

## **Assessment of Poultry Production System in Ilesha West Local Government Area of Osun State, Nigeria**

**Adedeji, O.S<sup>1\*</sup>, Amao, S.R<sup>2</sup>., Alabi, T.J<sup>3</sup>, Opebiyi, O.B.<sup>3</sup>**

<sup>1</sup>Department of Animal Nutrition and Biotechnology, Ladoke Akintola University of Technology, P.M.B. 4000, Ogbomosho, Oyo State, Nigeria.

<sup>2</sup>Department of Agricultural Education (Animal Science Division; Animal Breeding & Genetics Unit), School of Vocational and Technical Education, Emmanuel Alayande College of Education, P.M.B.1010.Oyo .Oyo State, Nigeria.

<sup>3</sup>Department of Animal Production and Health, Ladoke Akintola University of Technology, P.M.B. 4000, Ogbomosho, Oyo State, Nigeria.

### **\*Corresponding Author**

**Name:** Adedeji, O.S

**Email:** osadedeji@lautech.edu.ng

---

**Abstract:** This study analyses the assessment of poultry production in Ilesha west local government, Nineteen randomly selected questionnaires was administered to the farmers and village livestock producers. Results revealed that the ingredients used in keeping the Exotic breed of birds are mainly sourced from feedmill feeds using mostly intensive management system of poultry production. The health management survey indicated that Coccidiosis and Newcastle diseases are the major diseases affecting poultry keeping in the area, with practices like isolation and vaccination being used as control measures respectively. Though, high mortality is usually experienced during rainy season with related effects. Nonetheless, the marketability of the products are favourable and highly affected by seasonable demands which therefore enhanced the supply as at when due. Farmers in the area sourced their funds through personal savings and it has being a limiting factor to the development of poultry production in the area.

**Keywords:** Poultry birds, production systems, Ilesha West, health management, marketability

---

### **INTRODUCTION**

Poultry production is a very important source of livelihoods for most rural communities because it provides ready cash for emergency needs [1], supplies the fast-growing human population with high quality protein, contributes significantly to food security, poverty alleviation and ecologically sound management of natural resources [2]. Since there is a continuing rise in the cost of production of cattle, sheep and goat meat [3], consumer preferences have shifted now for poultry meat (white meat) given the ecological, economic, social and health advantages it has over the other types of meat (red meat)[2].

The poultry is the most commercialized (capitalized) of all the Nigerian livestock agriculture. The types of poultry that are commonly reared in Nigeria are chickens, ducks, guinea fowls, turkeys, pigeons and more recently ostriches. Those that are of commercial or economic importance are chicken, guinea fowls and turkeys, amongst which the chickens predominate [4]. Poultry production in the past was not counted as an important occupation. In some communities, fowl is used in the past as a means of knowing the time. Nowadays, poultry production has developed and occupies a place of pride among the livestock enterprise due to its rapid monetary turnover [5].

Poultry production has long been recognized as one of the quickest ways for a rapid increase in protein supply in the shortest run. Of recent, there has been a recorded improvement in poultry production sub-sector in Nigeria with its share of the Gross Domestic Product (GDP) increasing in absolute terms. Poultry eggs and meat contribution of the Livestock share of the GDP increased from 26% in 1995 to 27% in 1999 [6]. This significant improvement in poultry production has been sustained by availability and use of improved vaccines which curtailed mortality rates in birds, reduction in the tariffs on imported day-old chicks and parent stock [6] and the relative ease of compounding efficient food using easily available local feedstuffs [7].

Poultry management system in Nigeria is of three types which are intensive, extensive and semi-intensive, they are differentiated on the basis of their flock size and input and output relationship [8]. Flock size in intensive production are in thousands, whereas semi-intensive production system flock size range from 50-200 birds and keeping of big flock size in as a result of research development in artificial incubation, nutritional requirement and disease control. Poultry birds mature earlier than most breeds of livestock, they bring economic return within relatively short periods of about 10-12 weeks, poultry eggs and meat play a very

---

important role in bridging the protein gap in Nigeria and they are generally accepted.

Poultry production systems are however influenced by some factors which are; Types of Poultry (Birds), Housing, Socio-economic background of the respondent, Health and disease, Feed source and feeding, Sales and Disposal [9]. Therefore, the aim of this present study was to assess the production system of rearing poultry birds in Ilesha local Government area of Osun State.

