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Backyard Fish Farmers Information needs in Osun State, Nigeria

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Abstract

The need for increase in fish production in order to improve protein intake by Nigerians led to this study. The study analyzed information needs of backyard fish farmers in Osun State, Nigeria. Specifically, the study investigated the socio-economic characteristics of backyard fish farmers, frequency of performance, importance and difficulties of management practices as well as the constraints facing backyard fish farming. Questionnaire was used to elicit information from 70 backyard fish farmers. The findings indicated that backyard fish farmers in Osun State were mostly males, middle aged, married and most of them rear catfish. Feeding and cleaning are frequently performed by the fish farmers, feeding and maintenance of water quality were of extreme importance and also cleaning and harvesting were found to be extremely difficult. The major constraints facing the fish farmers were capital, security, feed, fingerlings procurement. The paper concluded that backyard fish farmers need training on management practices.

Key words: Backyard,, Fish farmers, Information need, Nigeria.

Introduction

Globally, consumer demand for fish continues to climb, especially in affluent, developed nations which imported 33 million tonnes of fish worth over US\$61 billion yearly. And some 77 percent of fish consumed globally as food is supplied by developing countries (FAO,2007) However, levels of captures of fish in the wild have remained roughly stable since the mid-1980s, hovering around 90-93 million tonnes annually. Similarly in Nigeria, Fish demand is put at about 1.5million metric tons per annum and

SimilarlyIn Nigeria, Fish demand is put at about 1.5 million metric tons per annum, and the total domestic the total domestic fish production can only supply 511,700 metric tons, leaving a shortfall of 680,000 metric tons of fish annually. To meet the local demand, government imports fish worth of N50 billion yearly (Nwankwo,2005). Nzeka (2003) asserted that for Nigerians, fish is an affordable source of protein, and the most popular imported species include croaker, herring, mackerel and catfish. Mackerel fills 65 percent of the domestic market and is preferred by most Nigerians. A current ban on imported poultry has made fish even more popular. In order to meet growing demand, the Nigerian aquaculture industry is growing Tilapia and catfish as the primary species produced at domestic fish farms, but it will be quite some time before production can match consumer demand Akinbile(2003) reported that extension

services were rendered to the fish farmers on pond construction, stocking, pond management, fish breeding, credit, fish harvesting, feed formulation, group formation and marketing outlets. Information has been identified as one of the resources required for the improvement of agricultural production (Aina, 1995). It is said to be a resource that must be acquired and used in order to make an informed decision. Those who possess appropriate and timely information will make a more rational decision than those without (Adesope,Asabiaka and Agumagu;2007) The expansion of the pond fishery sector is hampered by low levels of knowledge of fish farmers on inputs and pond management(Sarka, Chowdhury and Itohara,2006). This impedes growth of productivity in the sector. There is dearth of empirical data as to the aspect of fish farming in which farmers need information in Osun state, Nigeria. This study therefore seeks to provide answers to the following questions:-

- (a). What are the personal and socio-economic characteristics of backyard fish farmers in Osun State.
- (b). How frequent are the backyard fish farmers performing the management practices?
- (c). How important are the management practices to the backyard fish farmers?
- (d). What are the difficulties facing backyard fish farmers.

(f). what are the constraints facing backyard fish farming.

Objective of the Study:

The general objective of the study was to determine the fish farmers' information needs in Osun State, Nigeria. The specific objectives of the study were to;

- i). Examine the socio-economic characteristics of backyard fish farming practices in which fish farmers need information.
- ii). Investigate the frequency of performance, importance and difficulties encountered by fish farmers on management practices. by fish farmers.
- iii). Determine the management practices in which fish farmers need training.
- iv). Determine constraints facing backyard fish farming business.

Hypothesis

Ho₁: There is no significant relationship between the socio-economic characteristics of the farmers and their information needs on fish management practices.

HA₁: There is a significant relationship between the socio-economic characteristics of the farmers and their information needs on fish management practices.

Justification of the Study

This research work is of tremendous importance to increasing fish production in Nigeria in general and in Osun State in particular. This study will expose the management needs of fish farmers in osun state. This will assist the government in their policy formation as it relates to backyard fish farming. It will open up area for further research and spell out specific training contact that Agricultural extension agency could concentrate on in its programme for backyard fish farmers. It is important and useful for farmers in that their problems will be exposed to the extension agents who will provide solution to the pressing need through it technology review meetings, fortnight training and farm visits.

