

Perceived Importance of Agricultural Information Among Fish Farmers In Edo State, Nigeria

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Abstract

The study focused on the perceived agricultural information among fish farmers in Edo State, Nigeria. The specific objective were to; examine the socio-economic characteristics of fish farmers; identify their source of agricultural information; ascertain agricultural information needed; ascertain respondents' perceived importance of specific agricultural information; and identify the constraints encountered by respondents in sourcing agricultural information. Data were collected from one hundred and fifty (150) respondents across the 3 agricultural zones in Edo State with the use of structured questionnaire validated by expert judgment and interview schedule. The data were analyzed with descriptive statistics, Pearson Product Moment correlation (PPMC) was used to test the relationship that exist between the socio-economic characteristics and perception of the respondents on the importance of agricultural information. The result showed that majority (87.3%) of the respondents were male and are 30 years and below with a mean age of 28 years. Age ($r = -0.222, p < 0.01$), Sex ($r = 0.158, p > 0.05$), were significantly related to respondents perception of agricultural information on fish farming/production. The study concludes that fish farmers in Edo State perceived information as important and a factor of production and they are willing to pay for this information in order to improve their fish farming skills and increase fish production. The study thus recommends that Government should provide means of encouraging timely information dissemination to farmers by extension agents who are saddled with the responsibility of disseminating useful information to farmers on fish farming technologies in order to improve and increase fish production in Edo State.

Key Words: Fish Farming, Agricultural Information, Fish Farmers, Perceived importance

INTRODUCTION

Fish farming is the fastest-growing animal based food production sector, particularly in the developed countries-mainly from China and other Asian countries (Green Facts, 2004). In Africa, the governments of the continent under the tutelage of the Africa Union, have identified the great potentials of fish farming and are determined to encourage private sector investment (NEPAD, 2005). The potential exists for fish farming to make difference as shown by pilot projects, although these pilot projects fail when they are scaled up (New Agriculturists, 2005).

In Africa, the fish production, processing and trade, have become a leading export commodity for Africa with an annual export value of \$2.7 billion (U.S.) (New Partnership for African Development, 2005). Prior to the 1990s, aquaculture development in Nigeria was driven by socio-economic objectives including, nutrition improvement of rural communities, generation of additional family income, creation of employment and diversification of income generating activities; and was promoted by International Organization and agencies and the government at Federal, State and Local Government levels. Nigeria has over 14 million hectares of inland water surface, out of which about 1.75 million are available and suitable

for aquaculture (FAO, 2006).

In Nigeria, aquaculture is predominantly an extensive land based system, practiced at subsistence levels in fresh waters (Anyawu-Akeredolu, 2005). Commercial farming is yet to become widespread (Fagbenro, 2005). At present, most fish farmers operate small-scale farms ranging from homestead concrete pond (25-40 meters) to small earthen ponds (0.0-0.2 hectares). The industry produced over 85,000 tons of fish in 2007 (FDF, 2008). According to Akegbejo-Samson (1997) while human population with growth rate of about 4-5% and livestock production is rising at a rate of 2-3%. This shows that there is wide gap between supply and demand of animal protein. The consequence of the sceneries is the soaring cost of animal protein. This has made it almost impossible for the poor Nigerian to meet their animal protein needs. Despite the abundance fisheries resources and the relatively high consumption of fish in Nigeria; which has been considered the largest consumer of fish products in Africa (FDF, 2005; 2008), its domestic output of 0.62 million metric tons still falls short of demand of 2.66 million metric tons (FDF, 2008). A supply deficit of 2.04 million metric tons is required to meet the ever increasing demand for fish in Nigeria.

Although there is a paucity of information on the status of the fisheries industry and the role it plays, it is estimated that Africa produced 7.3million tons in 2003, and 4.8million tons was from marine fisheries (FAO, 2005). Aquaculture, was introduced to Nigeria in the early 1950s and fish production through aquaculture has risen steadily from few hundred kilograms to over 45,000 metric tons in 2013. The demand and supply of fish is augmented by massive importation of frozen fish and consequently large importer of fish with official records indicating 681,000 metric tons while export in 2008 was 0.065million metric tons and valued at US\$40.5 million. The local supply consist of productions from the artisanal (89.5%-85.5%), industrial(5%-2.5%) and aquaculture (5.5%-12%) sub-sectors (FDF,2009). However, it has been shown that Nigeria can substitutes fish importation with domestic production to create jobs, reduce poverty in rural and peri-urban areas where 70% of the effect on the exchange earnings of the national economy as well as caput consumption 9.68kg/head/year (FDF, 2008). The species imported are mainly herring, mackerel and stock fish to offset the deficit of 2.04million metric tons. Quantity of fish imported rose from 557,884.00 tons to 739,666.12 tons between 2000 and 2007. The amount of foreign exchange on fish importation also rose from US\$

241,066.54 million in 2000 to US\$594,373.69 million in 2007. According to FAO (2006), fish supply in Nigeria is 400,000 tons in comparison to 800,000 tons of demand hence there is need to close the gap between fish demand and fish supply in the country including Edo State.