## MATERIALS AND METHODS

### Site of the Study

This study covers Ilesha West local government area. Ilesha west is a Local Government Area in Osun State, Nigeria. Its headquarters are in the town of Oja Oba (Ereja Square) on the outskirts of the city of Ilesha. It has an area of 63 km<sup>2</sup> and a population of 103,555 [10] with latitude 7° 39'N and longitude of 4° 43'E.

### Data Collection Techniques

Nineteen (19) poultry farmers were selected and visited in order to collect data. Primary data were collected through the use of structure questionnaires and interview scheduled to the poultry producers selected in the study area. Data were collected through the use of the following information; Socio- economics, Management system, Production Records, Feed source and Feeding, Health management practice and Sale / Disposal

### Data Processing

Information obtained were analyzed and processed in descriptive statistical analysis. Descriptive analysis involved the use of statistical tool [11] to generate frequency distribution and percentage.

## RESULTS

Table 1 showed that male and female practice poultry system with a percentage difference of 84.21% and 15.79% respectively. 68.42% are married, 26.32% single and 5.26% widow indicating that most people that practice are adult. 84.31% as tertiary education, 10.53% secondary education and 5.26% Quranic education indicating that most are educate and is agriculturally related. Table 2 reveals that 47.31% attends poultry association because low or little organizing procedure. 42.11% has into poultry farming between 2-5 years, 15.78% between 6-8 years and 42.11% between 9-11 years.

Table 3 deduced that 84.21% practice intensive poultry management, 15.79% practice semi-intensive, 73.68% abducted new practice and 26.32% practice the old way. Intensive poultry management are been abducted because it is cheaper, 35.71% because it reduced diseases, 20.00% for easy management. All poultry checked reared chicken 26.32% has a flock size

of about 100- 900, 26.32% has between 1000 – 2000 and 10.53% has between 4000 – 5000. 68.42% used hired labour which 26.31% used family. 47.37% reared layers, 31.57% reared broilers, 10.53% reared cockerels and 5.56% reared layer/ broilers. Also it is been deduced that 47.37% practice full time and 47.37% practice part time.

Figures 1 and 2 shows that fund source data collected indicates that 13 farmers used their personal savings while others got their fund equally between the bank, friend and personal savings. Majority carrying 11 farmers got their information from Veterinary, 4 got theirs from internet.

Table 3 showed that range 70-75 recorded 50 production percentage, 76-80 recorded 30 production percentage, range 6-10 recorded 52.63 percentage mortality rate, 52.63 % mortality were caused by disease outbreak, 10.53% caused by coccidiosis and others were caused by climatic hazard, pecking and predator. 100% at 1<sup>st</sup> lay was recorded within the range of 18-22 weeks. Table 4 deduced that 73.68% get their food from feed mill, the remaining part from farm feed mill, local feed miller and self. 89.47% gives the poultry birds food twice per day. 17 farmers out of the 19 interviewed stored their feed for a week before new purchase

Table 5 showed that 36.84% of the poultry birds were given antibiotics, 26.32% were given vaccination and 10% were given preventive. Disease control were been controlled by isolation and vaccination respectively. Mostly the birds are been treated by farmers themselves with a total percentage of 63.16%, 94.74% farmers got their birds vaccinated and the common disease in the study area is Newcastle with a percentage of 47.37, 78.95% practice biosecurity. Table 6 showed that 60% realized large number of eggs, 30% realized small eggs, 60% realized 25-70 crates per day. Feed/vaccination/labour are the major production factors with a percentage of 36.84%. Also, 36.84% dispose to retailers, 47.37% to self, 10.53% to wholesaler. Also, it is been deduced that 68.42% during festive period, 26.32% during raining season.

## DISCUSSION

There were 19 respondents in the assessment data; the majorities (84.21 %) were male, with the same percentage educational level which was agricultural related. Poultry keeping was not claimed as the main occupation in the study area, respondents do not relied solely on chicken keeping for their livelihoods. The pattern at which the respondents practiced poultry keeping were similar to the findings of Sonaiya [8] who reveals that intensive management system is mostly practiced by the farmers.

The factors of production and the type of birds reared in this present study revealed that the most important factor, are labour source, bird source, bird type and considered factors for bird type were capital, hired, layer and regular income respectively. Thus were in the agreements with the work of Byarugaba *et al.*, [12]. The feed source and feeding of poultry production in this present study shows that feed mill feeds were adopted by the farmers to their animal feed.

