

Perceived Factors Influencing Choice of Farm Records and Accounting Among Youth Poultry Farmers in Lagos State, Nigeria

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Abstract

This research focused on perceived factors influencing choice of farm records among youth poultry farmers in Lagos State, Nigeria. The study was carried out in two (2) senatorial districts of Lagos State which are Lagos East and Lagos West. A total of one hundred and fifty-six (156) respondents were used for the study. Structured questionnaires were used to retrieve information. Data retrieved were described with descriptive statistics such as frequency, percentage and mean while chi-square was used to analysed data and make inferences. The results of the study indicated that there were more males than female with 72.4% and 27.6% respectively. Also, about 33.3% of the respondents were between the ages of 31- 35years. A little above average (59%,) were married and also, 36.5% had SSCE certificate. In addition, open market was their major source of production inputs while family and hired labour was their major source of labour with 46.8% and 34% respectively. The most important marketing channel of the respondents was retail channel (62.8%), while personal contribution and Government grants were their major source of capital. Sales record, cash book record, record of salaries and wages, credit book records, production records and cost account records were the most important records kept by respondents in the study area. Chi-square analysis shows that sex ($X^2=10.127$, $p=0.004$), age ($X^2=10.331$, $p=0.003$), marital status ($X^2=10.212$, $p=0.004$), formal education ($X^2=11.382$, $p=0.001$), source of labour ($X^2=12.014$, $p=0.005$), land ownership status ($X^2=14.082$, $p=0.002$), marketing channel ($X^2=10.171$, $p=0.003$) and source of capital ($X^2=12.081$, $p=0.007$) significantly related to perceived factors that affect the choice of farm records among youth

Keywords: Youth, Poultry Farmers, Farm Records and Accounting

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Background to the Study

The poultry industry plays important roles in the development of Nigerian economy. It is a major source of eggs and meat which have a high nutritional value particularly in the supply of protein. Eggs are also important in the preparation of confectionary and vaccines. The poultry industry also provides employment opportunities for the populace, thereby serving as a source of income to the people. The importance of poultry to the national economy cannot be overemphasized, as it has become popular industry among diverse age group, particularly the youth who are believed to be very active and adventurous and within the age range of fifteen and forty. Undoubtedly, the poultry industry has assumed greater importance in improving the employment opportunity and animal food production in Nigeria and in the entire world. (FAO, 2011)

Poultry production is a very important source of livelihoods for most rural communities. This is because it provides ready cash for emergency needs (Food and Agriculture Sector Development Policy (FASDEP), 2014), supplies the fast-growing human population with high quality protein, contributes significantly to food security, poverty alleviation and ecologically sound management of natural resources (Guëye, 2012). As a result of the fact that there is a continuing rise in the cost of production of cattle, sheep and goat meat (Onuekwusi, 2011), 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) (Guëye, 2012).

In the face of the recent global economic development and the rapid paradigm shift in the farming industry, it is practically impossible for poultry farmers to manage a farm enterprise the way done 30 years ago. In view of this, Arzeno, (2014) as well as Henderson and Gomes (2011) noted that one possible approach to improving poultry farming is through the use of farm records.

Farm record keeping involves collecting an account of a farmer's daily operations in the farm. Torres (2011) defines farm record keeping as keeping of detailed records by a farmer of his farm's daily operations, income and expenses. He added that record keeping also refers to data collection activity of a research organization which involves detailing activities performed from time to time following some guidance and support from the researcher.

Despite the importance of farm records to the growth of a farm business, farmers often consider it as a difficult task (Poggio, 2013) and therefore the decisions they make are guided by vague estimates and guesses based on their past experience of farming (Johl and Kapur, 2011).

Admittedly, Nigerian's livestock resources remain dominated by poultry farmers. A lot has been done in recent times, however, towards the modernization of the industry. This has included given credits in different forms to poultry farmers and the quantity and quality of research into all facets of the industry has increased. Lastly, the use of extension workers has, more than ever before, been recognized as an essential input of any modernization formula.

However, record keeping by poultry farmers has been largely disregarded. It is thus difficult to imagine a country seeking poultry modernization that does not attach considerable importance to record keeping and account by poultry farmers as a prime component of developmental agenda.

In places where records accounts are considered important the choice of which record to keep becomes an issue with the premonition and believe that the most important information is committed to memory from year to year by stakeholders. It is against this background that the study seeks to investigate the perceived factors influencing the choice of farm record and accounting in poultry production among youth in Lagos State of Nigeria with the following specific objectives.

