

Access to Public Extension Training Service by Poultry Farmers in Ikpoba-Okha Local Government Area of Edo State, Nigeria

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Abstract

One of the cardinal objective of public extension is to provide training service to farmers to boost productivity. In this study poultry farmers' access to public extension training service in Ikpoba-Okha Local Government Area of Edo state was investigated. A total of 120 poultry farmers were randomly sampled from a list of 180 poultry farmers' registered in the Local Government Area. Data was collected using interview schedule and analysed with descriptive and inferential statistics. Majority (40.0%) of farmers were below 40 years of age, male (68.3%), married (75.8%), with household size of between 5-8 (60.0%) and had secondary education (43.3%). The poultry farmers made an average of ₦19,980 weekly. Substantial proportion (68.3%), have between 11-15 years of poultry farming experience made use of hired labour (75.9%) and have a stock size of 501-1,000 birds (42.5%). Radio was mostly assessed (98.3%) for information on poultry production and the use of improved poultry equipment was the most accessed (74.2%) training service. Access to training service was not consistent with needs and ranked topmost for constraints in accessing training service. There were significant relationships between respondents' sex ($\chi^2 = 0.022$; $p = 0.042$), marital status ($\chi^2 = 0.046$; $p = 0.028$), level of education ($\chi^2 = 0.043$; $p = 0.026$), membership of poultry farmers association ($\chi^2 = 0.000$; $p = 0.000$), source of information on poultry production ($r = 0.383$; $p = 0.000$), constraints in accessing training ($r = -0.861$; $p = 0.000$) and poultry farmers' access to public extension training service. It was recommended that periodic needs assessment be carried out to do away with incongruity between poultry farmers needs and the training service offered.

Keywords: needs assessment, poultry farmers access, public extension, training service.

Introduction

In Nigeria, livestock plays an important role in the national economy. It has consistently contributed over 5 percent of the Gross Domestic Product (GDP) and about 20 percent of the total agricultural GDP over the years (Nigeria Country Report, 2004). The species of animals widely exploited by farmers for food and agriculture include cattle, sheep, goats, camels,

donkeys, pigs and poultry (Nigeria Country Report, 2004). Of these livestock groups, poultry remains the largest in terms of population, which was estimated at 140 million birds (Empres Watch, 2006). The sub-sector also remains the most commercialized and it plays a vital role in the national economic development with its contribution to human nutrition and employment generation. Hence

poultry was been selected by the federal government as one of the priority agricultural commodities to be developed under her Agricultural Transformation Agenda (ATA).

In livestock production, poultry occupies a prominent position in providing animal protein as it accounts for 25% of local meat production in Nigeria (Okunlola and Olofisawe, 2007). Nigerian diets have a deficiency gap which results in increase in the incidence of diseases and consequently death (Apantaku *et al.*, 1998). The importance of poultry to national economy cannot be over-emphasized, as it becomes popular industry for small holders that have great contribution to the economy of the country. In Nigeria, poultry represents an appropriate system to feed the fast growing population and to provide income for the small-scale farmers. The development of the poultry industry in Nigeria has been described as the fastest means of bridging the prevailing protein deficiency gap.

The rural areas in Nigeria is characterized by lack of public infrastructure, sub-standard education, poor health services and low agricultural productivity leading to poor standard of living for a sizable proportion of its population. In order to sustain the interest of poultry farmers in poultry production, effective research and extension are necessary to ensure meaningful impact on poultry productivity and farmers' standard of living. The aspirations of the farmers must be met to a reasonable extent by the income accruing from the business; therefore, increasing its production would result in a positive impact on household food security both in increased dietary

intake and income generation (Awuni, 2000). Fawole (2006) stated that prospect for sustainable poultry production in Nigeria is high given locally available resources and suggested proper information dissemination, management and utilization as a way to increase poultry production in Nigeria. Age *et al* (2002) reported that if the country wants to increase substantially the protein level in its people's diet, then more dynamic and aggressive livestock policy, especially in the areas of livestock extension would need to be vigorously pursued. Olaniyiet *al* (2008) however found that major constraints to utilization of poultry production technology were poor access to capital and inadequate extension contact.

Despite the services rendered by the extension agents to help farmers satisfy their needs, interest, desires and basically to solve problems, poultry farmers are constrained with high cost of good quality feeds, prevalence of diseases, poor management practices, poor infrastructure, marketing facilities, and lack of credit etc. According to Agbamu (2005), he identified some of the problems militating against extension services in most developing counties as inadequacy and instability of funding, poor logistics support for field staff, ineffective agricultural research extension linkage, and disproportionate extension agent to farm family ratio. Others are lack of clientele participation in programme development, insufficient and inappropriate agro technologies for farmers, etc.