The role of timely, relevant and accurate information in any human endeavour cannot be overemphasized. Kantunmaya (1992) opined that information is power which every individual in all societies should have access to. Access to information and improved communication is a critical prerequisite for sustainable development. This is even truer in the field of agriculture where the system that form the entity are stratified into a highly educated technology generation system and mass of technology utilization system and farmers who have no formal education (Adeniji, 1997). It is therefore imperative for relevant stakeholders to provide adequate, relevant and up-to-date information in order to transform agricultural production in many developing countries (Banmeke and Ajayi, 2008). However, transfer of technologies cannot occur unless the farmer attaches the correct and intending meaning to the received information (Matthews-Njoku and Asiabaka,2003). Farmers should form the right perceptions of and attach the right value to the information they receive from the change agents.

Research Questions

This study was to answer the following research questions

What are the socio-economic characteristics of fish farmers in Edo State?

What are respondents' sources of agricultural information?

What agricultural information is needed by respondents?

What is their perceived importance of specific fish production information?

What constraints do respondents encounter in sourcing information?

Objective of the Study

The broad objective of the study was to examine the perception of agricultural information among fish farmers in Edo State, Nigeria. The specific objectives are to:

examine the socio-economic characteristics of fish farmers in Edo State;

identify their source of agricultural information;

ascertain agricultural information needed;

ascertain respondents' perceived importance of specific agricultural information; and

identify the constraints encountered by respondents in sourcing agricultural information

Methodology

The study was conducted in Edo State, Nigeria. Edo State is located in the south-south geo-political zone of Nigeria. The State has 18Local Government Areas with the capital in Benin City. The State has a land mass of 19,794 square kilometer and geographically located between 05 44N to 07 03N latitude and 054E to 045E longitudes. The State is divided into three (3)

agricultural zones namely; Edo South, Edo Central and Edo North. Activities of fish farming are predominant in the three agricultural zones of the State. A Simple random sampling technique was used to select 50 fish farmers from 3 communities each from the three (3) agricultural zones in Edo State, namely; Edo South, Edo Central and Edo North making a total of 150 fish farmers in the study area. Data was collected with the aid of

structured questionnaire validated by expert judgment and was analyzed using descriptive statistics such as frequency count, percentages and mean. Inferential Statistics used for data analysis was Pearson Product Moment Correlation (PPMC)

Results and Discussion

Result in Table 1 shows the socio-economic characteristics of the respondents in the study area. The result showed that majority (87.3%) of the respondents were male. This result indicates that fish production is dominated by male in the study area. This may be due to the involvement of more males in fish production as noted by Ogunbameru, Ali, and Bala, (2012); Okoedo-Okojie and Edobor, (2013). The Table also showed that most (78.0%) of the respondents were less than 30 years an indication that the respondents were young, energetic and zealous in sourcing agricultural information that will help in boosting fish production in the study area. Farmers in the study area had formal education with majority (58.0%) having primary school education. Being educated may enhance their perception, knowledge, and awareness of fish farming/production hence the need to source for more quality information on fish farming. Majority (53.3%) of the farmers were single, this is expected as the farmers in the study area are relatively young, the Table also showed that higher proportion (59.3%) of the respondents had about 4-6 ponds. This result indicates that fishfarmers in the study area having more than one pond may require more information for improved fish farming practices in the study area. The result also indicate that higher proportion (50%) of the respondents used hired labour in their farms. This may be due to the drudgery nature of maintenance of fish ponds. Result in Table 2 showed that

to determine the relationship that exists between the socio-economic characteristics and perception of the respondents on the importance of agricultural information.

respondents major source of agricultural information was newspaper (78.7%), followed by Television (63.3%), E-mail contact (59.3%) and Radio (58.0%). This result is expected as majority of the respondents are educated, and being educated will enhance information sourcing on proven technologies on fisheries from different information source. Table 3 showed that for most (70.0%) of the respondents, fertilizer application is an important agricultural information to increase fish production, yet other information on proven fish production technologies are important e.g pond preparation (67.3%), pest and disease control (65.3%). This implies that information is important in fish farming in order to increase fish production. Table 4 showed that unavailability of extension workers (Mean=3.29), and lack of fund/finance (Mean=3.17) are the major constraints of fish farmers. Other constraints in accessing agricultural information were also seen as serious such as poorly trained extension workers (Mean=3.15), urbanization (mean=3.13) and gender roles (Mean=3.12). This implies that these constraints if not adequately addressed could limit fish production to a minimal level. According to Aina (2007), food security is a major focus of globalization and in order to produce for increase food productivity, there is the need for the provision of regular information to farmers in a format that will be comprehensible to them. This will go a long way in addressing these constraints.

