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Information needs of poultry farmers in Okha Local Government Area of Edo State, Nigeria.

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Abstract

The use of poultry management information among farmers will always lead to increased poultry productivity. This study determined the information needs of poultry farmers in Ikpoba Okha Local Government Area of Edo state, Nigeria. A two-stage sampling technique was adopted in the selection of the respondents. The first stage involved the purposive selection of six (6) communities. The second stage involved the random selection of twenty (20) farmers from each of the communities making one hundred and twenty (120) poultry farmers. Primary data were collected via the use of structured interview schedule. Descriptive statistical tools such as frequency, percentage and mean rank were used to analyse the data while inferential statistical tools such as correlation and chi-square were used to test the hypothesis. The farmers had a mean age of 46.97±14.49 years. Majority (72.5%) were male and married (79.2%). The result also showed a significant relationship between the following socio-economic characteristics of the poultry farmers and their information needs: farm size (r^2 = -0.199 p= 0.05), gender ($\tilde{?}$= 3.304 p= 0.05), scale of production ($\tilde{?}$=8.842 p= 0.05) and membership of poultry association ($\tilde{?}$=3.308 p= 0.01) Specialised poultry extension agents should be trained and equipped to reach out effectively to farmers.

Keywords: Farmers, Information, Knowledge, Needs, Poultry

Introduction

Poultry farming is the raising of domesticated birds such as chickens, ducks, turkeys and geese for the purpose of producing meat and/or eggs for food and/or for sale. More than 50 billion chickens are raised annually for both their meat and their eggs. (Wikipedia, 2015). The number of poultry species in Nigeria is approximately 150.682 million. Of these, 25% are commercially farmed, 15% semi-commercial and 60% in backyard (Onwualu, 2011). Also, poultry gives the greatest scope of increasing the quality and quantity of animal protein in Nigeria as poultry meat and egg accounts for almost 30% of the total livestock output (Evbuomowan, 2005).

The importance of poultry production to the biological, economic and social development needs of the people in any nation cannot be overemphasised (Oladeebo *et al.,* 2007). Poultry products especially meat and eggs provide an acceptable form of animal protein to most people throughout the world accompanied by a low proportion of fat. This is because there are very few or no religious or cultural taboos associated with poultry and its products as compared with some other livestock species like swine. Poultry are adaptable to a wide range of climatic conditions, they are highly productive and are good and efficient feed converters. They

also have a short generation interval. The droppings serve as manure for growing of crops as it is rich in nitrogen. Poultry production has increased the standard of living of so many people operating along the value chain ranging from the poultry farmer themselves to the middle men to the retailers.

According to Araminifera (2012), poultry production can be divided into three types based on the scale of production namely small, medium and large scale. Poultry farming has various branches of which egg and meat production are the main aspects. Other activities along the poultry production value chain include day-old chick production, point-of-lay or pullet grow-out production, poultry feed milling/production, manufacturing of equipment, processing and marketing of eggs and table birds (Oyeyika, 2011).

Regardless of the prospects of poultry, without people to farm it, the benefits cannot be actualised. Therefore, poultry farmers are very important in poultry business. Such farmers equally require right information to facilitate the achievement of their aims. Everret (2015) affirmed that for information to be termed good (right), it should be of relative advantage, it should be compatible, it should not be complex and it should be observable and triable.

Information needs, the absence of which may hinder growth is often understood as an individual or group's desire to locate and obtain information to satisfy a conscious or unconscious need. Therefore, the information needs of poultry farmers have to be looked into so as to satisfy their conscious and unconscious desires for direction, which when absorbed and applied will improve their skills and approach towards poultry production and also raise their standard of living, not excluding raising of the economy's gross domestic product (GDP). It is against this background that the study was carried out to describe the socio-economic characteristics of poultry farmers in the study area, identify the improved poultry production practices engaged in by poultry farmers in the study area, determine the level of information needs and information access of poultry farmers in the study area and to identify the constraints to the accessibility of information on poultry production in the study area.

Hypothesis of the study

H_o: There is no significant relationship between the selected socio-economic characteristics of the respondents and their information needs.

Methodology

The study was carried out in Ikpoba Okha Local Government Area (LGA) of Edo State. It is an inland state in Central Southern Nigeria situated at 6.34° North latitude, 5.63° East longitude and 80 meters elevation above sea level. A two-stage sampling technique was adopted in the selection of the respondents. The first stage involved purposive selection of six (6) communities because of concentration of poultry farmers in the area. All poultry farmers in the six (6) communities represented population from where samples were drawn. The second stage involved the random selection of twenty (20) farmers from each of the communities making one hundred and twenty (120) poultry farmers in the LGA. Primary data were collected via the use of structured interview schedule. Descriptive statistical

tools such as frequency, percentage and mean rank were used to analyse the data while inferential statistical tools such as correlation and chi-square were used to test the hypothesis.