Extension service is seen as a process by which information, extension education, technical support service including micro-credit financing and supply of essential inputs are provided for

farmers in order to improve their farm and non farm income. It is a process of helping farmers to make their own decision by providing them a range of options in giving innovation from which they can choose and by helping them to develop insight into the consequences of each option. Proper care and management of birds are necessary to ensure increase in egg production or increase in weight gain. In recent years agricultural extension services played a significant role in improving poultry production in Nigeria through advisory service and adequate access to information on improved techniques of production (Madukwe, 2008). Realizing the potentials of this sector and the challenges in accessing extension services, the study sought to examine poultry farmers' access to extension training service in Ikpoba- Okha Local Government Area of Edo state with the following objectives: (i) Describe the socioeconomic characteristics of poultry farmers, (ii) Examine the enterprise characteristics of poultry farmers, (iii) Identify sources of information accessed on poultry production, (iv) Examine poultry farmers' access to public extension training service, and (v) Identify the constraints in accessing public extension training service

Material and Methods

Methodology

The study was carried out in Ikpoba-Okha Local Government Area (LGA) of Edo state, which has its headquarters situated in Idogo, and an area of 862 km² and a population of 371,106 (NPC, 2006). The LGA is divided into ten wards and eighty two communities. The study population consisted of all poultry farmers in Ikpoba-

Okha Local Government Area registered under Agricultural Development programme (ADP) in Edo South zone. A two-stage sampling procedure was used to select poultry farmers. In the first stage, a purposive sampling technique was used to select registered poultry farmers who had access to public extension training service. In the second stage, a total of 120 farmers (67%) were sampled from a list of 180 poultry farmers spread across the 8 cells in the Local Government Area.

Measurement of Variables

The independent variable for this study include poultry farmers socio-economic characteristics, enterprise characteristics, source of information assessed on poultry production, constraints in accessing public extension training service, while the dependent variable is access to public extension training service which was accepted as regularly accessed (once in two weeks, once in a month, once in two months), accessed (once in three months and once in six months) and not regularly accessed (once in a year and once in two years)

Results

As revealed in Table 1, a fairly large proportion (40.0%) of the respondents were below 40 years of age, 32.4% were within the age range of 41-50 years and 25.8% were above 50 years. A sizable proportion (68.3%) of the respondents were male. Majority of the respondents were married (75.8%) while 18.4% and 5.8% were single and divorced respectively. A sizable proportion (60.0%) had a household size of 5-8 and 34.2% had household size of between 1-4, while 2.5%, 2.5% have a household size of

between 9-12 and above 12 respectively. Only 5.0% had no formal education, respondents who had adult literacy were 2.5%, primary education (5%), secondary education (43.3%) and tertiary education (44.2%). A larger percentage (69.2%) had trading as their secondary occupation, 14.2% were artisans while others are engaged in other agricultural ventures.

A substantial proportion (68.3%) of the respondents had considerable years (11-15 years) of poultry farming experience (Table 2). A fairly large proportion (42.5%) of the respondents have a stock size of between 501-1000 birds, 28.3%, 15.8%, and 11.7% have a stock size of between 1-500, 1501-2000 and above 2000 birds respectively, while a larger proportion (91.0%) engaged the services of hired labour. More than half (53.33%) of the farmers reared layers alone for egg production, while 28.35% raised both broilers and layers and 18.33% raises broilers alone.

Information on poultry production was mainly accessed from radio (98.3%) and television (97.5%) (Table 3). Other media like agricultural bulletins was also appreciably accessed (86.7%) for information on poultry production, however, respondents expressed low access (40.8%) to information through extension agents. Data from Table 4 shows that the respondents had regular access to training on the use of improved poultry equipment (74.14%), also regularly accessed is training on effects of climate change and adaptation strategies (67.5%). However, respondents claimed irregular access to utilizing credit facilities (94.1%), and training on the use of farm records (93.3%). Training on storage of eggs (85.0%), feed formulation and

compounding (79.2%), and brooding of chicks (75.0%) were also not regularly accessed by the farmers.

