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EXTENSION SERVICE NEEDS OF FISH FARMERS IN IJEBU-ODE LOCAL GOVERNMENT AREA OF OGUN STATE, NIGERIA

Ewebiyi, I.O. and O. S Olatunji,

Department of Agricultural Science,
Tai Solarin University of Education, Ijagun, Ogun State, Nigeria
email : tayoewebiyi@yahoo.com

Abstract

Low productivity of fish in Nigeria has been associated with the inability of extension services to reach and address immediate problems of fish farmers. This study investigated extension service needs of fish farmers in Ijebu-Ode LGA of Ogun State, Nigeria. A structured questionnaire was used to collect data from 120 purposively selected respondents from the study area. Data were analysed with the use of descriptive statistics such as (frequency count, percentages and mean) and inferential statistics, Pearson Product Moment Correlation to determine relationship between constraints and extension service needs among fish farmers in the study area. The findings showed that most of the respondents (79.2%) fell within the age range of 26-55 years. Majority (50.8%) were married with fairly large household size of six. Most (59.2%) of the respondents were males while (63.3%) had tertiary education and 60.8% were Christians. The study further revealed that most respondents (55.0%) used concrete pond for their fish farming and (85.0%) used local feeds to feed their fishes. Pond construction (52.5%), fish breeding (54.2%) and disease treatment and prevention (63.3%) are extension services that are mostly needed by the respondents. Extension services of the respondents was severely constrained by water scarcity (35.8%), high cost of feed (7.3%), microcredit procurement (45.0%) and genetic brood stockfish (35.8%). Significant relationship existed between constraints ($r = 0.317$, $p = 0.000$) faced by the respondents and their needed extension services. The level of extension service needs of the respondents was high among more than half (57.5%) inspite of being matured, experienced and highly educated. The study recommended that extension services providers should be proactive in their service delivery so that the needed services will be delivered to fish farmers at the appropriate or needed time. Government should try to ease stringent conditions often attached to credit facilities by the providers. Effective monitoring and supervision of extension agents must be carried out regularly. This will enhance effective delivery of extension services to fish farmers in the study area which in the long run may translate to high productivity, income and better standard of living.

Key Words: Extension services, fish, Farmers, Needs, IjebuOde, Nigeria

Introduction

Fisheries is an important sector in the Nigerian economy, as it is an important protein source for teaming Nigerian population, constituting about 60% of the total protein intake in adults especially in rural areas (Adekoya and Miller, 2004). According to Federal Department of Fisheries (FDF, 2008) cited by Adeogun and Egbodo (2016), the small scale fisheries account for over 80 percent of total fish production in Nigeria despite its atomistic and antiquated mode of production. Olaoye, Ashely-Dejo and Adekoya (2010) also submitted that fishery will continue to maintain its crucial position through its contribution to agriculture's share of Gross Domestic Product (GDP) in Nigeria. They further elaborated that aquaculture has the ability to contribute significantly to the local fish production in the country if improved aquaculture technologies were introduced and adopted by fish farmers. As population increases, the demand for fish and fish products increases, especially with its nutritional advantage over meat, however, there are numerous

challenges confronting fish farming practices, among which are poor management, inadequate supply of good quality fingerlings, lack of capital, high cost of feed, inadequate extension services and marketing of fish products. This calls for improved fish farming technologies and other extension services for improved production.

Asiabaka and Owens (2002) and Agwu (2004) posited that successful adoption of improved fishing techniques is predicated upon fish farmers acquiring the required knowledge and understanding of these techniques, a process most effectively accomplished by the fisheries extension services. A good extension services will deliver the desired technology for increased fish production when the effect or extension services on fish farmers is noticed by, through a change in knowledge and skill of the fish farmers which will enhance fish production, achieve food security and more income from increased productivity and improved standard of living. Agricultural extension is defined by Ekpere (1990) as the discipline which seeks to develop

