

Information Accessibility among Fish Farmers in Girei, Yola North and Yola South Local Government Areas, Adamawa State, Nigeria

¹Barguma K, ²A.A Ndaghu

^{1,2} Department of Agric Econs and Extension, School of Agriculture, MAUTECH, P.M.B 2027, YOLA Adamawa State Nigeria

¹ kitbarguma@gmail.com, ² mrndaghu@yahoo.com

ABSTRACT

The study investigated the information accessibility among Fish Farmers in Girei, Yola North and Yola South Local Government Areas, Adamawa State, Nigeria. Fish Farmers have high needs of information but the accessibility is low in the face of the constraints they faced. The study described the socio economic characteristics of respondents, determined their information needs and assessed the fish production information available to the respondents. Data for the study were generated through the administration of questionnaires to 48 respondents who were selected by the use of a snowball technique. The data was analyzed using descriptive statistics such as mean, percentage and inferential statistics such as Chi – square and Pearson Product Moment Correlation (PPMC) tests which were used to test the hypotheses at 0.05 level of significance. The result revealed that, 37.5% of the respondents were between the age range of 41 – 50 years that is 58% of the respondents were above the mean age which was 45 years. Majority (83.3%) of the respondents were male and 75% were married with 72.9% of them having acquired one form of formal education or another. Civil service was their major (50%) primary occupation and 56.2% of them had household size of 6 – 10 people with 79.1% having less than 10 years of experience in fish farming. Majority (83.3%) of the respondents had high information needs on fish farming. The sources of information available to the respondents on daily basis were friends/fellow farmers (81.3%), family members (56.2%), GSM (52.1%), radio (47.1%) and television (31.2%). PPMC revealed that only educational attainment had significant relationship with the respondents' information accessibility on fish farming. The study recommended that extension agents should provide adequate information on fish farming to fish farmers as their information need in that regard is high.

Keywords: *Information accessibility, economics, fish farming*

1. INTRODUCTION

In most developing countries, agriculture is the most important economic activity which provides food, employment, foreign exchange and raw materials for industries. Agriculture provides livelihood for at least 53% of the economically active population of Africa (Ajala and Ononogbo, 2008; Mohammed *et al.*, 2009).

Among the different aspects of agricultural practices is fish farming, which has gained prominence in Nigeria since the advent of the fourth democratic republic in 1999. Fish provides cheaper source of protein (Moses, 1983), it makes a vital contribution to the food and nutritional security of about 200 million Africans and provides income for over 10 million people, consisting mostly small scale fish farmers and entrepreneurs who are engaged in fish production (World Fish Centre, 2005). In agriculture, the role of information in enhancing agricultural development cannot be over emphasized. Information is vital for increasing food production and improving marketing and distribution strategies (Oladele, 2006). According to Aina *et al.* (1995), information has a vital role to play in improving and sustaining agricultural production of any nation. Information as a factor of production is necessary to increase productivity. It has been established that poverty in Nigeria has a strong linkage with agricultural stagnation due to decline in productivity as a result of low use of information and improved technologies (FAO, 1999). The enhancement of local fish production can be achieved by improving capacity in terms of enhancing access to information which can be achieved through enhanced information

seeking behavior by the use of information communication technologies (Akinbile and Alabi, 2010).

Information can be said to be knowledge based on facts which arises as a result of generated data or experience.

Aina (1995) defined information as the data for decision making. It is a resource that must be acquired and used in order to make an informed decision. Those who possess appropriate and timely information are likely to make a more rational decision than those without information.

Fish farmers need information on fish farming technologies such as pond construction and management, breeds and spawning, processing, storage and marketing (Ofuoku *et al.*, 2008). Access to information is very essential for increased productivity by fish farmers, according to Ekoja (2003) agricultural information is available through the National Agricultural Extension and Research Liaison Services (NAERLS) and its allied information centers. In the opinion of Adomi *et al.*, 2003, other sources of Agricultural information are the various Agricultural research institutes and Schools of Agriculture in the Universities as well as the Federal and State Ministries of Agriculture. Also, Oladele (2006) revealed the fact that literature is replete with low access to Agricultural information as the major challenge experienced by fish farmers in Nigeria. This constraint has persisted in spite of the great advances in information technologies and dissemination.

2. MATERIALS AND METHODS

2.1 The Study Area

The study was conducted in three Local Government Areas of Adamawa State namely: Girei, Yola North and Yola South. The study area lies between Latitude 7° and 11° North of the Equator and between Longitude 11° and 14°E of the GMT (Adebayo, 1999). The wet season commences in April and ends in late October, while the dry season starts in November and ends in April. The mean annual rainfall of the area is about 1000mm (Adebayo, 1999). The study area falls within the Northern Guinea Savannah Zone with land mass of 2,310.05km² and a population of 522,849 (NPC, 2006). The area is bounded by Fufore, Song and Demsa Local Government areas to the south and east, to the north and to west respectively.