Measurement of variables

Two groups of variables were considered and investigated in the study namely Dependent and Independent variables. The dependent variable which is the level of information needs was measured using a 4 point Likert-type scale consisting of Not needed (1 point), Slightly needed (2 points), Needed (3 points) and Extremely needed (4 points).The questions asked included Feed formulation and production, record keeping, feeding, poultry processing, poultry product storage, management of poultry equipment, identification of poultry birds, sexing of chicks, debeaking of birds, identification of sick birds, identification of disease symptoms, vaccination of birds, culling of birds, formulation of feed, identification of fertile eggs, preparation of farm records, despurring, disposal of dead birds, disposal of poultry waste, brooding, use of medications and marketing of poultry products. The level of information needs index was sum of the scores on all 23 practices with a minimum score of 23 and a maximum score of 92.

Results and Discussion

Socio-economic characteristics of the poultry farmers

As shown in Table 1, the mean age of the poultry farmers was 46.97±14.49 years. The implication of this is that majority are in their active years. Majority (72.50%) were males. This is an indication that more men are involved in poultry production than women. This finding is in agreement with that of Lawal *et al.* (2009) who reported that modern poultry farming is still predominantly a male occupation. In addition, Adam *et al.* (2014) reported that more men than women are likely to venture into poultry production because of the modernisation of poultry farming with improved breeding stock, modernised management system and its highly capital-intensive nature. Majority (79.20%) of the respondents are married. Also, majority (74.5%) of the farmers had tertiary education. This will enhance information access because educational level has a great influence on farmers'` access to and use of information (*Waller et al.,* 1998). The implication of this is that majority of them could access information easily from different sources. Furthermore, exposure to education gives an individual the ability to control information input, store information and retrieve same for future use. They would also be ambitious fort the most part because they are responsibly married and educated with a mean household size of 5.8 persons. This is considered to be close to the average household size of 4 reported by NPC (2006). This shows that the farmers had enough opportunity of family labour for poultry farming which also indicates that less hired labour will be needed which is an added advantage. Also, the mean farming experience was 9.96 years. This finding also follows the assertion of Nwaru (2004) that the higher the farming experience, the more the farmer would gain more knowledge and technical ideas and the higher would be his output and income. 53.30% of the poultry farmers were involved in egg production while 30.80% were into broiler production. 10.80% and 5.00% were into pullet production and feed production respectively. This implies that most of the

Table 1: Distribution of respondents by their socio-economic characteristics

Variable	Frequency	Percentage	Mean±Std. Dev
Age (years)			
<30.00 - 39.00	14	11.7	
30.00 - 49.00	55	45.9	46.97±14.49
50.00 - 69.00	41	34.0	
=70.00	10	8.4	
Sex			
Male	87	72.5	
Female	33	27.5	
Marital status			
Married	95	79.2	
Single	20	16.7	
Divorced	3	2.5	
Widowed	2	1.7	
Level of education			
No formal	7	5.8	
Primary	9	7.2	
Secondary	15	12.5	
Tertiary	89	74.5	
Years of experience			
1-9	14	11.7	
10-19	43	35.8	9.96±9.39
20-29	63	52.5	
Household size			
0-5	21	17.5	
5-10	87	72.5	5.8±3.7
11-15	11	9.2	
15-20	1	0.8	
Major area of production			
Eggs	64	53.3	
Broilers	37	30.8	
Layers	13	10.8	
Production of feed	6	5	
Income level			
<500,000	25	20.8	1,543,311±4,892,323
500,000-999,999	18	15	
>1, 000,000	77	64.2	
Scale of production			
Small	106	88.3	
Medium	9	7.5	
Large	5	4.2	
Membership of poultry association			
Yes	37	30.8	
No	83	69.2	
Membership of cooperative			
Yes	43	35.8	
No	77	64.2	

Source: Field survey, 2016.

poultry farmers are more involved or interested in egg production because of steady income. This finding follows the assertion of Ayanda (2013) who reported that keeping layers for egg production is more profitable. The result shows that the poultry farmers were operating on a small scale production level with mean annual income of above 1 million Naira. This is because majority (88.30%) were small scale poultry producers. The study shows that majority (69.20%) of the poultry farmers do not belong to any poultry association in their locality while majority (64.20%) are not members of cooperative groups. This might slow down the rate at which the poultry farmers get information needs which might be of advantage to them. Galadima (2014) reported that farmers should be encouraged to participate in the formation of cooperative groups so as to pool resources and consequently improve their financial capability and innovative skills in the course of group interaction..