professional competencies essential to the operation of a system of services which assist rural people through educational programmes of improved farming methods and techniques, increased production efficiency and income, level of living and achievement of a more fulfilling rural life. Information is an indispensable factor in agricultural practices and it is the basis of extension service delivery. Aderetiet *al.* (2006) defined information as data that have been put into a meaningful and useful context which is communicated to recipient who uses it to make decision. Fish farming information can be considered as all published or unpublished knowledge in all aspects of culture fish production. Aderetiet *al.* (2006) also stated that the quality of information rests solidly on three pillars which are accuracy, timelines and relevance. Accuracy implies that information is free from bias, timeliness means that recipients can get information when they need it, while relevance implies whether the piece of information specifically answer the user's question. An individual consciously or unconsciously engages information search in order to find appropriate information which can fill the information gap thereby regaining physiological and psychological balance. As important as fish is to household and national food security, it has been observed that a wide gap exists between its supply and demand (Oginni, 2004). Commenting on this dismal condition, Adeogun and Egbodo (2016) stated that to cater for this deficit in fish supply effective fishery extension service delivery occupies prominent position. The submission above therefore suggests the need for assessment of extension service needs of fish farmers in Ijebu Ode Local Government Area of Ogun State, Nigeria so as to improve appropriate attention and intervention required for improvement in fish production and food security not only in the study area but Ogun state at large.

Objectives of the Study

The main objective of the study is to assess extension service needs of fish farmers in Ijebu-Ode Local Government Area of Ogun State, Nigeria.

The specific objectives are to:

- i. to identify socio-economic characteristics of fish farmers in Ijebu-Ode LGA of Ogun State, Nigeria.
- ii. determine extension service needs of the respondents in the study area
- iii. identify the constraints faced by the fish farmers in the study area.

Hypothesis of the Study

Hypothesis: There is no significant relationship between constraints faced by the respondents and their extension service needs.

Methodology

Government Area of Ogun state, Nigeria. It is located in southwestern Nigeria. It is close to the A121 highway. Ijebu-Ode Local Government is located 110km by road northeast of Lagos. It is within 110km of the Atlantic Ocean in the eastern part of Ogun state and possesses a warm tropical climate. It has a population of 154,032 (NPC, 2006). It has coordinates of 6°49N and 3°55E. Ijebu-Ode Local Government is inhabited by the Ijebus, a sub-group of the Yoruba ethnic group who speaks the Ijebu dialect of Yoruba. It is the trade centre of a farming region where yam, cassava, grain, tobacco and cotton are grown. Ijebu-Ode Local Government has nine political wards and list of registered fish farmers from all the political wards was collected from the Department of agriculture of the local government area council secretariat, Agricultural Department, Ijebu-Ode. This list serves as sample frame of the study. All the registered 120 fish farmers on the list were purposively selected because they are not many and this constituted sample size of the study. Survey research design was employed and data were collected through a well structured questionnaire which were administered to the respondents. The information collected on socio-economic characteristics of respondents includes: age, sex, marital status, religion, education, fish farming experience, household size, pond types and types of feed used to feed their fishes. Other information collected includes extension service needs of the respondents and constraints faced by fish farmers in accessing needed extension services for their production. Descriptive statistics such as frequency counts, percentage, mean were used to analyse objectives (i) – (iii) of the study while Pearson Product Moment Correlation (PPMC) was used as inferential statistics at 0.05 significant level to determine the relationship between constraints and extension service needs among fish farmers in the study area.

Results and Discussion

Socio-economic characteristics of respondents

The result of analysis in Table 1 shows the distribution of fish farmers with respect to their socio-economic characteristics. More than a quarter (27.5%) were within the age bracket of 26-35 years and 36-45 years respectively. This age bracket is a productive age which portends better future for fish production. Also it is considered as an economically active age (Aphunu and Agwu, 2014). This implies that very young people are involved in fish farming in the study area. Sex plays a key role in fish farming and agriculture, in terms of property asset acquisition like fixed assets such as land and machines. Most respondents (59.2%) were male while (40.8%) were female. This result is in line with the findings of

Agbebi (2012) and Olaoye (2014) who carried out similar studies in Ekiti and Ogun states, Nigeria respectively. and reported same distribution of respondents' sex in fish farming. This indicates that fish farming in Ijebu Ode Local Government Area (LGA) of Ogun state is predominantly dominated by male. This result can also justifies by the assertion of Brummetet *al.* (2010) that fish farming activities are mostly dominated by men. According to Ekong (2003) marriage in our society is highly cherished. This fact was further established by the reports of Fakoya (2000) and Oladojaet *al.* (2008) who asserted that marriage confer some level of responsibility and commitment on individuals who are married. In this study, most respondents (50.8%) were married while very few 38.3%, 5.0% and 3.3% were single, widowed and separated respectively. The implication of this result is that majority of the fish farmers in the study area are married people involved in fish farming in Ijebu-Ode LGA and this may make them committed and continuously seek for extension services that will boost their productivity. It also indicates that fish farmers in the study area are matured and relatively position to have access to family labour on their farms.