The health management practices in this present study reported that Coccidiosis and Newcastle were the prevalent disease affecting their birds and

proffer solution to those outbreaks were through isolation and vaccination and the highest chicken death rate was observed during the rainy season (June, July and August), this findings is also similar with the work done by Halima [13]. The marketability of the eggs and birds indicated that eggs which are in crates were disposed, broilers were sold mainly at 8 weeks, layers at 15 weeks. The price of live chickens is affected by seasonal supply and demand especially during holidays and fasting months, September, January and May are the months of high demand for eggs and chickens, this finding is in Agreement with the result reported by Aklilu *et al.* [14].

**Table 1: Socio-Economic Factors Of Farmers In Ilesha West Local Government Area.**

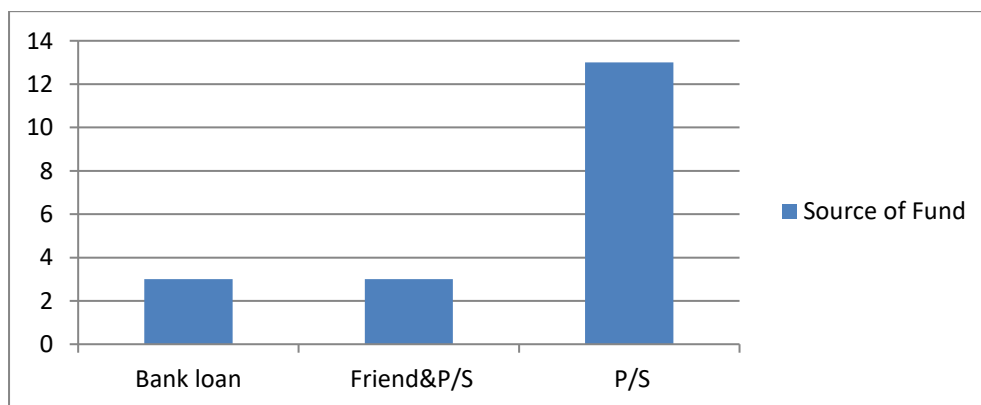
PARAMETERS	Frequency	Percentage
<b>Sex</b>		
Female	3	15.79
Male	16	84.21
<b>Marital status</b>		
Married	13	68.42
Single	5	26.32
Widow	1	5.26
<b>Household size</b>		
3	1	5.26
5	3	15.79
6	1	5.26
8	1	5.26
10	1	5.26
Others	12	63.16
<b>Education background</b>		
Quranic	1	5.26
Secondary	2	10.53
Tertiary	16	84.21
<b>Agricultural related to education background</b>		
No	6	31.58
Yes	13	68.42
<b>Years of experience</b>		
2-5	8	42.11
6-8	3	15.78
9-11	8	42.11

**Table 1.1: Poultry Association In Ilesha West Local Government Area**

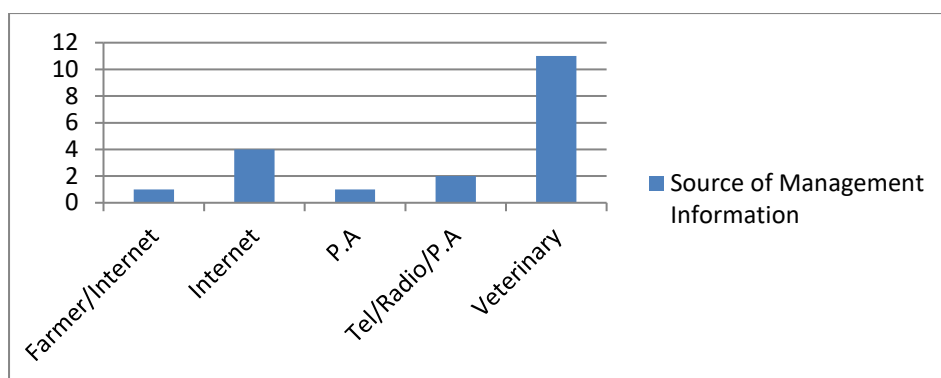
PARAMETERS	Frequency	Percentage
<b>Poultry association</b>		
No	10	52.63
Yes	9	47.31
<b>Membership status</b>		
Executive	3	33.33
Ordinary member	6	66.67
<b>Attendance of meeting</b>		
No	3	33.33
Yes	6	66.67
<b>Why No? (Reason)</b>		
Busy schedule	1	33.33
Not organized	1	33.33
Schooling	1	33.33