- i. Describe the socio-economic characteristics of youth poultry farmers in the study area
- ii. Identify the types of farm records
- iii. Determine the dispositional perceived factors that affect the choice of farm record and account among youth poultry farmers in the study area.

Research Hypothesis

Ho₁ There is no significant relationship between selected socio- economic characteristic of the respondents and perceived factors influencing the choice of farm record and account among youth poultry farmers

Research Methodology

The study was conducted in Lagos State of Nigeria. Multiage sampling technique was used to collect data as follows. The twenty (20) Local Government Areas of the state was divided into three (3) based on the senatorial districts. 70% of the senatorial districts were purposively sampled due to high prevalence of youth poultry farmers that is; Lagos East and Lagos West senatorial districts. 40% of the LGAs in the selected senatorial districts were then randomly sampled for the study. Then systematic sampling was used to select 50% of the youth poultry farmers to get the total sample size. Well structured questionnaire was used to elicit information from youth poultry farmers in the study area after it was validated. Results were presented using frequency count, percentages and weighted mean score. Likert type scale of 'major factor', 'minor factor' and 'not a factor' were used to measure the perceived factors that influence the choice of farm records and account and finally inferential statistics of chi square was used to test the stated hypothesis.

Results and Discussion

Social economic characteristics of youth poultry Farmers

Table 1 shows the socio-economic characteristics of the respondents It was revealed that 66.0% of were males while about 34% were females. This implies that poultry production in the study area is male dominated like most other agricultural enterprises. This may not be unconnected with the fact that researcher such as Momor (2011), suggested that men should indulge more in the farming to increase the agricultural production in Nigeria. The Table also shows that 5.8% respondents were below the age of 20 years, 12.2% were between the ages of 21-25 years, 30.8% were between the ages of 26-30 years, 33.3% were between 31-35years, while 17.9% were above

the age of 36 years respectively. The result of age analysis shows that majority of the respondents are still within the most active age range. This implies that they are capable of taking more risks and getting more involved in the different aspects of poultry farming.

On the marital status it was revealed that 22.4% of the respondents were single, 59% of the respondents were married, and 13.5% of the respondents were divorced while 5.1% of the respondents were widow respectively. This means that majority of the poultry farmers were married. The implication of this is that these married individuals are believed to be more responsible. This is in line with the findings of Numengo, (2008) who found out that majority of those who were into poultry business in Kenya central were married with 91% of all the total respondents in a pilot study. Similarly, the study also corroborate the finding of Ishola and Shopitan (2015) who found out that majority of those involved in poultry production in the rural communities of Lagos State are married. The result on formal education attended by the respondents shows that 28.2% of the respondents had no formal education, 19.9% of the respondents attended primary school, 36.5% had secondary school certificate, while 15.4% of the respondents are higher education graduates. This means that most of the respondents are secondary school certificate holders. The implication of this is that secondary school leavers are the ones who are prominent in poultry farming. On the source of production inputs of the respondents, Table 1 revealed that 46.8% of the respondents patronize open market, 17.9% of the respondent's source through the ministry of agriculture, 16.7% of the respondent's source through the ADP, 13.5% of the respondent's source through the research institutes, while 5.1% of the respondents patronize other source of production inputs. This is an indication that majority of the poultry farmers source their inputs from the open market.

The result on the source of labour shown in Table 1 revealed that 17.3% of the respondents employ their family, 12.2% of the respondents gets supports from friends, 34% of the respondents employ both the family members and hired personnel, 11.5% of the respondents hired the family and friends while (25%) of the respondents are managing the business themselves and hired some people as well. The finding is supported by Aji, (2010) who asserted that farming businesses are mostly maintained by the owner which at the long-run, after expansion now needs more hands to handle its operations. Also, Table 1 shows the result on land ownership status. It reveals that 23.7% of the respondents had their own personal land, 41% had to rent land for the business, and 16% are maintaining family land while the remaining 17.3% of the respondents are squatting. This implies that majority of the youth poultry farmer do not have ownership of the place of production. This will therefore affect expansion of their poultry production and therefore limit profit maximization. On the marketing channel, it was revealed that 37.2% of the respondents used the local market, while 62.8% of them market through the retailer outlet. This implies that there is no well established market for the youth who are engaged in poultry production. For the source of capital, result revealed that 12.8% of the respondents source through loan from bank, 32.7% of the respondents source their capital from their personal contribution, 21.2% of the respondents had their capital source from family and friends while the remaining 33.3% of the respondents got theirs through grant from Government. The implication of this finding is that, youth poultry farmers don't have reliable source of capital as they mostly rely on personal contributions which does not guaranty large scale production.