The study also revealed that majority of the respondents (60.8%) were Christian, while more than a quarter (35.0%) were Muslims and (4.2%) were traditionalists. This result is contrary to the findings of Olaoye (2014) who reported that Muslims in Lagos and Ogun states, Nigeria find it interestingly in culturing fishes, thus they can easily adopt improved production technologies gotten from an extension agent to enhance their productivity. Concerning the educational level of the sampled fish farmers, in the study area, it was observed that most (63.3%) of the respondents were educated. This implies that fish farming in the study area was dominated by the educated class and mostly by those armed with high level of education. The high level of education of the respondents is expected to positively influence their information seeking behaviour on fish farming as well as work closely with extension agents. Education will also assists them in coding and decoding necessary information packaged in other languages on fish farming.

Furthermore, the findings of this study revealed that majority (57.5%) of the respondents had between 1-10 years fish farming experience, 35.0% and 7.5% had between 11-20years and 21 years and above experience respectively. This indicates that fish farmers in the study area are farmers of experience which is expected to assist them to utilize fishery extension services that are readily available and accessible to them effectively. This result compares favourably with the assertion of Olaoyeet *al.* (2010) that experience is the act of gaining knowledge through constant practices of skill

which brings about specialization. The sum of accumulated experience results in increase in output and is playing a key role in any farming enterprise. The result of this study shows that household size of fish farmers in the study area was relatively large with majority (50.0%) of them having 4-6 members, 43.3% had 1-3 household size and less than a quarter of the respondents (6.7%) had more than 6 members of household. It suggests that fish farmers would have more hands to use as farm labour. This result is in agreement with that of Ewebiyi (2015) who reported fairly large household size among rural farming households in Ipokia Local Government Area (LGA) of Ogun state, Nigeria.

Table 1: Socio-economic characteristics of the respondents

Variable	Frequency	Percentage
Sex		
Male	71	59.2
Female	49	40.8
Age		
≤ 25	6	5.0
26-35	33	27.5
36-45	33	27.5
46-55	29	24.2
> 55	19	15.8
Marital status		
Single	46	38.3
Married	61	50.8
Divorced	3	2.5
Widow	6	5.0
Separated	4	3.3
Religion		
Christianity	73	60.8
Islam	42	35.0
Traditional	5	4.2
Level of Education		
No formal education	4	3.3
Adult education	24	20.0
Primary school education	1	8
Secondary school education	15	12.5
Tertiary education	76	63.3
Fish farming experience		
> 11	69	57.5
11-20	42	35.0
21 and above	9	7.5
Household size		
1-3	52	43.3
4-6	60	50.0
>6	8	6.7

Source: Field survey, 2017

The result of this study further revealed that most respondents (55.0%) used concrete pond, less than half of them (30.0%) used earthen pond and few of them (15.0%) used plastic pond. This implies that fish farmers in the study area carried out their fishing activities in concrete pond than any other type of pond,

as shown in Figure 1. This result is in tandem with that of Adebessin (2011) who carried out similar study at Eriwe cooperative fish farm, Ijebu-Ode, Ogun state, Nigeria and reported that concrete ponds used mainly by the fish farmers.