Most of the respondents indicated that training services were not consistent with their needs ($\bar{x} = 2.97$). Also that inappropriate timing of training ($\bar{x} = 2.91$), and low ratio of trainers to poultry farmers ($\bar{x} = 2.74$) ranked highest as constraints in accessing public extension training service (Table 5). However, inadequate training aids ($\bar{x}=2.33$), and inadequate capital to execute training service offered ($\bar{x}=1.45$) were ranked low as constraints in accessing public extension training service. Inferential statistics in Table 6 reveal that significant relationship exist between sex ($\chi^2= 0.022$; $p = 0.042$), marital status ($\chi^2= 0.046$; $p = 0.028$), level of education ($\chi^2= 0.043$; $p = 0.026$), membership of poultry farmers association ($\chi^2= 0.000$; $p = 0.000$) and poultry farmers access to public extension training service. The correlation analysis reveals that a significant relationship exists between source of information accessed on poultry production ($r= 0.383$; $p = 0.000$) and poultry farmers access to public extension training service (Table 7.) Also, a significant relationship exists between constraints in accessing public extension training service ($r= -0.861$; $p = 0.000$) and poultry farmers access to public extension training service.

Table 1: Distribution of respondents by their socioeconomic characteristics

Variables	Frequency	Percentage	Mean
Age (years)			
40 and below	48	40.0	
41-50	41	34.2	
51-60	18	15.0	
61-70	13	10.8	56.27
Sex:			
Male	82	68.3	
Female	38	32.7	
Marital status			
Married	91	75.8	
Single	22	18.4	
Divorced	7	5.8	
Religion			
Christian	84	70.0	
Islam	26	21.7	
Traditional	10	8.3	
Household size			
1-4	41	34.2	
5-8	72	60	
9-12	4	3.3	
Above 12	3	2.5	5.08
Educational level			
No formal education	6	5.0	
Adult literacy	3	2.5	
Primary education	6	5.0	
Secondary education	52	43.3	
Tertiary education	53	44.2	
Secondary occupation			
Fish processing	5	4.2	
Trading	83	69.2	
Artisan	17	14.2	
Bee keeping	8	6.7	
Crop farming	6	5.0	
Fish production	1	0.8	
Income (₦)/Month			
1,000-20,000	85	70.8	
20,001-40,000	27	22.5	
40,001-60,000	4	3.3	
Above 60,000	4	3.3	19,980
Membership of PAN			
No	24	20	
Yes	96	80	

Source: Field survey, 2013.

Table 2: Distribution of respondents according to enterprise characteristics

Variables	Frequency	Percentage (%)	Mean
Years of poultry farming experience			
0-5	5	4.2	
6-10	15	12.5	
11-15	82	68.3	
16-20	18	15	12.8
Main source of labour			
Self	4	3.3	
Family members	25	20.8	
Hired labour	91	75.9	
Stock size			
1-500 birds	34	28.3	
501-1000 birds	51	42.5	
1001-1500 birds	2	1.7	
1501-2000 birds	19	15.8	
Above 2000 birds	14	11.7	921.3
Type of poultry bird reared			
Broilers	22	18.33	
Layers	64	53.33	
Layers and broilers	34	28.33	

Source: Field survey, 2013.

Table 3: Distribution of respondents sources of information assessed on poultry production

Sources	YES		NO	
	F	%	F	%
Extension agents	49	40.8	71	59.2
Radio	118	98.3	2	1.7
Television	117	97.5	3	2.5
Internet	22	18.3	98	81.7
Friends	18	15.0	102	85.0
Farmers association	45	37.5	75	62.2
Input sellers	81	67.5	39	32.5
NGOs	29	24.2	91	75.8
Newspaper	15	12.5	105	87.5
Agricultural bulletins	104	86.7	16	13.3
Veterinary personnel	102	85.0	18	15.0

Source: Field survey, 2013.

Table 4: Respondents access to public extension training service

Extension training service	Regularly Accessed		Accessed		Not regularly Accessed	
	F	%	F	%	F	%
The use of improved poultry equipment	89	74.2	10	8.3	21	17.5
Feed formulation and compounding	22	18.3	3	2.5	95	79.2
Effects of climate change adaptation strategy	81	67.5	–	–	39	32.5
Use of farm records	6	5.0	2	1.7	112	93.3
Accessing and utilizing credit facilities	2	1.7	5	4.2	113	94.1
Storage of eggs	15	12.5	3	2.5	102	85.0
Marketing of produce	21	17.5	11	9.2	88	73.3
Brooding of chicks	8	6.7	22	18.3	90	75
Prevention and control of pest and diseases	30	25	11	9.2	79	65.8
Identification and isolation of infected animals	30	25	9	7.5	81	67.5
Waste utilization and Proper waste disposal	28	23.3	8	6.7	84	70.0
Drug administration	33	27.5	3	2.5	84	70.0

Source: Field survey, 2013.

