



Media use pattern of fish farmers in Oluyole Local Government Area, Oyo State, Nigeria

Amusat, A. S.* and Oyedokun, M. O.

Institute of Agricultural Research and Training, Obafemi Awolowo University,
P. M. B, 5029, Moor Plantation, Ibadan, Nigeria.

Article History

Received 20 February, 2018
Received in revised form 20
March, 2018
Accepted 23 March, 2018

Keywords:

Fish farming,
Media,
Catfish,
Fishery technologies.

Article Type:

Full Length Research Article

ABSTRACT

Mass media have been known to be an important source of useful information to fish farmers. The study, therefore, assessed media use pattern of fish farmers in Oluyole Local Government Area, Oyo State, Nigeria. Structured questionnaires were used to collect information from 109 respondents which were purposefully selected because of the large number of fingerlings stocked in their ponds. Data collected were analyzed using mean, standard deviation and Chi-square. Majority of the respondents (74.3%) were males, married (85.3) with a mean age of 57.4, while majority (85.3%) reared catfish. The most common way of getting information on fish technology to the fish farmers was through radio (97.2%), while most (50.5%) considered evening period as the most appropriate time for getting across information on fish technology to them. Irregular power supply ranked first as major constraint faced by the respondents in the study area. Results of Chi-square obtained indicate that sex ($p = 0.006$), marital status ($p = 0.027$), primary occupation ($p = 0.000$) and education ($p = 0.000$) had significant relationships with media use pattern. It is recommended that more information on media use should be provided to fish farmers and also sensitize them on the associated benefits of using media to obtain technologies. Finally, youths and women should be sensitized to come into fish enterprise as it is dominated by males and fairly old people in this study.

©2018 BluePen Journals Ltd. All rights reserved

INTRODUCTION

In Nigeria, research into media use pattern of farmers has received attention in the last two decades (Alfred and Fagbenro, 2007). This increased interest is based on the premise that an understanding of farmers' media use pattern will enable policy makers to plan relevant programmes for their target audience and at the same time achieve prompt dissemination of appropriate technologies to farmers at increased rate because of the media ability to cover wide area within a short period of time. Consequently, if farmers use media in a better way it will have positive impact on agricultural production by

facilitating the adoption of innovation that is being promoted on air. This view is applicable to fish farming which is increasingly gaining ground to complement the ever decreasing catch fish from capture fisheries.

Nigerian fish farming has been in existence for over 40 years (Ekwegh, 2005). It is in fact the world's fastest growing source of animal food, outpacing terrestrial meat production and the captured fisheries (Ogunremi et al., 2013). Implicitly, consumption of fish has great potential to augment daily protein intake that is needed by human beings. This realization gives fish production, processing and marketing in Nigeria widespread acceptability as there is no taboo placed on it by any religious or cultural belief (Adebayo, 2012). Fish farming is a profitable venture and it is rapidly expanding and that is the more reason Nigerian government has made several attempts

*Corresponding author. E-mail: niyiamusat2000@yahoo.co.uk.
Tel: +234-8023469575.

over the years to increase productivity of fish farmers through institutional reforms and various economic measures (Soyemi and Haliso, 2015). Among the measures taken to promote fish farming is the use of mass media to get relevant information to farmers. The media therefore, become an important source of information dissemination because the way they present messages has an impact on public opinion as well as constituted authorities. The key role they play in structuring and dominating the public sphere make them the most used and preferred information sources (Olsena and Osmundsen, 2016). The media not only provide information for fish farmers, but also allow new entrants who did not have access to training on fish farming to gather information with which they can start their own fish farm. If farmers, youth and women could seize and use the opportunity to take fish farming as a profession, the population of fish farmers will grow, productivity and yield will increase to meet the ever-increasing demand for fish in the country as Nigeria is among the largest fish consumers in the world, with over 1.5 million tons of fish consumed annually (Davies et al., 2008). However, current annual aquaculture production hovers around 500,000 metric tons. This is an indication that a deficit occurs in the demand and supply for fish consumption in the country. The implication is that the country either depends on importation of fish or needs to encourage local participation in fish farming to ensure food security for its citizenries.