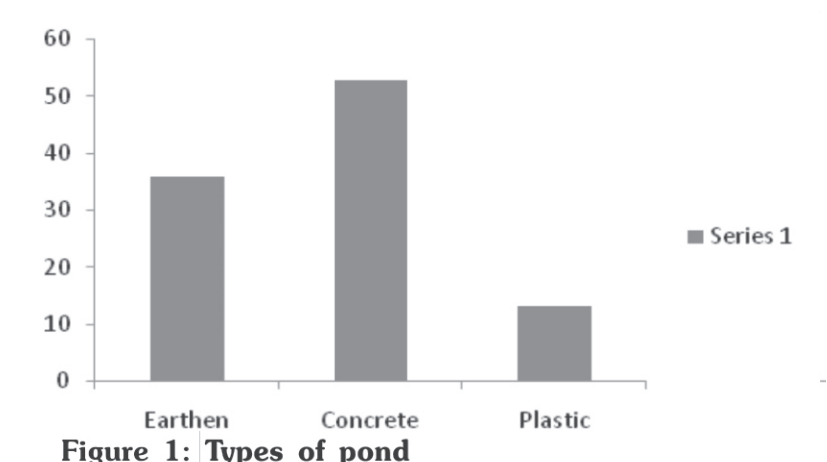


Figure 1: Types of pond

Source: Field Survey, 2017

Result in figure 2 showed that most respondents (85.0%) used local feed to feed their fishes. The result further revealed that less respondents compare to local feeds ((63.0%) and (65.0%) respectively feed their fishes with imported and pellet feed while capsulated feed (10.0%) and concentrated feed (5.0%) were used at a very low level by the fish farmers. This

may be as a result of less access and expensiveness of imported feed, thus, making farmers to rely mainly on local feeds. This result contradicts the findings of Ogunleye *et al.* (2015) who carried out a similar study in Osun state, Nigeria and reported that fish farmers used imported feeds to feed their fishes.

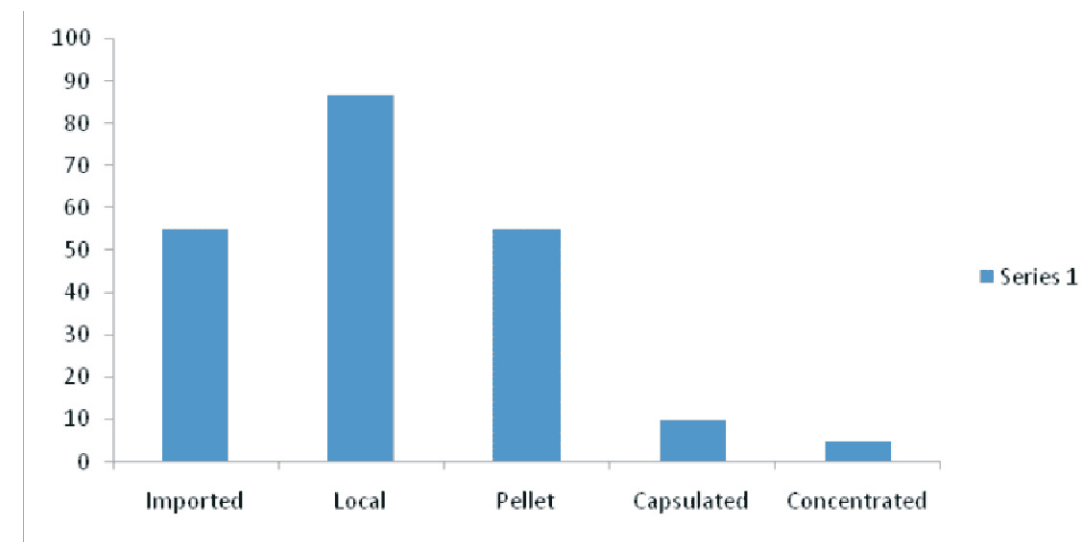


Figure 2: Types of feed

Source: Field Survey, 2017

Extension service needs of the respondents

The result in Table 2 revealed that most respondents 52.5% and 50.8% were highly in need of extension services in the area of pond construction and government assisted fund. The result further showed that 38.3% and 53.3% of fish farmers respectively in need of extension services to assist them in site selection for their fish farming and management of high quality water. This result implies that most respondents (63.3%) highly see

the need for effective extension services and of the opinion that access to all the aforementioned extension services can increase their productivity and income. This result is in line with that of Ofuokue *et al.* (2008) carried out in Yola North and South of Adamawa state, Nigeria and submitted that fish farmers need information on fish farming technologies, pond construction and management, breeds and spawning, processing storage and marketing.