Table 5: Distribution of respondents according to constraints in accessing public extension training service

Constraints	Serious constraint		Minor constraint		Not a constraint		Weighted Mean	Rank
	F	%	F	%	F	%		
Irregular training schedules	75	62.5	34	28.3	11	9.2	2.53	7th
Long distance to training venues	82	68.3	34	28.3	4	3.3	2.68	6th
Inadequate training aids	72	60.0	16	13.3	32	26.7	2.33	9th
Training service not consistent with needs	118	98.3	1	0.8	1	0.8	2.97	1st
Poor notice of training schedules	89	74.2	29	24.2	2	1.7	2.72	4th
Inadequate information on improved technologies provided	94	78	19	15.8	7	5.8	2.72	4th
Inappropriate timing of training	113	94.2	4	3.3	3	2.5	2.91	2nd
Ineffective training service	73	60.8	16	13.3	31	25.8	2.35	8th
Inadequate capital to execute training service offered	6	5.0	43	35.8	71	59.2	1.45	10th
Low ratio of trainers to poultry farmers	89	74.2	31	25.8	–	–	2.74	3rd

Source: Field survey 2013.

Table 6: Relationship between socio-economic characteristics, enterprise characteristics and access to public extension training service

Variable	χ^2	r-value	p-value	Df	Decision
Sex	0.022		0.042	6	S
Marital status	0.046		0.028	18	S
Level of education	0.043		0.026	18	S
Membership of PFA	0.000		0.000	6	S
Religion	0.189		0.199	12	NS
Secondary occupation	0.801		0.736	30	NS
Age		0.009	0.955		NS
Income		0.138	0.373		NS
Years of experience		0.045	0.622		NS

S= Significant; NS= Not Significant;

Source: Field survey 2013.

Table 7: Relationship between sources of information accessed on poultry production, constraints in accessing training and access to public extension training service

Variables	r-value	P-value	Decision
Source of information on poultry production	0.383	0.000	S
Constraints in accessing training	-0.861	0.000	S

S: Significant

Source: Field survey 2013.

Discussion

The high populations of respondents below age 40 portends that a sizable proportion of the respondents are still in their productive age thus they can carry out activities associated with poultry production. This is in tandem with Akinbile (2007) that population within this age group are productive energetic and constitute active workforce. The finding of this study was in consonance with the study of Fawole (2006) and Oladeji (2011) who reported that majority of poultry farmers are males. The

respondent poultry farmers in this study, generally had medium sized families to cater for. Household size has a great role to play in family labour provision in the agricultural sector (Sule *et al.*, 2002.) Adebayo and Adeola (2005) and Fawole (2006) reported in their studies that majority of poultry farmers had secondary or postsecondary educational qualifications. The fact that many respondents had alternate occupations suggests that their engagement in other income generating activities will serve as buffer for the risks associated with the poultry venture. The

study further established that respondents make an average of ₦19,980 weekly, this reveals that poultry farmers in the study area make considerable income from this venture. This finding is consistent with the findings of Okoli *et al* (2004) and Apantaku (2006) who found that poultry farming was a profitable business and income level was quite modest. A substantial proportion of the respondents (80.0%) were members of the Poultry Association of Nigeria, this finding is contrary to the findings of Fawole (2006) and Oladeji (2011) who reported that membership of PAN was low in their studies.

The high proportion of farmers with 11-15 years experience in poultry farming suggests that they are not new in this venture and can ascertain the training service they are in need of and have received in the course of being engaged in this venture. This is in agreement with the findings of Oyeyinka and Raheem (2011) who reported that majority of poultry farmers in their studies had spent between 1-10 years in poultry farming. This suggests that an ample proportion of the respondents are engaged in commercial production hence personal and family labour will not suffice for the labour required. The fairly large stock sizes in the study area shows that the farmers practice commercial production and will be willing to receive public extension training service to enhance productivity. The large stock size also contributes to the reason why a high (91%) proportion of the farmers engage labour from outside sources.

The high production of layers can be attributed to the demand for eggs which is a relatively cheap and rich source of

protein especially for children. The rearing of broilers alone appeared to be less prominent than rearing of layers alone, probably because layers provide additional income from sales of culled birds. This finding agrees with the Laseinde (2002) who confirmed that rearing of broilers is seasonal and is usually targeted towards major festivities to provide chicken for the celebrating population.