Table 1: Table of social economic characteristics

Sex	Frequency	Percentage (%)
Male	103	66.0
Female	53	34.0
Age		
Below 20	9	5.8
21 – 25	19	12.2
26 – 30	48	30.8
31 – 35	52	33.3
36 and above	28	17.9
Marital status		
Single	35	22.4
Married	92	59
Divorced	21	13.5
Widow	8	5.1
Formal Education Attended		
No formal Education	44	28.2
Primary School Certificate	31	19.9
Secondary School Certificate	57	36.5
Higher Education	24	15.4
Source of Production Inputs		
Open Market	73	46.8
Min of Agric	28	17.9
ADP	26	16.7
Research Institutes	21	13.5
Others	8	5.1
Source of Labour		
Family	27	17.3
Friends	19	12.2
Family and hired	53	34
Family and friends	18	11.5
Self and hired	39	25
Land Ownership Status		
Personal land	37	23.7
Land tenant	64	41
Family Land	25	16
Squatter	27	17.3
Marketing Channel of the Poultry		
Local Market	58	37.2
Retailer	98	62.8
Source of Capital		
Loan from bank	20	12.8
Contribution	51	32.7
Loan from family and friends	33	21.2
Grant from Government	52	33.3
Total	156	100

Type of Farm Record kept by Youth Poultry Farmers

The type of record kept by youth poultry farmers in the study area is represented in Table 2. It shows that sales record, cash book record, salaries and wages, credit book records, production records and cost account records are the most important records kept by respondents in the study area. The table shows that 152 of the total 156 respondents do keep track of sales records of their business, while 4 do not prepare sales account. This means that majority of the poultry farmers knew the essence of preparing the sales records of their business. It might be denoted that those that do not keep this records are likely to have small scale poultry or being managed within a non populous area.

The result on record kept shows majority of the farmers are more interested in the cash flow in the business than the adequacy of records of the business. This is corroborated by Olabiyi, (2009) farmers are more interested in the excess of money received over the money spent. Results on salaries and wages clearly shows that most of the respondents took salaries and wages account as a vital records for their business.

Also, the table shows that 75% of the total respondents kept record of their production while the remaining 25% do not keep production record. This means that majority of the respondents do keep records of their production in order to know the rate at which their birds are producing. This means that majority of the respondents do not keep annual valuation records of their business. All the 22 poultry farmers do their annual valuation yearly. In support of this finding, Numengo (2008) who carry out a research on assets valuation and the prospects of agricultural businesses in Kenya, finds out that 52% of the total 341 respondents do value their record of production in their Agribusiness activities. The result on cost account shows that 96.8% do keep cost accounting of their material inputs while 3.2% of them do not. Conclusively the bane of failure in poultry production is not unconnected with the inadequacy of records among farmers. This why Kazeem (2015), pointed out that appropriate record of poultry business is sine qua non to success determination.

Table 2: Distribution of Respondents on the type of record kept by youth poultry farmers

Types of Record	Yes	No
Purchase Records	88 (56.4%)	68 (43.6%)
Sales Records	152 (97.4%)	4 (2.6%)
Profit and Loss Account	45 (28.8%)	111 (71.2%)
Inventory Record	97 (62.8%)	59 (37.8%)
Cash book Accounts	131 (84.0%)	25 (6.0%)
Equipment Records	48 (30.8%)	108 (69.2%)
Labour Records	33 (21.2%)	123 (78.9%)
Salaries and Wages	111 (71.2%)	45 (28.8%)
Credit book	137 (87.8%)	19 (12.2%)
Receipts and Payments Account	63 (40.4%)	93 (59.6%)
Production Records	117 (75.0%)	39 (25.0%)
Annual Valuation Records	22 (14.1%)	134 (85.9%)
Cost Accounts	151 (96.8%)	5 (3.2%)
Assets Accounts	40 (25.6%)	116 (74.4%)
Stock Valuation Records	94 (60.3%)	62 (39.7%)

