar{x}$  =3.69), lack of information on price ( $\bar{x}$  =3.24), poor housing system ( $\bar{x}$  =3.51), poor management system ( $\bar{x}$  =3.51), lack of proper marketing structure for local birds ( $\bar{x}$  =3.061), predators ( $\bar{x}$  =3.86), price fluctuation ( $\bar{x}$  =3.45) and poor breeding stock ( $\bar{x}$  =3.37) were the factors affecting indigenous poultry production in the study area. These results imply that the indigenous poultry farmers in the study area are affected with a lot of factors.

**Table 4: Mean Distribution of factors affecting indigenous poultry production**

<b>Factors</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>Mean</b>	<b>Remark</b>
Stealing	49 (60.5)	27 (33.3)	5 (6.2)	0 (0)	3.54	Agreed
Lack of capital	58 (71.6)	22 (27.2)	1 (1.2)	0 (0)	3.69	Agreed
Lack of information on price	27 (33.3)	47 (58.0)	5 (2.5)	2 (2.5)	3.24	Agreed
Poor housing system	42 (51.7)	36 (44.4)	3 (3.7)	0 (0)	3.51	Agreed
Poor management system	43 (53.1)	37 (45.7)	1 (1.2)	0 (0)	3.51	Agreed
Lack of proper marketing structure for local birds	17 (21.0)	52 (64.2)	12 (14.8)	0 (0)	3.061	Agreed
Predators	70 (86.4)	11 (13.6)	0 (0)	0 (0)	3.86	Agreed
Price fluctuation	41 (50.6)	36 (45.7)	2 (2.5)	1 (1.2)	3.45	Agreed
Poor breeding stock	38 (46.9)	36 (44.4)	6 (7.4)	1 (1.2)	3.37	Agreed

Table 5 shows the chi-square analysis of relationship between socio-economic characteristics and status of indigenous poultry production. From the table, sex of respondents did not show significant relationship in status of indigenous poultry. The implication is that male and female keep almost the same quantity of birds. This however does not conform to theoretical expectation.

Findings also shows that age of respondents did not show significant relationship in status of indigenous poultry. The implication is that age is not a barrier to keeping of indigenous poultry. This however does not conform to theoretical expectation. Marital status of respondents did not show significant relationship in status of indigenous poultry. This however does not conform to theoretical expectation. Number of children of respondents did not show significant relationship in status of indigenous poultry. This however does not conform to theoretical expectation. Educational level of respondents did not show significant relationship in status of indigenous poultry. The implication is that anyone can keep indigenous poultry regardless of educational level. This however does not conform to theoretical expectation. Purpose for keeping poultry showed significant relationship in status of indigenous poultry. This conforms to theoretical expectation as respondents majorly keep indigenous poultry for household consumption. The contingency coefficient (CC) of 0.66 shows a strong relationship between status and purpose for keeping poultry. How much made showed significant relationship in status. This conforms to theoretical expectation as majority of respondents made ₦6, 000–₦11, 000 per season. The contingency coefficient (CC) of 0.66 shows a strong relationship between status and how much made.

**Table 5: Relationship between socio-economic Characteristics and Status of Indigenous Poultry Production**

	X <sup>2</sup> cal	X <sup>2</sup> tab	CC	df	Remarks
Status vs. sex	0.549	3.84	0.082	1	NS
Status vs. age	4.447	7.81	0.228	3	NS
Status vs. Marital status	4.949	7.81	0.24	3	NS
Status vs. No. of children	7.770	14.07	0.296	7	NS
Status vs. Educational level	4.352	7.81	0.226	3	NS
Status vs. purpose of keeping poultry	63.585	5.99	0.66	2	S
Status vs. how much made	63.675	5.99	0.66	2	S

If Calc X<sup>2</sup> < Tab X<sup>2</sup>, Not Sig.; If Calc X<sup>2</sup> > Tab-X<sup>2</sup>, Sig

### CONCLUSION

From the findings of this study, the following conclusions were made:

- ❖ The major indigenous poultry farmers are female and young married women with some form of education.
- ❖ Greater proportion of the respondents kept local chickens.
- ❖ Majority of the households in the study area reared indigenous poultry for food and income.
- ❖ The major factors affecting indigenous poultry production included predators, and lack of capital.

### RECOMMENDATIONS

The following recommendations are made based on findings in this research:

1. Since women dominate the production process, women's access to production inputs and adequate care facilities should be improved. All forms of barriers against women should be discouraged especially when it comes to the area of production.
2. The study found that most respondents do not belong to cooperative societies. Poultry farmers should be organized into groups by the Ministry of Agriculture and Agricultural Development Programme (ADP) so as to identify their individual problems and find possible solutions to the problems.
3. Provision of infrastructural support to encourage indigenous poultry production.
4. There is need to take stock of farmers involved in indigenous poultry production for ease of attention and credit provision

### REFERENCES

- Abubakar, M. B., Ambali, A. G., Tamjdo, T. (2007). *Rural Chicken Production: Effects of Gender on Ownership and Management Responsibilities in some parts of Nigeria and Cameroon. International Journal of Poultry Science*, 6 (6), 413 – 416.
- Akinleye, A.J., Bello, K.O., Oyedepo, J.A., Eruvbetine, D. And A.O. Fanimu (2011) Indigenous Poultry Production In Ogun State, Nigeria: A Case Of Yewa North Local Government Area. *Journal of Agricultural Science & Environment*, 11(2): 52-64

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- Alexander, D. (2001). New castle Disease Vaccines for Rural Africa. *British Poultry Science*, 42: 5 – 22.
- Bill & Melinda Gate Foundation (2011). Agricultural Development: Strategic Overview. Retrieved from [www.datesfoundation.org/agricultural](http://www.datesfoundation.org/agricultural) development on 10 October 2012.
- Federal Department of Livestock and Pest Control Services/Resources Inventory and Management Ltd. FDLPS/RIM (1999). *Nigerian National Livestock Survey Report*. Abuja, Nigeria.
- Halima, H. M. (2007). *Phenotypic and genetic characterization of indigenous chicken populations in Northwest Ethiopia* – PhD Thesis. Faculty of Natural and Agricultural Sciences, Department of Animal, Wildlife and grassland Sciences, University of The Free State, Bloemfontein, South Africa. 53.
- NAERLS (2000) Improving the performance of local chickens. *Extension bulletin No. 92. Poultry series 6*. National Agricultural Extension Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria, Nigeria
- Nwagu, B. I. (2002). *Production and Management of Indigenous Poultry Species*. A training manual in National training workshop on poultry production in Nigerian National Animal Production Research Institute, Shika, Zaria. 10 – 26pp.
- Okeno T. O., Kahi A. K., & Peter J. K., (2011). *Characterization of Indigenous Poultry Production systems. In Kenya: Household Flock Structure, Dynamics and Breeding Practices. Tropical Animal Health Production*, 44 (3): 601 – 608.