The high dependence on radio for information on poultry production is believed to be so, because radios are portable, cheap to maintain, have a wide coverage with an array of stations its users can access for information. The reliance on television as a source of information, can be attributed to the transmission of agricultural programmes like documentaries, agricultural shows, agricultural exhibitions, agricultural research updates etc. via this medium, and all these have enhanced viewers appeal. This findings are corroborated by earlier findings of Adedokun, Olowu and Adekoya (2002) and Myhre and Flora (2000) who identified radio and television as major sources of information on health, agriculture and related activities. Oladeji (2011) also reported high use of radio and television for poultry information. The observed low access to information from extension agents may be largely attributed to the disproportionate extension agents to farm family ratio experienced in public extension which has led to the dwindling services provided by extension agents.

Conversely, significant proportions (87.5%) and (81.7%) did not access information from newspapers and the internet respectively, this is largely due to the poor media appeal accorded to agricultural information in national

newspapers by readers. The observed low patronage of the internet for information can be attributed to the lack of expertise and the cost of accessing information through this medium. This view is supported by Easdown and Starasts (2004) who reported that internet is not available and its value not appreciated, its cost is high and there is lack of skill and limited time to explore it for relevant information.

The relatively high access to training and climate change adaptation strategies contributes to keeping poultry farmers abreast with new and improved equipment developed to enhance production efficiency. The increasing impact of climate change on poultry production cannot be overemphasized hence the need to acquaint poultry farmers on adaptation and mitigation strategies to sustain production. This view is shared by Ozor *et al.*, (2010) that almost all sectors in agriculture (crop, livestock, fishery, etc.) depend on weather and climate whose variability have meant that rural farmers who implement their regular business plans risk total failure due to climate change effects. The training not regularly accessed by the respondents include accessing and utilizing credit facilities (94.1%), use of farm records (93.3%) also not regularly accessed is training on storage of eggs (85.0%), feed formulation and compounding (79.2%), and brooding of chicks (75.0%). Considerable expansion in business may not be experienced if poultry farmers are not exposed to the benefits attached to this service accessing and the utilization of credit facilities. Also it is opined that if poultry farmers are exposed to services such as use of farm records, they will take stock of the chain of production activities and make

informed decisions that will enhance production, the utilization of farm records affords farmers the opportunity to access credit from credit lending institutions.

Inappropriate timing of training and low ratio of trainers to poultry farmers were indicated as constraints in accessing public extension training service, it is be inferred that needs assessment was not carried out before the service was rendered, this view is also established by Santucci (2002) who reported that it is a concern that many farmers in Syria think that research stations are doing experiments on subjects that are not useful to them. The time fixed for such training may not suit the farmers because their job is time demanding and they also engage in other income generating activities and will need suitable time to effectively participate in training. It is expected that optimum delivery of training service can only be achieved when proportionate trainers to trainee ratio is adhered to.

From the relationship among sex, marital status, level of, membership of poultry farmers association and poultry farmers access to public extension training service, it can be inferred that male poultry farmers could create time and have access to training service than their female counterpart. Educated poultry farmers were willing to take advantage of the service provided and put it to use, this view is supported by Yahaya (2003) who posited that people with better education take advantage of new sources of information than those less educated. Been members of PAN, poultry farmers were not averse to the training service provided hence they had more access to the training service offered, this is largely because they are conversant with such training

service. As the poultry farmers information on poultry production increases they will be more willing to access public extension training service provided for them. It can also be inferred that the constraints faced by the respondents was not significant enough to limit their access to public extension training service, this may be attributed to the benefits derived from this service.

Conclusion and Recommendations

Majority of the respondents in Ikpoba-Okha are in their productive age, engaged in commercial production and earn substantial income from this venture. Radio, television and agricultural bulletins were sources of information accessed on poultry production. The use of improved poultry equipment and effects of climate change and adaptation strategies were training services regularly accessed while training service not consistent with needs and inappropriate timing of training was constraints in accessing public extension training service. Sex, marital status, level of education, membership of Poultry Association of Nigeria, source of information on poultry production and constraints in accessing training have influence on poultry farmers' access to public extension training service.

Based on the findings, the following recommendations are proposed:

- i. The use of agricultural bulletins in the sensitization of poultry farmers on their venture should be exploited.
- ii. Training on accessing and utilization of credit should be accorded priority to enable poultry farmers take advantage of the benefits accrued to it.

- iii. Periodic needs assessment should be carried out to do away with incongruity between poultry farmers needs and the training service offered.
- iv. Training on the utilization of farm records should be regularly offered to enable poultry farmers increase production efficiency.
- v. Extension agents and their clientele should reach a consensus on the schedule of training to enhance effectiveness.

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