Table 1: Distribution of respondents according to their socio-economic characteristics

Characteristics		Frequency	Percentage	Mean
Age	≤30	110	78.0	28
	31-40	40	22.0	
Sex	Female	21	12.5	
	Male	129	87.3	
Marital Status	Married	49	32.7	
	Single	80	53.3	
	Divorce	21	14.0	
Household Size	1-5	40	28.2	8
	6-10	86	58.8	
	>10	24	13.0	
Education	Primary	10	58.0	
	Secondary	29	14.9	
	OND/Diploma	37	10.0	
	HND/Bsc	74	12.0	
Pond size	1-3	58	38.7	4
	4-6	89	59.3	
	7-9	3	2.0	
	Communal	25	15.0	
	Hired	80	50.0	
Membership of association	Yes	56	34.0	
	No	94	66.0	

Source: FieldSurvey2017

Table 2: Distribution of Respondents by Source of Agricultural Information

Information source	Frequency	Percentage
Radio	87	58.0
Newspaper	118	78.7
Television	95	63.3
Extension agents	80	53.3
Interviews	47	31.3
E-mail contact	89	59.3
Community meetings	43	28.7
Video-tape	16	10.7
Audio tape	31	20.7
Magazines	18	12.0
Debate	78	52.0
Discussions	24	16.0
Handbills/posters	34	22.7
Books	57	38.0

Source: FieldSurvey2017

Table 3: Distribution of respondents (Fish farmers) by importance of agricultural information to increase production

Information	Frequency	Percentage
Fertilizer application	105	70.0
Pond preparation	101	67.3
Pest and disease control	98	65.3
Fish feed preparation with planting ingredient	96	64.0
Fish feed preparation with animal ingredient	101	67.3
Postharvest handling/preservation	94	62.7
Cropping/harvesting	93	62.0
Fish farmer cooperative	87	58.0
Pond management	86	57.0
Improved fingerlings/spawning	67	44.7
Market information	61	40.7

Source : Field Survey, 2017***Multiple responses****Table 4: Constraints to Accessing Agricultural Information**

Information source	Mean	SD
Lack of fund/finance	3.17*	0.8
Illiteracy	2.97*	1.0
Poorly trained extension workers	3.15*	0.9
Urbanization	3.13*	0.9
Gender roles	3.12*	0.9
Low self esteem	3.05*	0.8
Unavailability of extension workers	3.29*	0.9

Source: Field survey, 2017***Serious (Mean= > 2.50)****Test of Hypothesis****Relationship between Socio-Economic Characteristics and Perception of Agricultural Information**

Findings on the correlation between these two variables are shown in Table 5 and discussed as follows;

Relationship between fish farmers' socio-economic characteristics and perception of agricultural information. Age ($r = -0.222$, $p < 0.01$) was significantly related to respondents' perception of agricultural information. The negative correlation showed that younger farmers have a higher perception of agricultural information than older farmers. This could be due to the fact that they are young and have more time and energy in sourcing for agricultural information. Sex ($r = 0.158$, $p > 0.05$) was significantly related to

respondents' perception of agricultural information. The positive correlation showed that male fisher folks have a higher perception of agricultural information than females; this finding agrees with Onugu (2002) that male extension more with female farmers. Household size ($r = -0.029$, $p > 0.05$) was not significantly related to respondents' perception of importance of agricultural information. The negative correlation showed that respondents with smaller household sizes have a higher perception of agricultural information than those with larger household sizes. The implication therefore is that respondents with smaller household size usually have smaller responsibilities and as a result better access to agricultural information.

Education ($r = -0.029, p > 0.05$), was not significantly related to respondents perception of agricultural information. The negative correlation showed that respondents with lower education have a higher perception of agricultural information than those with higher education.

Lower education could make respondents prone to accepting any agricultural information that comes their way without proper consideration of the relevance of such information to their present situation and also being educated may be able to value agricultural information

Table 5: Relationship between respondents' socio-economic characteristics and perception of the importance agricultural information

Socio-economic variables	Importance of agricultural information (Fish farmers)	
	Correlation coefficient (r)	Probability Level
Age	-0.222**	0.400
Sex	0.158	0.033
Household size	-0.029	0.000
Education	-0.030	0.004
Farm size (ha)	-0.102	0.219
Membership Association	-0.003	0.534

Source: Computed from field survey, 2017 ** Correlation is significant at the 0.05 level (2- tailed)

Conclusion and Recommendation

Based on the findings highlighted above, the study concludes that fish farmers in Edo State perceived information as important factor of production. The study thus recommends that, credit facilities should be made available by Government to fishfarmers in the study area in other to increase fish production as lack of funds poses higher constraints to farmers in Edo State also

Government should provide means of encouraging timely information dissemination to farmers by extension agents who are saddled with the responsibility of disseminating useful information to farmers on fish farming technologies in order to improve and increase fish production and also farmers to joining cooperatives units for the purpose of self-help.

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