Perceived Factors that influence the Choice of Farm Records and Accounting

Result in Table 3 shows that the cost of hiring financial accountant was the most important factor with a weighted mean score (WMS) of 1.34. It was ranked 1st in the distribution. This implies that as poultry farmers have phobia for the huge amount of salary to be paid to professional accountant. This assertion is in agreement with the study of Ayinde, (2009) who reported in his study that 25% of farmers agrees that the wage of an accountant is not hindrances to keeping farm records in a study on quantifying the socio economic determinant of sustainable crop production in Nepal. It is seconded by the 3rd and 12th items which stated that “farm size” and “number of customers” with weighted means score of 1.33 was ranked 2nd respectively. This implies that, the respondents believed that the farm size and number of potential customers will be a great determinant factor to the poultry farmers in the choice of farm record. This is because the operation of a poultry farm is greatly determined by the size of the poultry. Consequently, the size of any poultry farm will determine the size of its potential customers which will in turn influence the level of work in the aspect of record keeping. Farmer's level of formal education follow suit closely with the WMS of 1.32 while ranking 4th. 79 (50.6%) of the respondents perceived it as a major factor, 48 (30.8%) of the respondents perceived it as a minor factor while the remaining 29 (18.6%) perceived it as no factor. This implies that the educational training of poultry farmers will influence their exposure towards the choice of farm records and accounting. In support of this finding, Suwe (2011) observed that educational qualification of farmers will be an additional aid to the farmers' operational activities. The first item on the list was ranked 5th with an average weight mean score of 1.22 which stated “age of the farmer” and was perceived by 66 (42.3%) of the respondents as a major factor, 59 (37.8%) perceived it to be a minor factor while 31 (19.9%) of the respondents perceived it as no factor. This implies that the older the farmer, the lesser their ability to operate the farm poultry effectively. This was not the same as the opinion of Alber (2010) who opined that farmers who are young are capable of running a farm more effectively and efficiently than older farmer.

The statement on “farmer's years of farming experience” and “location of the farm” ranked 6th average weight mean score of 1.16. This implies that if the poultry farms are well situated it commands good profit as it is closer to the target consumers and in addition, the number of years on the job will expose farmers to the use of accounting information. Consequently, it will prompt them to take record keeping seriously. Bakare (2007) was in agreement to this in his study, that farmers' nearness to potential customers will boost sales and increase the profitability index of the business and therefore make them compare how they are fairing from the record they kept. Furthermore, 54 (34.6%) of the respondents agreed that forms of operation (i.e. traditional or modern) will majorly influence the choice of farm records and accounting, 69 (44.2%) perceived it as a minor factor while 33 (21.2%) of the respondents perceived it to be no factor. This indicates that those who are following the modern trend in poultry farming will be eager to keep accounting records while those with the traditional method may not see it as a necessity. “Farmer's willingness” was ranked 9th with an average mean score of 1.11. 62 (39.7%) of the respondents perceived it as major factor, 49 (31.3%) perceived it as a minor factor while the remaining 45 (28.8%) of the respondents perceived it as no factor.

This implies that the intrinsic motivation of poultry farmers will determine their perception towards the choice of farm records and account. 45 (28.8%) of the respondents perceived farmers' net income as a major factor that affects the choice of farm records and accounting of poultry farmers, 72 (46.2%) perceived it as a minor factor while the remaining 39 (25%) perceived it as no factor. This was ranked 10th with an average weight mean score of 1.04. This implies that the level of profitability of poultry farmers will affects their choice of farm records and accounting either positive and negative, this was in consonance with the study of Umeh, (2012) who revealed that farmers are not having high level of profitability and this has limits their operation in the keeping farm records and accounting in Uyo. Farmer's status was next ranking 11th with weighted average mean of 1.03 with 53(34%) of the respondents perceived it as a major factor, 54 (34.6%) of the respondents perceived it as minor factor while the remaining 49 (31.4%) perceived it as no factor. This implies that farmers' status either as full time or part time will influence the choice of their farm records and account. Those involve in full time poultry farming job will need to have records while those running it on a part time basis will see no need for farm record keeping. The next was sex of the farmers ranked 12th with WMS of 1.01 was perceived by 45 (28.8%) respondents as major factor, 67 (42.9%) perceived it as minor factor while 44 (28.2%) perceived it as no factor to them. This shows that the sex of the farmers may not really be perceived to have greatly influence the choice of farm record. This is in consonance with the study of Omaiya, (2009), who opined that irrespective of gender, farmers do not always keep track of their records due to their non-challant attitudes towards record keeping. Finally, farmer's access to credit facilities ranked 13th with average weighted means of 0.74. 37 (23.7%) of the respondents perceived as a major factor, 41 (26.3%) perceived it as minor factor while the remaining 78 (50%) of the respondents perceived it to be no factor. Thus, it is therefore not farfetched to ascertain that credit facilities are not part and will not influence the poultry farmer's choice of farm records in the study area.