**Table 2: M.Anagement System Of Poultry In Ilesha West Local Government**

Parameters	Frequency	percentage
<b>Management system</b>		
Intensive	16	84.21
Semi Intensive	3	15.79
<b>New innovative practice</b>		
No	5	26.32
Yes	14	73.68
<b>Preferred practice</b>		
Cheaper	4	28.57
Disease reduction	5	35.71
Easy management	3	21.42
Egg wastage Reduction	1	7.14
Predator prevention	1	7.14
<b>Flock size</b>		
100-900	5	26.32
1000-2000	5	26.32
4000-5000	2	10.53
Others	7	36.84
<b>Considered factors of production</b>		
Capital / water / land	1	5.26
Capital, labour, land	10	52.63
Land	7	36.84
Water	1	5.26
<b>Source of labour</b>		
Family	5	26.31
Hired labour	13	68.42
Others	1	5.26
<b>Bird types</b>		
Broilers	6	31.57
Cockerels	2	10.53
Layers	9	47.37
Layers, broilers	1	5.26
Others	1	5.26
<b>Owners' involvement</b>		
Full time	9	47.37
Part time	9	47.37
Others	1	5.26
<b>Major occupation</b>		
Civil servant	3	33.33
Factory worker	2	22.22
Student	3	33.33
Trader	1	11.11



**Figure 1: Source Of Fund; P/S: Personal Saving**



**Figure 2: source of management information; P/A: Poultry Association, Tel: Telephone**

**Table 3: Production Record Of Birds In Ilesha West Local Government Area.**

PARAMETERS	Frequency	percentage
<b>Production % of eggs per month</b>		
70-75	5	50.00
76-80	3	30.00
81-85	1	10.00
86-90	1	10.00
<b>Percentage mortality</b>		
1-5	6	31.58
6-10	10	52.63
11-15	2	10.53
16-20	1	5.26
<b>Causes of mortality</b>		
Climatic hazard	1	5.26
Coccidiosis	2	10.53
Disease outbreak	10	52.63
Disease outbreak/ pecking	1	5.26
Pecking	1	5.26
Predator	1	5.26
Others	3	15.79
<b>Seasonal difference in egg and mortality rate</b>		
Yes	10	100.00
<b>Age of birds at 1<sup>st</sup>lay</b>		
18-22 weeks	10	100.00

**Table 4: Feeding Source/ Feeding In Ilesha West Local Government Poultry**

Parameters	Frequency	Percentage
<b>Production of feed</b>		
Farm feed mill	2	10.53
Feed mill	14	73.68
Local feed miller	1	5.26
Others	2	10.53
<b>Times of feeding</b>		
Twice	17	89.47
Others	2	10.53
<b>Feed stored before new purchase</b>		
1 week	17	89.47
Others	2	10.53
<b>Water treatment</b>		
No	1	5.26
Yes	16	84.21
Others	2	10.53
<b>Feed analysis</b>		
No	9	47.37
Yes	9	47.37
Others	1	5.26

---

**Table 5: Health Management Of Poultry In Ilesha West Local Government**

Parameters	Frequency	Percentage
<b>Medication type</b>		
Antibiotics	7	36.84
Antibiotics / vitamin	1	5.26
Preventive	2	10.53
Vaccination	5	26.32
Others	4	21.05
<b>Disease outbreak control</b>		
Cleanliness	1	5.26
Drugs	2	10.53
Good management	1	5.26
Isolation	5	26.32
Vaccination	5	26.32
Veterinary consultation	1	5.26
Others	4	21.06
<b>Health management personnel</b>		
Personal	12	63.16
Personal / veterinary	1	5.26
Veterinary	5	26.32
Others	1	5.26
<b>Bird vaccination</b>		
Yes	18	94.74
No	-	-
Others	1	5.26
<b>Common disease</b>		
Coccidiosis	5	26.32
Coccidiosis / fowl cholera	1	5.26
Coccidiosis / Newcastle	1	5.26
Fowl cholera / coccidiosis	1	5.26
Newcastle disease	9	47.37
Newcastle disease coccidiosis	1	5.26
Others	1	5.26
<b>Biosecurity</b>		
No	2	10.53
Yes	15	78.95
Others	1	10.53

---

**Table 6: Sale / Disposal Of Products In Ilesha West Local Government.**

Parameters	Frequency	percentage
<b>Egg size</b>		
Large	6	60.00
Large / extra-large	1	10.00
Small	3	30.00
<b>Number of egg crate</b>		
18-24	3	30.00
25-70	6	60.00
71-149	1	10.00
<b>Cullage</b>		
Broilers	2	10.53
Broilers/ cockerel	2	10.53
Broilers/ layers	1	5.26
Layers	12	63.16
Others	-	-
<b>Production factors</b>		
Disease treatment/ Biosecurity	5	26.32
Drug/ feed cost	3	15.79
Feed cost	4	21.05
Feed/ vaccination/ labour	7	36.84
<b>Marketing</b>		
Retailer	7	36.84
Self	9	47.37
Wholesaler/retailer	2	10.53
Others	1	5.26
<b>Period of high demand for product</b>		
Raining season	5	26.32
Festive period	13	68.42
Others	1	5.26