Multi – stage sampling was applied in the study. Three Local government areas (Girei, Yola North and Yola south) were purposively selected; this selection was done because of the preponderance of fish farmers around the area compared to other parts of the state. Snowball technique was used where the respondents from the purposively selected L.G.As were used to identify other respondents because of the difficulty in identifying fish farms and fish farmers. The questionnaire was administered to 60 fish farmers but only 48 questionnaires were completed and returned properly which formed the basis for the analysis in this study.

3. RESULTS AND DISCUSSION

The age distribution of the respondents as presented in the Table 4.1 revealed that 37.5% of the respondents were between 41 – 50 years of age, The sex group of the farmers indicate that 83.3% of the respondents were male, while 16.7% were female. This indicates that men dominate fish farming than women in the study area. This finding is in tandem with Ofuoku *et al.* (2008) who reported that the male dominance of this source of livelihood implies the laborious nature of fish farming operations right from pond construction to management, which their female counterparts cannot easily undertake and cope with. The marital status of the respondents indicates that majority (75.0%) of the respondents were married, points out that 33.3% of the respondents had NCE/Diploma, 22.9% of them had B.Sc/HND, 16.7% had M.sc, 14.6% had senior secondary school education, 8.3% had no formal education and 4.2% had primary education only. This implies that 72.9% of the respondents had one form of tertiary education or another, only 8.3% were not formally educated. The mean years of farming experience is seven years. While 79.1% of the respondents practiced fish farming for less than 10 years, 20.9% of them had more than 10 years farming experience. This connotes that fish farming diffused very slowly among the farmers in Girei, Yola North and Yola South Local Government areas of Adamawa state. The situation is attributed to the presence of many water sources such as rivers and streams and natural ponds that mainly supplied fish for the people of the area.

Table 1: Personal characteristics of the respondents

Variable	Frequency	Percentage
Age (Years)		
20 – 30	2	4.1
31 – 40	15	31.3
41 – 50	18	37.5
51 – 60	10	20.8
60 and Above	3	6.3
Total	48	100
Mean = 45 Years		
Sex		
Male	40	83.3
Female	8	16.7
Total	48	100
Marital Status		
Single	7	14.6
Married	36	75.0
Widowed	4	8.3
Divorced	1	2.1
Total	48	100
Household size		
1 – 5	14	29.2
6 – 10	27	56.2
11 and above	7	14.6
Total	48	100
Mean = 7 People		
Occupation		
Farming	17	35.4
Trading	5	10.4
Civil Servant	24	50.0
Artisans	2	4.2
Total	48	100
Educational Attainment		
No formal Education	4	8.3
First School Leaving Certificate	2	4.2
Senior Secondary School Certificate	7	14.6
Diploma/NCE	16	33.3
B.Sc./HND	11	22.9
M.Sc.	8	16.7
Total	48	100
Farming Experience		
< 5 Years	22	45.8
6 – 10 Years	16	33.3
11 – 15 Years	8	16.7
16 – 20 Years	1	2.1
>20 Years	1	2.1
Total	48	100

Source: Field survey, 2012

3.1 Fish Farmer's Information Needs

Respondents need information in almost all the areas presented to them. However, the respondents had high need for information in the areas of suitable land (72.9%), hired labor (66.6%), good water quality (64.6%), waste drainage (62.5%), fish feeding (60.4%),

<http://www.ejournalofscience.org>

fish preservation and processing (60.4%), fish harvesting (56.3%), feed storage (56.3%) and credit facilities (56.3%). It is a pressing need among fish farmers. It is also in line with Ofuoku, *et al.* (2008) who posited that fish farmers need information on fish farming technologies, construction and management, breeds and

spawning, processing, storage and marketing. The reason has been the urge to improve and increase yield as asserted by Margaret *et al.* (2010). Many of the fish farmers need information about marketing of their agricultural produce for better profits (Luoga, 2010).

Table 2: Fish Farmers' Information Needs

Information needs	High	Low
Production	F %	F %
Pond Construction	24 50.0	9 18.7
Fish Fingerling types/ sources	15 31.3	17 35.4
Feed types and sources	18 37.5	11 22.9
Fish disease prevention	22 45.8	12 25.0
Fish disease treatment	21 43.8	12 25.0
Fish growth	16 33.3	8 16.7
Fish harvesting	27 56.3	10 20.8
Fish preservation and processing	29 60.4	14 29.2
Inputs		
Suitable Land	35 72.9	7 14.5
Good Water Quality	31 64.6	9 18.7
Credit Facilities	27 56.3	14 29.1
Hired Labor	32 66.6	3 6.3
Management		
Pond environment management	20 41.7	21 43.7
Fish feeding	29 60.4	10 20.8
Equipment repair	23 47.9	12 25.0
Feed Storage	27 56.3	13 27.1
Waste Drainage	30 62.5	9 18.8
Marketing		
Fish processing	22 45.8	18 37.5
Fish storage	26 54.2	17 35.4
Fish marketing	22 45.8	18 37.5
X = 14.25		