Table 3: Perceived factors that influence the choice of farm records and account

S/N	Variables	Major Factor		Minor Factor		Not a Factor		WMS	Rank
		No.	(%)	No.	(%)	No.	(%)		
1.	Age of the farmer	66	42.3	59	37.8	31	19.9	1.22	5 th
2.	Sex of the farmer	45	28.8	67	42.9	44	28.2	1.01	12 th
3.	Farm size	78	50	51	32.7	27	17.3	1.33	2 nd
4.	Farmers level of formal education	79	50.6	48	30.8	29	18.6	1.32	4 th
5.	Farmer's years of farming experience	63	40.4	55	35.3	38	24.4	1.16	6 th
6.	Farmer's status (i.e. full time / part time)	53	34	54	34.6	49	31.4	1.03	11 th
7.	Farmer's net income	45	28.8	72	46.2	39	25	1.04	10 th
8.	Farmer's access to credit facilities	37	23.7	41	26.3	78	50	0.74	13 th
9.	Cost of hiring financial accountant	66	42.3	77	49.4	13	8.3	1.34	1 st
10.	Location of the farm.	65	41.7	51	32.7	40	25.6	1.16	6 th
11.	Farmer's willingness	62	39.7	49	31.4	45	28.8	1.11	9 th
12.	Number of customers	67	42.9	73	46.8	16	10.3	1.33	2 nd
13.	Forms of operation (traditional or modern)	54	34.6	69	44.2	33	21.2	1.13	8 th

Test of Hypothesis

Relationship between selected socio-economic characteristic and perceived factors that influence the choice of farm record and account among youth poultry farmers

Evidences from the findings show that there is a significant relationship between the selected socio economic characteristics and perceived factors that influence the choice of farm record and account. table 4 therefore point out that sex ($X^2=10.127$, $p=0.004$), age ($X^2=10.331$, $p=0.003$), marital status ($X^2=10.212$, $p=0.004$), formal education ($X^2=11.382$, $p=0.001$), source of labour ($X^2=12.014$, $p=0.005$), land ownership status ($X^2=14.082$, $p=0.002$), marketing channel ($X^2=10.171$, $p=0.003$) and source of capital ($X^2=12.081$, $p=0.007$) are all significantly related to perceived factors that influence the choice of farm record and account. This means that sex, age, marital status, formal education, source of labour, land ownership status, marketing channel and source of capital influenced the perceived factors that do affect the choice of farm record and account among the youths. This implies that at older or younger age, at a particular sex and even marital status youth may consider or prefer the choice of some farm record to another. Similarly, the level of educational attainment, source of labour, land ownership status, marketing channel as well source of capital can help determine which farm record and account should be kept by the youth.

Table 4: Relationship between selected socio- economic characteristic of the respondents and perceived factors that affect the choice of farm record and account

Variables	X^2 value	Df	Probability	Decision
Sex	10.127	1	0.004	Significant
Age	10.331	4	0.003	Significant
Marital status	10.212	3	0.004	Significant
Formal education attended	11.382	3	0.001	Significant
Source of labour	12.014	4	0.005	Significant
Land ownership status	14.082	3	0.002	Significant
Marketing channel of the poultry	10.171	2	0.003	Significant
Source of capital	12.081	3	0.007	Significant

Conclusion

Based on the findings of the study, it can be deduced that more male youth are involved in poultry farming, more of them have secondary school as their highest educational qualification and more of them use their personal contribution for their poultry production. Also, the study also show that that “farm size” and “number of customers” are the most important factors that can influence the choice of farm records among youth poultry farmers in Lagos State.

Recommendations

On the strength of the findings, the following recommendations are made:

- i. Female youth must be encouraged to enter into the poultry business. This can be done by giving awareness on the benefits in poultry production.