Methodology

The study was conducted in Osogbo, Osun State, Nigeria is located on South Western Nigeria, it is situated on latitude 9.7°N and on longitude 4.5°E. The town is with an annual rainfall of about 0.6mm. Farming is the traditional and major occupation of the people of Osogbo. They grow various food crops like

yam, maize etc, poultry farming and fish farming are also undertaken. The study population is the total number of the people who have backyard fish farm in Osogbo. A sample size of 70 backyard fish farmers

were selected from the population by using a snow ball technique. There was no record to show the total numbers of backyard fish farmers. However, those who operate it know themselves.

The research design for this study was survey and correlational. The instrument used in the study was a well structured questionnaire. However, personal interview was conducted for those who could not read and write base on the items on the questionnaire. The secondary data was from internet, journals and library. Lecturers from agricultural Extension and Rural Development of University of Ilorin validated the instrument. The dependent variable is the information needs of backyard fish farmers. This was measured by subjecting the respondents to a 14 items on management practices placed on likert type scale. FAO(1992) method of determining the need was used through job analysis by ascertaining the frequency of performance, importance of and difficulties faced in pond management practices by the respondents.

a). Frequency of performance was placed on a 5 point. Likert type scale where seldom = 1, occasionally = 2, weekly to monthly = 3, daily to weekly = 4, daily = 5.

Any management practice whose mean is greater than 3 is frequently performed.

b). Importance of management practices was placed on a 3 point likert type scale where marginally important = 1, moderately important = 2, extremely important = 3.

Any management practice whose mean is greater than 2 is very important.

c). Difficulty in handling management practices where easy = 1, moderately difficult = 2, very difficult = 3, extremely difficult = 4. Any management practices whose mean is greater than 2.5 is difficult for the fish farmers.

Information Need Score (INS) was computed by cumulating the total respondent score on each practice for each of the performance, importance and difficulty. The minimum INS Score was 3 and a maximum of 12. The independent variables consist of: Socio-economic characteristics of the backyard fish farmers include Age, gender, marital status, level of education, years

of experience and type of fish stocked. The data were analyzed using descriptive statistic such as frequency counts, percentages, mean and rank while the inferential used was Pearson Product Moment Correlation (PPMC).

RESULTS AND DISCUSSIONS

From table 1, A little below average (46%) of the respondents were middle aged which ranges from 40-59 years, 36.9% were classified as young in which their age ranges between 26-39 years, while few (17%) were old. This implies that people who were involved in backyard fish farming young and agile than old and inactive.

The mean age was 44years. Seventy-seven percent (77.1%) of the respondents were males while few (22.9%) of the respondents were females. This showed that males were mostly involved in backyard fish farming than the females.

This may be due to the fact that management practices in fish farming may be too tedious for females which the males have the stamina to handle. On the marital status, 72.9% were married. This suggests that there may be high demand for food and additional income as the family size increases. Few percentages (20%) of the respondents were single and this indicates that they are youth and they still have strength to work on the pond without hiring labour.

Majority (78.5%) of the respondents had post secondary education. The ability of farmers to read or write may contribute to their information seeking behaviour. An average number (51.4%) of the respondents were new entrants within five years experience in fish farming.

A little (31.3%) of the respondents have more than ten years of experience in fish farming, this implies that the entrance rate of people into fish farming is rapid in the recent past. This may be due to the potential of fish farming as a profitable venture and source of protein. Catfish was reared by majority (95.8%) of the respondents, while few percentage (4.2%) stock tilapia. This confirmed Nzeka(2003) report that Tilapia and Cat fish were reared by Nigerians. The raising of catfish may be due to fact that many people demand for it due to its flavour, high protein content, medicinal characteristics and the most important is the weather, it can thrive well in any weather condition unlike tilapia which survives mostly in warm environment (Noel, 1992).

Table 1 reported 14 management practices that are relevant to pond fish farmers. Two of the practices that were frequently performed were (MR = 4.75) and cleaning (MR = 3.52) Control of water quality was an occasional activities (MR= 2.90). The checking of Alkalinity and processing were seldom performed by the farmers (MR= 1.68 and 1.60 respectively). Feeding is the back bone of the enterprise that provides strength and growth to fish. The quality and regularity of feeding will determine the output. This findings support Delta (2000) who reported that feeding promotes fast growth survival and health.