## CONCLUSION AND RECOMMENDATION

Arising from the finding of this study, it concludes that poultry farmers within the study area sourced their fund from their personal savings. The socio-economic characteristic of respondents shows that the majority of poultry farmers are educated and that men are those who practice poultry farming. Result also shows that seasonal variation and diseases significantly influenced the poultry production in the study area. In conclusion, it is evident that there is great potential for the commercialization of the poultry industry in Nigeria, the various identified constraints based on the results of this study notwithstanding.

### Recommendation

In order to promote the commercialization of the poultry sub-sectors the following recommendations are considered necessary.

- There is the need to produce and make available to poultry producers and processors local and gender sensitive technologies such as hatcheries, feed mills and accessors, production and processing equipment and storage facilities.
- Research institutes, Banks and Private sector should be encouraged with funding support and creation of the enabling business environment.

- Youth should be encouraged to be more involve in farming particularly poultry farming.
- There should be provision for seminars and lectures at least every (3) three months i.e. quarterly.
- Farmers should be encouraged to form cooperatives to enhance their capacity to procure the necessary machineries and farm input under their cooperatives organizations.
- Government should take a proper and reasonable look at the epileptic power supply in the area which can result to a big loss for farmers.

## REFERENCES

1. Food and Agriculture Sector Development Policy 1, Ministry of Food and Agriculture. FASDEP; 2002.
2. Guëye EF; Employment and income generation through family poultry in low-income food-deficit countries, World's Poultry Science Journal, 2002; 58: 541-557.
3. Onuekwusi GC; Adoption of Improved Rabbit Technologies by Farmers in Akwa-Ibom State Nigeria Implications for Extension. Proceedings of 36th Annual Conference, Agric. Society of Nigeria F.U.T. Owerri 2001; 20-24, 368-371

- 
4. Daniel S, Ugwu; Baseline study of small and medium scale poultry production in Enugu and Lagos state of Nigeria. *World journal of Agricultural Sciences*, 2009; 5 (1): 27 – 33.
  5. Laseinde EAO; Terminology in poultry production. *Tropical Agricultural Production Science*. 1994.
  6. Central Bank of Nigeria; Annual Report and statement of Accounts. CBN Publications. 1999.
  7. Afolabi D, Ojo SO; Economic Analysis of Replacing the Fish meal component in Broiler starter Mash with *Gliricidia Sepium*. *Animal Options Book of Proceeding*. Ed. By S.N. Ukachuwku *et al.* Af. Farming J. Jan/Feb 2000 ; 4.
  8. Sonaiya EB; The context prospects for development of smallholder rural poultry production in Africa. In CTA seminar proceedings, smallholder Rural poultry production seminar. Thesalonia kis Greece, 2005; 1:35-52.
  9. Adedeji OS, Ajayi JA, Amao SR, Aiyedun JO; Extent of commercial poultry production in Saki West local government area of Oyo State. *Transnational Journal of Science and Technology*, 2013; 3(5): 68-81.
  10. National Population Census, Office, Osogbo, Osun State. Nigeria. NPC, 2006.
  11. SAS. Statistical Analysis System .SAS Institute Inc, carry North Carolina. 2003
  12. Byarugaba DK., Olsen JE, Rwakishaya KE; Production, Management and Marketing Dynamics of the Rural Scavenging Poultry in Uganda. Second FAO/INFPD Electronic Conference on Family Poultry 2002 on Bangladesh Model Retrieved April 5, 2012, from [http://www.fao.org/ag/againfo/themes/fr/infpd/documents/econf\\_bang/add\\_paper9.html](http://www.fao.org/ag/againfo/themes/fr/infpd/documents/econf_bang/add_paper9.html)
  13. Halima H; phenotypic and Genetic characterization of indigenous chicken population in North West Ethiopia. PHD dissertation, Department of animal, Wildlife and Grassland Sciences, University of the free state, Blormfontein, South Africa. 2007.
  14. Aklilu H, Mekinders CJMA, Udo HMJ; Consumption and marketing in the relation to Gender, Religious Festivals and Market access. *Tropical Animal Health and Production*, 2007; 39: 165 – 177.