It is of no doubt that fish farming has great potential of solving the problem of food security when it is done in the right way. This view is buttressed by (Ogunremi et al., 2013), that increased production of fish will help combat hunger and malnutrition which remain one of the most devastating problems facing the majority of the poor in the country. As the population of fish farmers is growing by the day, different kinds of information need be made available to those that are interested, particularly on how to start and manage fish farms. All these are to encourage local participation so as to increase rate of production (Akinbile and Alabi, 2010). If local fish production must be boosted, fish farmers must raise their yield using modern techniques of production (Alfred and Fagbenro, 2007). Modern techniques of raising fish are normally passed to fish farmers through agricultural extension services that are saddled with the responsibility of disseminating information and persuading farmers to adopt new technologies. However, the agricultural extension service delivery is constrained with so many factors that are limiting their performance.

The limiting factors include high extension farmer ratio, paucity of funds, and lack of mobility among others. This observation was buttressed by Mohammed and Olabode (2007) who argue that in Nigeria and many other developing countries, limited number of extension agents (1:4000 farmers) makes it impossible to reach all farmers

by inter-personal means. Implicitly, the number of trainings the farmers supposed to have will be inadequate due to limited number of extension agents. This signifies that personal contact of extension agents with farmers need to be complemented with other methods of information dissemination, so as to have access to timely information. It is believed that farmers who possess appropriate and timely information will make a more rational decision than those without (Ogunlade, 2007). Mass media therefore become an important source of information dissemination that will fill the gap (inadequate number of training) that interpersonal method of extension agent could not fill. It therefore becomes necessary to study the pattern of media use by farmers.

Objectives of the study

The broad objective of the study is to assess the media use pattern of fish farmers in Oluyole Local Government Area of Oyo State. The specific objectives are to: determine the socio-economic and enterprise characteristics of the respondents in the study area; identify sources of information available to fish farmers in the study area; determine the appropriate time of disseminating fishery technologies on media; identify the types of information available to fish farmers in the study area; and identify the constraints militating against the respondents in accessing technologies.

Hypothesis of the study

The study hypothesized that there was no significant relationship between the socio-economic characteristics of respondents and their media use pattern.

METHODOLOGY

The study was carried out in Oluyole Local Government Area of Ibadan Oyo State Nigeria. The headquarters of the local government is at Idi Ayunre. It has an area of 62.9 km and a population of 202,725 at the 2006 census. Oluyole Local Government Area has latitude 3° 50 187 N and 3°50 696 N and Longitude 7° 18 021 E and 7°18 997 E. The population of the study comprised all the fish farmers in Oluyole Local Government Area and it was purposefully selected due to their predominance in fish farming activities. Oluyole Local Government has 10 wards out of which 5 wards (50%) were randomly selected. Therefore, 24 fish farmers were purposively selected from each ward due to the large number of fingerlings stocked in their ponds making a total of 120 fish farmers out of which 109 respondents were finally

Table 1. Socio-economic characteristics of the respondents.

Variable	Frequency	Percentage	Mean
Age			
25-34	03	2.8	57.48
35-44	16	14.7	
45-54	29	26.6	
55-64	30	27.5	
65-74	22	20.2	
75 and above	09	8.2	
Sex			
Male	81	74.3	
Female	28	25.7	
Marital status			
Single	06	5.5	
Married	93	85.3	
Divorced	08	7.3	
Widowed	02	1.9	
Education			
Non-formal	00	0.0	
Primary	19	17.4	
Secondary	53	48.6	
Tertiary	37	33.9	
Primary occupation			
Farming	80	73.4	
Trading	07	6.4	
Hunting	1	0.9	
Civil servant	21	19.3	
Household size			
1-3	07	6.4	7.20
4-6	38	34.9	
7-9	41	37.6	
10 and above	23	21.1	
Religion			
Islam	49	45.0	
Christianity	59	54.1	
Traditional	01	0.9	

used for the study. Primary data were collected through a structured questionnaire. Data for the study were analyzed through the use of descriptive statistics such as frequency counts, percentages and mean scores while inferential (Chi-square) was used to test the hypothesis at $p = 0.05$.

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

Data in Table 1 show that the largest age group (27.5%) of the respondents was between the age brackets of

Table 2. Enterprise characteristics of the respondents.