Level of information needs

As shown in Table 2, the farmers had extreme need for information on disposal of poultry waste (mean=2.73), identification of fertile eggs (mean=2.73), despurring (mean=2.73), use of medications (mean=2.70) and poultry processing (mean=2.70). Disposal of poultry waste ranked first confirming the report of Cassius and Keaikitse (2013) that farmers' knowledge of poultry waste management was inadequate. The farmers also had moderate need for information in the following improved practices: disposal of dead birds (mean=2.68), identification of sick birds (mean=2.68), identification of poultry breeds (mean=2.66), sexing of chicks (mean=2.66), preparation of farm records (mean=2.52) and debeaking of birds (mean=2.45) This also confirmed the reports of Temba *et al.* (2016) that poultry farmers need a wide variety of information to increase their knowledge on poultry management.

Table 2: Distribution of the farmers by the information needs of the practices.

Variables	Mean	Information Needs
1. Debeaking of birds	2.45	Moderately needed
2. Preparation of farm records	2.52	Moderately needed
3. Identification of poultry breeds	2.66	Moderately needed
4. Sexing of chicks	2.66	Moderately needed
5. Identifying of sick birds	2.68	Moderately needed
6. Disposal of dead birds	2.68	Moderately needed
7. Poultry processing	2.70	Extremely needed
8. Use of medications	2.70	Extremely needed
9. Identification of fertile eggs	2.73	Extremely needed
10. Despurring	2.73	Extremely needed
11. Disposal of poultry waste	2.73	Extremely needed
Grand Mean	2.73	

Source: Field Survey, 2016

Level of information access

Table 3 shows that farmers' access to information was high on twelve out of the twenty three practices evaluated. Ranking first was marketing of poultry products (mean =3.50) followed by debeaking of birds (mean= 3.46) and poultry processing (mean =3.44) among others. This shows that the farmers' desire to make a success of their poultry enterprise will make them source for and access market information. Also, most poultry farmers source for market information before production. Oyeyinka and Bello (2013) found out that majority (81.3%) of poultry farmers in Oyo State required information for the sale of their products and that the major sources of agricultural marketing information outlets to the respondents were fellow farmers (81.3%), radio (85.4%) and phone messages (83%). Agboola (2013) affirmed that farmers need information to organise their production activities as such information can help them take necessary decisions and identify market outlets to minimise the risks related to getting the farm products disposed of at good prices. Also, a little above average (54.48%) of the farmers have high level of access to information on improved poultry production practices while 45.52% have low level of access. Potnis (2014) reported that an informed person is better able to make better decisions in accomplishing a certain task or solving a problem.

Table 3: Distribution by level of information accessed on improved poultry production

Variables	Mean	Rank
Marketing of poultry product	3.50	1st
Debeaking of birds	3.46	2nd
Poultry processing	3.44	3rd
Culling of birds	3.42	4th
Disposal of poultry waste	3.33	5th
Poultry feeding	3.31	6th
Identifying of sick birds	3.30	7th
Identification of disease symptoms	3.29	8th
Brooding	3.29	9th
Vaccination of Birds	3.25	10th
Formation of feeds	3.23	11th
Use of medications	3.23	12th
Grand Mean	3.17	

Source: Field Survey, 2016

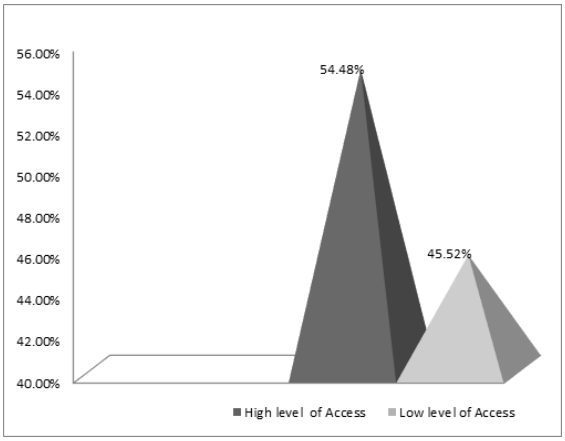

Figure 1: Level of information access

Sources of information

From the results in Table 4, radio (mean= 3.52), seminars and workshops (mean=2.69) and books (mean=2.20) were ranked as the most used sources of information. This is not unconnected with the high level of literacy of the farmers. Other sources of information include the internet (mean =1.96), television (mean =1.95), research works (mean =1.92), bulletins (mean =1.80), cell phone messages (mean =1.78). extension services (mean =1.74) and fellow farmers (mean =1.73). **Oladeji** (2011) reported the radio **as the preferred source of information among poultry farmers.** This is because statistics have shown that radio receivers are at least ten times more common than television sets in developing countries and it is the only means of information for two thirds of people living in rural Nigeria. In addition, the radio is listened to by 80% of people living in developing countries every week, reaching people isolated by language, geography, conflict, illiteracy and poverty (Aboyade, 1997)