- ii. The Directorate of Agricultural Extension Service (DAES) of the Ministry of Agriculture should intensify their work on youth farmers to enable them keep comprehensive farm records. This can be done by organizing frequent training programmes and follow-ups to enable youth poultry farmers keep farm records and account.
- iii. Simple data notebooks and data sheets for farm record keeping must be designed for the use of youth poultry farmers. To ensure practicability, the data notebooks and data sheets need to be developed in consultation with farmers.
- iv. Record keeping should also be made an important feature of agricultural shows organized yearly in many states and farmers should be assured that record keeping will not result in unfair taxation.

Reference

- Aji, S. S. (2010). Employment creation/opportunities in the agro-allied sub- sector: The case of poultry farming bullion, *Publication of the Central Bank of Nigeria, October - December, 2010*.
- Alber, M. (2010). Quantifying the socio-economic determinants of sustainable crop production: An application of wheat cultivation in the Tarui of Nepal, *Agricultural Economic, 14, 45-60*.
- Arzeno, A. (2014). *Record keeping in farm management college of agriculture and biological Sciences, South Dakota State University, Brookings*.
- Ayinde, M. (2009). *Quantifying the socio-economic determinants of sustainable crop production: An Application of Wheat Cultivation in the Tarui of Nepal*.
- Bakare, B. (2007). *Record keeping among small partners; The case of the Oshun North- East Area of Oyo State of Nigeria (OSKEA) 1983-1984*, Paper presented at the 5th Seminar of the Agricultural and Rural Management Training Institute (ARMTI) Ilorin, 23rd-25th April 2007
- FAO, (2011). *Animal husbandry and animal health division-poultry sector country review for Tanzania*, Rome: UN-Food and Agriculture Organization, Retrieved May 7, 2016 from <http://fao.org/docrep/fao>
- FASDEP 1. (2014). *Food and agriculture sector development policy 1*, Ministry of Food and Agriculture.
- Gueye, S. (2012). *Status of farm data systems and record keeping in Sub-Saharan Africa*, FAO Rome: Italy
- Henderson, T. & Gomez, H. (2011). Profiles of small farming in St. Vincent, Dominica and St. Lucia: Report of a baseline survey, Barbados. in Niger-Delta, Nigeria, *Journal of Central European Agriculture, 6 (4)531-538*

- Ishola, T. A. & Shopitan, K. A. (2015). Involvement of rural women in poultry production in rural communities of Lagos State, Nigeria, *Nigerian Community Development Journal* 3 Pp 142-153. ISSN 2360-7432 Pp 142-153
- Johl, J. H. & Kapur, N. D. (2011). *Linear probability, logit and probit models*, Sage Publications.
- Momor, A. A. (2011). Determinants of technical efficiency and policy implication in traditional production: Empirical study of Nigerian food crop farmers, *Empirical Economic Letters*. 1 (1).
- Numengo, A. (2008). Scaling-up: *The BRAC poultry model in Kenya: in F. Dolberg and P. U. Pertersen (eds.) poultry as a Tool in Poverty Eradication and Promotion of Gender Equality*, Proceedings of a Workshop, March 22-26, 2008, Tune Landboskole, Kenya.
- Kazeem, A. Y. (2015). *Towards sustainable peri-urban poultry in Nigeria*, Paper presented at the 22nd annual conference of the Nigerian Society for Animal
- Olabiyi, O. L. (2009). The mobilization of credit for agricultural development in Anambra State, Nigeria, *Savings and Development*, 4(4) 120-122. http://www.srdc.gov.au/en/media/hdr_20092010_en_complete.pdf [Accessed 21 Feb. 2010].
- Omaiya, O. (2009). Technical efficiency of poultry egg production in Osun State: A data envelopment analysis (DEA) approach. *International Journal*
- Onuekwusi, K. A. (2011). Effect of micro-finance on small scale poultry business in South Western Nigeria Emir, *Journal Food Agric*. 19(2) 38-47.
- Poggio, M. (2016). *Farm management records*, Available Online: www.srdc.gov.au, retrieved on 4th November, 2011, 9:20 GMT
- Suwe, S. (2011). *Problems of poultry production in Nigeria*, A Paper Presented at a Workshop Organized by the Nigerian Society for Animal Production (NSAP), Ogun State, Nigeria.
- Torres, A. B. D. (2011). *Farm management in extension in the Philippines*, Rome: FAO, 23
- Umeh, S. G. (2012). Resource use efficiency in urban farming: An application of stochastic frontier Production Function, *International Journal of Agriculture and Biology*, 1, 38-44