Variable	Frequency	Percentage	Mean
Fish type			
<i>Alaran</i>	06	5.5	
Catfish	93	85.3	
Tilapia	10	9.2	
Number of ponds			
1-3	51	46.8	
4-6	49	45.0	
7-9	03	2.7	
10 and above	06	5.6	
Number of fish stocked last			
less than 1000	27	24.8	1630.005
1001-2000	53	48.6	
2001-3000	20	18.3	
3001-4000	06	5.5	
4001-5000	03	2.7	
Farming experience			
1-10	56	51.4	12.38
11-20	31	28.4	
21-30	22	20.2	

55-64 years old with mean age of 57.5 years. This implies that the respondents are not too old, but still active and energetic enough to perform their fishing activity which is not too cumbersome. Majority (74.3%) were males while 25.7% were females. This indicates that fish farming is still a male-dominated enterprise. Also, a little above average of the respondents (54.1%) were Christian while 45.0% practiced Islam. This shows that fish farming has no religious barrier.

Further analysis reveals that majority of the respondents (86.1%) were married, this result implies that the respondents have responsibilities which made them to be committed to their fishery business so as to earn reasonable income to support their family. Also, (48.6%) had secondary education while (33.9%) attended tertiary institutions. The implication of this is that majority of fish farmers in the study area were educated and may likely know where and how to source and access information. Tertiary and secondary education would equip respondents with skill to source for adoptable technologies on fish farming. Majority of the respondents (73.4%) were involved in farming with average household size of 7 people. This shows that the study area is predominantly rural and farming still remains the major occupation of rural populace. According to Yekinni (2010), the average family size of 5 and above depicts a

fairly large family. Oyebade (2014), averred that the larger the family size, the greater the number of household members whose food and nutritional requirements must be met by such household. Having a large family size portends that there will be more hands available as source of labour for the fish enterprise.

Enterprise characteristics of the respondents

Data in Table 2 show that most respondents (85.3%) reared catfish, while (9.2%) reared Tilapia and the least (5.5%) reared *alaran*. Most respondents (46.8%) had between 1 - 3 ponds, while 5.6% had more than 10 ponds. This is in line with the fact that catfish is the commonest form of fish farming in Nigeria and that majority of the respondents are of small scale enterprise. Larger percentage (48.6%) of the respondents stocked between 1001 - 2000 fishes while 2.7% stocked between 4001-5000. This also aligns with the number of ponds possessed by them. Also, (51.4%) of the respondents had farm experience of between 1-10 years in fish rearing, while (20.2%) had 21-30 years' experience. This indicates that respondents had enough experience to access relevant information related to their enterprise in fish production with little assistance. Ability to access

Table 3. Appropriate time for disseminating information on fishery technologies on media.

Time of day	Frequency	Percentage
Morning	53	48.6
Afternoon	1	0.9
Evening	55	50.5

Table 4. Sources of information on fishery technologies.

S/N	Media type	Yes	No
1	Radio	106 (97.2)	3 (2.8)
2	Television	85 (78.0)	24 (22.0)
3	Internet	20 (18.3)	89 (81.7)
4	Print	15 (13.8)	94 (86.2)
5	Mobile phones	20 (18.3)	89 (81.7)
6	Extension agents	69 (63.3)	40 (36.7)
7	Fellow farmers	100 (91.7)	9 (8.3)

Note: Figures in brackets are in percentage.

relevant technologies on fish farming will likely improve production and productivity of farmers. Experience is an indicator of possession of wealth, knowledge and practical skill (Sanyaolu, 2008).

Appropriate time for disseminating information on fishery technologies

Dissemination of information to farmers on fishery technologies through the media at the appropriate time would enable them listen, understand and enhance the possibility of adoption of such technologies. Data in Table 3 indicate that half (50.5%) of the respondents considered evening time, as the most appropriate time for disseminating information on fishery technologies on different media. However, 48.6% preferred morning as the best time to disseminate information. The distribution of respondent signifies that radio farm broadcasts should be aired in the morning and evening as indicated by the respondents to be the convenient time for them to listen to radio. This is in line with Adegbola (2015) who posited that the best period for agricultural programmes on radio is early in the morning or late in the evening when farmers would have returned from their farms.

Sources of information on fishery technologies

Data in Table 4 show the different sources of information

on fishery technology available to respondents in the study area. The most popular information sources available to the respondents were radio (97.2%), fellow fish farmers (92.6%) and television (78.0%). The result also shows that the least popular source of information available to the respondents were print (13.8%), mobile phones (18.3%) and internet (18.3%). This corroborates the view that radio is the most important source of information dissemination in the southwest of Nigeria. The problem of access, difficulty in operations and cost may hinder farmers from the use of information sources like print, mobile phones and internet. The epileptic nature of extension service as reported by IAR&T (2014) in the study area might have reduced the rate at which extension agents are having contacts with fish farmers.