Source: Field Survey 2012

3.2 Respondents' Access to Information

Table 3 revealed that most (62.5%) of the respondents had low access to information on temperature, feed type and source (58.3%), production management (58.3%), disease control (50.0%) and pond management (47.9%). Other areas where they had low access to information were sources for improved fingerling (47.9%), community development project (47.9%), current market prices (47.9%), fish harvesting

(45.8%) and environmental protection (41.6%). This study shows that fish farmers have low or no access to fish farming information. This could probably be due to high cost of information and fear of accessing the information by the community as asserted by Williamson (1998). This also corroborates the findings of Peter (2012) that, various factors are known to hinder information accessibility.

Table 3: Respondents' Access to information

Access to Information	High Access	Low Access	No Access
Technical Information	F %	F %	F %
Disease control	15 31.2	24 50.0	9 18.8
Temperature	12 25.0	30 62.5	6 12.5
Feed Types and Sources	16 33.3	28 58.3	4 8.3
Pond Management	17 35.4	23 47.9	8 16.7
Improved Fingerlings	15 31.3	23 47.9	10 20.8
Fish production/Management	13 27.1	28 58.3	7 14.6
Harvesting	20 41.7	22 45.8	6 12.5
Economic Information			
Current Market Prices	15 31.3	23 47.9	10 20.8

http://www.ejournalofscience.org

Market Location	14 29.2	19 39.5	15 31.3
Agric. Insurance	12 25.0	15 31.3	21 43.7
Budgeting Methods	14 29.2	14 29.2	20 41.7
Legal Information			
Land Dispute Settlement	14 29.2	14 29.2	20 41.6
Government regulation	11 22.9	17 35.4	20 41.7
Environmental Protection	14 29.2	20 41.6	14 29.2
Social Information			
Sources of assistance/grants	12 25.0	15 31.3	21 43.7
Self-help project	17 35.4	11 22.9	20 41.7
Community development project	4 8.3	23 47.9	21 43.8
$\bar{X} = 17.06$			

Source: Field survey, 2012

3.3 Respondents' Sources of Information

Table 4: shows that, most (81.3%) of the respondents sourced information from friends/fellow farmers, (56.2%) family members, (52.1%) GSM, radio (47.9%) and television (31.2%) of them from daily basis. Also 41.7% of the respondents accessed information monthly from farmers' association and 22.9% of them

accessed information on weekly basis from the newspapers. In the same vein 33.3% of them received information once in several months from workshop/seminars. Majority (45.8%) of the respondents never accessed information from internet, agricultural extension agents (39.6%) and agricultural extension bulletin (41.7%).

Table 4: Respondents' Sources of information

Sources of Information	Daily		Weekly		Fortnightly		Monthly		Once in several Months		Never	
	F	%	F	%	F	%	F	%	F	%	F	%
Extension agents	-	-	5	10.4	1	2.1	10	20.8	13	27.1	19	39.6
Farmers' Associations	4	8.3	5	10.4	5	10.4	20	41.7	10	20.8	4	8.3
Family Members	27	56.2	1	2.1	3	6.3	3	6.3	6	12.5	8	16.6
Fellow Farmers/ Friends	39	81.3	8	16.4	11	22.9	12	25.0	16	33.3	10	20.8
Internet	1	2.1	2	4.2	5	10.4	8	16.7	10	20.8	22	45.8
Radio	23	47.9	5	10.4	3	6.3	3	6.3	9	18.7	5	10.4
Television broadcast	15	31.2	8	16.7	5	10.4	7	14.6	7	14.6	6	12.5
Bulletin/Posters	-	-	10	20.8	3	6.3	4	8.3	11	22.9	20	41.7
Newspapers	9	18.8	11	22.9	2	4.2	3	6.3	10	20.8	13	27.0
Mobile phone GSM	25	52.1	4	8.3	2	4.2	2	4.2	5	10.4	10	20.8
Workshop/Seminar	-	-	8	16.7	2	4.2	8	16.7	16	33.3	14	29.1
$\bar{X} = 35.31$												

Source: Field survey 2012

Table 5: Correlation and Chi – square result for the relationship between some socio – economic characteristics of the respondents and information accessibility

Variables	DF	Test Statistics	P. Value	Decision
Educational Attainment	5	$r = 0.316^*$	0.040	S
Household Size	2	$r = - 0.130$	0.378	NS
Fish Farming Experience	4	$r = 0.038$	0.797	NS
Marital status	3	$\chi^2 = 0.915$	0.216	NS
Primary Occupation	3	$\chi^2 = 0.116$	0.216	NS

Source: Field Survey 2012

4. CONCLUSION

Considering the result of the study, it is concluded that, the majority (83.3%) of the respondents were male and 75% were married with 72.9% of them having acquired one form of tertiary education or another.