Constraints to accessibility of information

From the study, myriads of constraints were encountered by the farmers in their quest to access information on improved production/management practices in poultry production. These constraints include lack of good roads for easy visit of extension workers which ranked first followed by lack of extension services and lack of aid from non-governmental organisations. Others include agricultural information not being broadcast on radio and television in local dialects and computer illiteracy among some farmers as

Table 4: Distribution by Information Sources

Information Sources	Mean	Mean Rank
1. Radio	3.52	1st
2. Seminars and workshops	2.69	2nd
3. Books	2.20	3rd
4. Internet	1.96	4th
5. Television	1.95	5th
6. Researchers/consultants	1.92	6th
7. Leaflets	1.80	7th
8. Cell phone	1.78	8th
9. Extension services	1.74	9th
10. Fellow farmers	1.73	10th

Source: Field Survey, 2016

Table 5: Constraints to the accessibility of poultry information

Constraints	Mean	Mean Ranking
1. Lack of access roads for easy visit of extension workers	2.74	1st
2. Lack of extension services	2.40	2nd
3. Lack of NGOs	2.40	2nd
4. Agricultural information is not broadcast on radio and television in Edo dialect at all times.	2.30	4th
5. Computer illiteracy	2.28	5th
6. Inability to read and write (illiteracy)	2.26	7th
7. Poor power supply	2.26	7th
8. Inadequate information from family/friends/neighbours	2.26	7th
9. Agricultural information on radio and television is always aired at odd hours when farmers who desire such information have gone to their farms	2.00	10th
10. No/poor internet access	2.00	10th

Source: Field Survey, 2016

shown in Table 6. The result is in agreement with the report of Nnenna (2011) that lack of access roads for visit of extension workers and lack of extension services are the constraints to the accessibility of poultry information.

Hypothesis testing

In Table 6, the result of Pearson's product moment correlation analysis shows a significant relationship between selected farmers' socio-economic characteristics and their information needs. The finding revealed that farm size had negatively significant relationship with the information needs of the farmers (r = -0. 199 = 0.05. Hence the null hypothesis was rejected. The result implies that the higher the farm size, the less the information needs of the farmers. This implies that large scale farmers had less information needs.

TThe results in Table 7 shows the chi-square analysis showing significant relationship between selected farmers' socio-economic characteristics and the information needs of the respondents. The findings revealed that the following variables have significant relationship with the information needs of the farmers: gender ($?^2$ =3.304 = 0.10), scale of production ($?^2$ =8.842= 0.05) and membership of poultry association (X^2 =3.308= 0.10). Hence the null hypothesis was rejected. The result thus implies that gender had a significant relationship with the information needs of the farmers. This implies that the gender of the poultry farmers has influence on the information needs of the farmers. This could be as a result of the higher percentage of males (72.50%) to females (27.50%). More males are involved in poultry production and therefore have influence on the information

Table 6 Pearson product moment correlation analysis

Variables	Correlation coefficient (r)	P-value	Decision
Age	0.228	0.512	NS
Family size	-0.016	0.859	NS
Farm size	-0.199**	0.029	S
Income level	-0.052	0.331	NS
Skilled employees	-0.020	0.822	NS
Number of employees	-0.024	0.696	NS

Key: ** Significant at 0.05 level of significance.
Source: Field survey, 2016

Table 7: Result of Chi-square analysis showing association between socio-economic characteristics and the information needs of poultry farmers.

	X^2 value	Df	p-value	decision
Gender	3.304*	1	0.064	S
Marital status	1.559	1	0.20	NS
Educational qualification	4.952	3	0.14	NS
Scale of production	8.842**	2	0.011	S
Years of farming experience	4.049	3	0.484	NS
Membership of poultry association	3.308 *	1	0.068	S
Membership of cooperative society	1.245	1	0.266	NS

Keys: **, Significant at 0.05; * Significant at 0.1
Source: Field survey, 2016

needs of the farmers. Also, scale of production had a significant relationship with the information needs of the farmers. This implies that the scale of production of the poultry farmers had influence on the information needs of the farmers. Membership of poultry association had a positive relationship with the information needs of the farmers. This implies that the membership of poultry association had influence on the information needs of the farmers.

Conclusion and Recommendations.

The information needs of the poultry farmers was high. However, they had highest information access on marketing of poultry products and extreme need for information on disposal of poultry waste. Lack of access roads for easy visit of extension workers and inadequacy of extension services were the highest ranking constraints to information access. The radio was the most important information source used. Gender, membership of poultry associations and farm size had influence on the information needs of the poultry farmers. Government can help by revitalising the extension agencies by improved funding and provision of needed infrastructure so as to ensure an effective advisory system is put in place. It is recommended that poultry farmers should be encouraged to join farmers' cooperative societies to facilitate wider information flow. Also, specialised poultry extension agents should be trained and equipped to reach out effectively to farmers using the radio as one of their channels.

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