Type of information disseminated by media on fishery technologies

Data in Table 5 show information on different aspects of fishery technology disseminated by media. The result shows that information on fish breeding ranked first with a mean value of (1.29), followed by information on water quality management (1.04), fish marketing (0.97) from media sources, the Table also indicates that information on fish harvesting was ranked lowest, this may be due to the fact that respondents are conscious of the harvesting practice and do not require further information as harvesting operation is the payback period.

Table 5. Type of information disseminated by media on fishery technologies.

S/N	Information	Mean	Rank
1	Fish breeding	1.29	1 st
2	Feed formulation	0.92	4 th
3	Marketing	0.97	3 rd
4	Health	0.90	5 th
5	Credit	0.75	7 th
6	Fish harvesting	0.63	9 th
7	Group formation	0.70	8 th
8	Pond management	0.82	6 th
9	Water quality Management	1.04	2 nd

Table 6. Constraints to accessing information on fishery technologies from media.

SN	Constraints	Mean	Rank
1.	Irregular power supply	1.31	1 st
2.	Illiteracy	0.59	6 th
3.	Inadequate time	0.70	5 th
4.	Unavailability of media equipment	0.93	3 rd
5.	Unfavorable time schedule	0.30	8 th
6.	Poor radio signal	0.51	7 th
7.	Indigestibility of information	0.71	4 th
8.	Irregular visit of extension agents	1.01	2 nd

Table 7. Level of media use pattern of the respondents.

Media use pattern	Range of score	Frequency	Percentage	Mean	Standard deviation
Low	(1.0 – 2.4)	62	56.9	2.53	1.34
High	(2.5 and above)	47	43.1		

Source: Field survey, 2016.

Constraints to accessing information on fishery technologies from media

The result in Table 6 shows the different constraints to accessing information on fishery technologies from media by the respondents in the study area. The result shows that irregular power supply (1.31), irregular visit of extension agents (1.01), unavailability of media equipment (0.93) were ranked first, second and third respectively as the major constraints to the respondents. Unfavorable time schedule (0.30) and poor radio signal (0.51) were the least ranked constraints to accessing information on fishery technologies from media. This means that producers of farm broadcast programmes have been

relaying the programmes at the right and convenient time for farmers.

Media use pattern of the respondents

The media use pattern of the respondents was derived through addition of the standardized (Z) scores of “appropriate time for dissemination of information on fishery technologies” and “sources of information on fishery technologies” available to the respondents. The summary of the result in Table 7 shows that most of the fish farmers (56.9%) had low media use pattern. This may be attributed to the unreliable power supply,

Table 8. Chi-square test between the socio-economic characteristics of respondents and their media use pattern.

Variables	χ^2	df	p – value	Decision
Age	8.587	5	0.125	Not significant
Sex	7.505	1	0.006	Significant
Marital status	9.209	3	0.027	Significant
Religion	2.204	4	0.698	Not significant
Education	18.771	2	0.000	Significant
Household size	4.349	3	0.226	Not significant

Source: Field survey, 2016.

inappropriate broadcast time, lack of awareness of agricultural program on the media and ambiguity in the language used.

Relationship between the socio-economic characteristics of the respondents and their media use pattern

The result in Table 8 shows the chi-square relationship of the respondents' socio-economic characteristics and their media use pattern. The result shows that sex ($\chi^2= 7.505$, $p= 0.006$), marital status ($\chi^2= 9.209$, $p= 0.027$), education ($\chi^2=18.771$, $p=0.000$) had significant relationships with media use pattern. However, the relationships between age, religion and household size were not significant with the media use pattern.

This implies that sex, marital status, and educational status are determinants of media use pattern of fish farmers in the study area. For instance, the more educated a fish farmer is, the higher he or she would seek information on fishery technologies from different media. Educational status also affects the frequency of how such a person would use certain media to seek information. This implies that the higher the level of education, the greater the consciousness to seek relevant information through media. Also, gender and marital status of the respondents to a large extent influence the use of media. This finding is in line with Oyekunle et al. (2017) who affirmed that gender and marital status to a large extent influence cassava farmers' utilization of print and electronic media.