Their primary occupation was civil service (50%) and 56.2% had household size of 6 – 10 people with 79.1% having less than 10 years of experience on fish farming.

The respondents had high information needs on fish farming but accessibility of the information on fish

farming was far from adequate. Most of the respondents differ in their access of fish farming information from various sources at different time intervals. Information

obtained on frequent basis was few and the diversity could be related to personal, social, economic or institutional factors. The reasons behind diversity and farmers' current level of access of agricultural information would be subscribed to the gaps in information technology and inadequate number of Agricultural Extension officers, who create awareness on fish farming information. This was capable of enhancing the production and productivity of agriculture. This was not the case as revealed by the results from this study.

Furthermore, respondents in the study area were not always using institutionalized sources of information such as extension service, internet, and extension bulletin/poster among other sources. Most of the farmers obtained first-hand information from family members/friends, radio and mobile phone (GSM). Such sources may be devoid of the expected accuracy and the technical efficiency that may come with the information had it come from the agricultural extension agents or research organizations.

Recommendations: The study recommended that extension agents should provide adequate information on fish farming to fish farmers as their information need in that regard is high.

REFERENCES

- [1] Aina, L.O. (1995). Information and Agriculture in Africa in *Agricultural Information in Africa*. Aina L.O.; A.M Kaniki, J.B Ojiambo (Eds.), Published by Third World Information Services Ltd. Ibadan, pp. 1 – 11.
- [2] Aina; I.O, Kaniki, A.M. Ojiambo, J.B (eds), *Agricultural Information In Africa*, Third World Information Services Ltd.Ibadan Pp12-31.
- [3] Ajala, C. G. and Ononogbo, U. N. (2008). An overview of HIV/Aids scourge among the rural residents of benue State, Nigeria. *Proceedings of the Seventeenth Annual Congress of Nigeria Rural Sociological Association (NRSA) held at National Root Crops Research Institute, Umudike, Abia State, Nigeria, 19th – 22nd August, 2008: 23 – 30.*
- [4] Adomi, E. E., Ogbomo, M.O. and Inoni, O.E. (2003). Gender factor in crop farmers' access to agricultural information in rural areas of Delta state, Nigeria. *Library Review*, 52(8): 388-393.
- [5] Adebayo, A.A. and Tukur, A.L. (1999). *Adamawa State in maps*. Paraclates Press Jimeta, Yola pp 6-9.
- [6] Ekoja, I.I. (2003). Farmers' access to agricultural information in Nigeria. *Bulletin of the American Society for Information Science and Technology*, August/September. Pp. 21 – 23.
- [7] FAO. (1999). *The State of World Fisheries and Aquaculture. 1998 Food and Agriculture Organization*, Rome, Italy.
- [8] Lwoga, E.T. (2010). Bridging the Agricultural Knowledge and Information Divide: The case of selected Telecasters and Rural Radio in Tanzania. *The Electrical Journal of Information System in Developing countries*.
- [9] Moses, B.S. (1983). *Introduction of Tropical Fisheries*, Ibadan University Press, Ibadan, Nigeria. pp 120.
- [10] National Population Commission (2006). *National Census of the Federal Republic of Nigeria*, Abuja.
- [11] Ofuoku, A.N., Emah, G.N., & Itedjere, B.E. (2008). Information utilization among rural fish farmers in Central Agricultural Zone of Delta State, Nigeria. *World Journal of Agricultural Science* 4 (5); 558 – 564.
- [12] Oladele, O.I. (2006). Multilingualism of farm broadcast and agricultural information access in Nigeria. *Nordic Journal of African Studies* 15 (2): 199 – 205.
- [13] Peter, O.S. (2012). Barriers in accessing agricultural information in Tanzania with a Gender Perspective. *The Electronic Journal on information Systems in Developing Countries*. <http://www.ejisd.org> retrieved July 2012.
- [14] Willianson, K. (1997) *The Information Needs and Information Seeking Behaviors of Older Adults: An Australian Study* In : Vakka, P. Savoliannen, R. and Dervin, B. (Eds) *Information Seeking Context. Proceedings on Research on Information Needs, Seeking and Use in Different Contexts*, August, Tampere, Finland. London: Taylor Abraham, pp 337-350.
- [15] World Fish Centre, (2005). *Fish and Food Security in Africa*. World Fish Centre, Penang, Malaysia.