Extension Service Needs	High	Moderate	Not a Need	Mean	Rank
Pond construction	52.5	41.7	5.8	1.73	1
Pond management	46.7	40.0	13.1	1.17	6
Fish breeding	54.2	35.0	10.8	1.14	9
Site selection	38.3	45.0	16.7	1.30	3
Hatchery management practices	50.8	40.0	9.2	1.14	9
Disease treatment and prevention	63.3	30.8	5.8	1.08	12
Water quality management	53.3	35.8	10.8	1.28	4
Record keeping	40.8	47.5	11.7	1.15	8
Government assistance / fund	50.8	33.3	15.8	1.38	2
Feed formation	43.3	45.8	10.8	1.12	11
Marketing outlet	46.7	45.0	8.3	1.26	5
Extension workstation	48.3	38.3	13.3	1.17	6

Source Field Survey, 2017

Respondents' constraints to extension service needs

Fish farming in the study area associated with some challenges. Table 3 shows that most respondents 73.3% and 55.0% observed high cost of feeds and lack of technical skills as severe constraints to fish farming. Also, 49.2%, 45.0%, 42.5%, 40.0% and 35.8% of the respondents respectively identified government policy, inability to procure micro-credit, illiteracy and water scarcity as severe constraints to fish farming. Also poaching, inadequate contact with extension agents, fingerlings procurement, the incidence of diseases and pests, inadequate capital,

poor genetic breeding stock and lack of technical skill were identified as mild constraints by the farmers. This result was corroborated by Adefaluet *al.* (2013) who carried out similar studies in Ilorin metropolis, Kwara State and Ogunlade (2007) in Osun state, Nigeria and identified inadequate provision of information, incidence of pest and diseases, lack of technical skill, high cost of fish feeds, government policy and poaching as severe constraints militating against fish farmers' productivity.

Table 3: Distribution of respondents according to constraints militating against extension service needs.

Constraints	Very severe	Mild constraints	Not a constraint	Mean	Rank
High cost of feed	73.3	25.8	0.8	1.47	2
Poaching	26.7	63.3	10.0	1.33	11
Fingerling procurements	34.2	45.8	20.0	1.43	4
Incidence of disease/pest	42.5	45.0	12.5	1.22	15
Poor water quality in farm area	34.2	45.8	20.0	1.42	7
Water scarcity	35.8	36.7	27.5	1.58	1
Farm micro credit procurement	45.0	38.3	16.7	1.43	4
Inability to expand pond size	35.8	43.3	20.8	1.29	14
Inadequate capital	55.0	28.3	16.7	1.33	11
Lack of technical skills	28.3	55.0	16.7	1.33	11
Government policy	49.2	27.5	23.3	1.38	8
High rate of illiteracy	40.0	36.7	40.0	1.35	9
Poor genetic broodstock fish	35.0	40.0	25.0	1.47	2
Inadequate contact to extension agents	21.7	57.5	20.8	1.33	11
Marketing of fingerlings/juveniles	20.8	48.3	30.8	1.43	4

Source: Field Survey, 2017

Result of correlation between fish farmers' constraints and their extension service needs

Table 4 shows that there is significant relationship between constraints ($r = 0.317$, $p = 0.000$) faced by the respondents and their extension service needs.

This implies that constraints faced by the farmers in

the study area is an indication of the urgent need for extension services in fish farming in the study area.

Table 4: Relationship between constraints and respondents' extension service needs

Variable	r	P	Decision
Constraints	0.317	0.000	Significant

Source: Field survey, 2017

Conclusion and Recommendations

The study investigated the extension needs of fish farmers in Ijebu-Ode LGA, Ogun state, using 120 fish farmers purposively selected from the state. The study shows that respondents were predominantly married with a high level of education and farming experiences. They were in their active productive years with a fairly large household size of 4-6 persons. The high cost of feeds, inadequate capital and credit facilities, paper policy of government on fishery agriculture, the incidence of pest and diseases as well as the outbreak of natural disaster such as flooding were severe constraints militating against accessibility of respondents to extension service needs. There was a significant relationship between the constraints faced by the respondents and their extension service needs

Based on these findings, the following recommendations were made:

- I. Extension services providers should be proactive in their services delivery to fish farmers in the most important areas of their need.
- ii. The government should see to the stringent conditions often attached to credit facilities by the providers especially the banks and other credit agencies so that enough capital will be made available for fish farmers in the study area.
- iii. Adequate extension personnels should be employed by the government and non-governmental organisations (NGOs). This will go a long way in making needed extension services available for the fish farmers in the study area.
- iv. Effective monitoring and supervision of extension agents must be carried out regularly for effective extension delivery services.

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