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

- More information on media use should be provided to fish farmers specifically and others that are willing to

come into fish enterprise in general.

- Fish farmers should be empowered to acquire battery operated devices and wind up radio so as to overcome problem of epileptic power supply which inhibit their use of broadcast media.
- Information on fish technologies should be aired in the morning before the target audience goes out and in the evening period when they might have retired back home for the messages to be well received.
- Government should also endeavor to employ more extension agents and improve on their welfare so as to impact positively on the respondents.
- Finally, youths and women should be sensitized to come into the enterprise through advocacy campaign as it is dominated by males and fairly old people in the study area.

Conclusion

The study concluded that sex, marital status and education of fish farmers are significant predictors determining fish farmers' media use pattern in the study area and that, the respondents preferred using media in the morning and in the evening. The most available information source to farmers is radio while technology on fish breeding is the most disseminated fishery technology on media.

REFERENCES

- Adebayo O. O. (2012). Determinants of extension services needs to catfish farmers in Oyo State, Nigeria (A case study of Ido Local Government Area). *J. Hum. Soc. Sci.* 1(4):54-58.
- Adebola R. A. (2015). Impact of an independent farm broadcast programme in Southwest Nigeria. Being an invited paper delivered at University of Ibadan, Department of Agricultural Extension and RURAL Development.
- Akinbile L. A. & Alabi O. E. (2010). Use of ICTs among fish farmers in Oyo State .*J. Agric. Ext.* 14(1):22-30.
- Alfred I. S. D. & Fagbenro O. A. (2007). Perception of tilapia farmers on information sources in the coastal region of Ondo State, Nigeria. Available online at:

- Arizona.edu/aZaqua/15TA7/papers/Fagbenro/perception.doc.
- Davies R. M., Davies O. A., Inko-Tariah M. B. & Bekibele D. O. (2008). The mechanization of fish farms in Rivers State, Nigeria. *World Appl. Sci. J.* 3(6):926-929.
- Ekwegh K. R. (2005). Fish for all. A report of a study for new pond. *J. Hum. Ecol.* 6-7.
- Institute of Agricultural Research and Training, IAR&T (2014). Annual report. Bora Agro Nigeria Publication.
- Olsena M. S. & Osmundsen T. C. (2016). Media farming of aquaculture <https://doi.org/10.1016/j.marpol.2016.11.013G>
- Mohammed K. Y. & Olabode I. B. (2007). Measuring the impact on farmers of agricultural radio and television programmes in Southwest Nigeria. *J. Appl. Comm.* 86(3):24.
- Ogunlade I. (2007). Backyard fish farmers Information needs in Osun State, Nigeria. Proceedings of Association of Agriculture and Agricultural Economics Conference held in Ghana. Pp. 165-169.
- Ogunremi J. B., Abraham P. & Olatunji S. O. (2013). Gender and aquaculture information preferred sources among rural fish farmers in Ondo State, Nigeria. *J. Sustain. Dev. Afr.* 15(7):45-47.
- Olsena M. S. & Osmundsen T. C. (2016). Media farming of aquaculture. *Marine Policy.* 76: 19-27. <https://doi.org/10.1016/j.marpol.2016.11.013>
- Oyebade O. E. (2014). Effect of social capital on rural households food security in southern agricultural zone, Nigeria. An unpublished M.Sc Thesis in the Department of Agricultural Extension, University of Ibadan. 46p.
- Oyekunle O., Oose M. O., Amusat A. S., Oyeyinka R. A. & Akinruli B. T. (2017). Cassava farmers' utilization of print and electronic media for agricultural information dissemination.
- Sanyaolu O. J. (2008). Farmers' assessment of extension services rendered in Ogun State, Nigeria. Unpublished M.Sc Thesis, Department of Agricultural Extension and Rural Development, University of Ibadan. 8p.
- Soyemi O. D. & Haliso Y. (2015). Agricultural Information use as determinant of farm income of women in Benue State, Nigeria. *Res. Hum. Soc. Sci.* 5(18):27-32.
- Yekinni O. T. (2010). Determinants of utilization of information and communication technologies for agricultural extension delivery in Nigeria. An unpublished PhD Thesis, Department of Agricultural Extension and Rural Development, University of Ibadan. 78p.