Five items were of extreme important to fish farming these were feeding (MR = 2.92), water quality (MR = 2.88), cleanings (MR = 2.85), stocking (MR= 2.68) and handling of finger lings (MR = 2.50). The findings support Datta (2000) The tasks that farmers found difficult among the management practices were cleaning of the pond (MR = 2.70) and harvesting (MR = 2.41). All other practices were moderately difficult for the farmers to handle. The difficulties of these farmers may be due to earthen pond method used for farming.

Objective 5: To determine the constraints facing backyard fish farming business. From table 5, the major constraints facing the farmer as capital. The cost of land and inputs for fish farming are expensive which makes some fish farmers to stop production. Security is another problem of the respondents, they were faced with poachers problem who steal fish when they are about to be harvested. Feed cost is the largest production expense for catfish farmers (USDA, 2000). From the above table, the difficulty is positively correlated with training needs which implies that the more difficult the management practices are, the more the training needs. Thus H_0 is rejected. Performance is negatively correlated with the training needs. The less the performance of management practices, the more the training needs. H_0 is accepted at 0.05 level. Age of the respondents is positively correlated with difficulty which implies that the older they get, the more difficult the management practices will be. Importance of management practices is positively correlated with the performance which means the more important the management practices are, the more the farmers perform the management practices.

Conclusion:

Backyard fish farmer need information on pond management practices for maximum production

benefit. The following recommendation were made inline with the study:

1. The difficult tasks and management practices that were seldom perform maybe focused for training. Management practices such as feeding, cleaning maintenance if water quality and weed control will serve as good content for extension programming.
2. The Fish farmers need extension information on different fencing methods to prevent poachers from intruding and carting away their products.
2. Information on sources of micro-credit to farmers has to be unveiled. Farmers should be mobilized to established cooperative society in order to enjoy government provision of capital under poverty alleviation programme.

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Table 1: Socio-economic characteristics of respondent (n=70)

Socio-economic characteristics	Frequency	Percentage	Mean	S.D
Age				
Young ≤ 39	26	36.9	44.1	12.73
Middle age 40- 59	32	46.0		
Old age 60+	12	17.1		
Gender				
Male	54	77.1		
Female	16	22.9		
Marital status				
Single	14	20.0		
Married	51	72.9		
Divorced/separated	2	2.9		
Widowed	3	4.2		
Level of education				
No formal education	-			
Adult education	2	2.9	4.52	1.05.
Primary education	4	5.7		
Secondary education	9	12.9		
Post-secondary education	55	78.5		
Years of experience				
≤ 5years	36	51.4	8.31	6.27
6-10years	12	17.3		
> 10years	22	31.3		
Types of fish stocked				
Catfish	67	95.8	1.01	0.26
Tilapia	3	4.2		

Table 2: Frequency of performance, importance and difficulties encounter in pond management practice

Management Practices	Frequency of Performance		Importance		Difficulties	
	Mean	Rank	Mean	Rank	Mean	Rank
Cleaning	3.52	2	2.85	3	2.70	1
Fertilization	2.15	5	2.24	9	2.10	12
Water quality	2.92	3	2.88	2	2.15	9
Handling of finger lings	1.95	10	2.50	5	2.20	8
Stocking	2.02	8	2.68	4	2.01	14
Feeding	4.75	1	2.92	1	2.08	13
Weed control	2.57	4	2.45	6	2.38	3
Disease Control	1.97	9	2.30	8	2.28	4
Alkalinity	1.68	13	1.98	11	2.15	9
Harvesting	2.15	5	2.44	7	2.41	2
Storing	1.75	11	1.78	12	2.22	6
Marketing	2.08	7	2.02	10	2.21	7
Preservation	1.71	12	1.55	14	2.24	5
Processing	1.60	14	1.57	13	2.11	11

Table 6: Constraints to fish production

Constraints	Frequency	Percentage
Feed	12	17.0
Capital	52	74.3
Security	35	50.0
Advice	8	11.4
Marketing	8	11.4
Fingerling	11	15.7
Water quality	9	12.9
Storage	7	10.0
Time management	2	2.9

Hypothesis Testing

Correlation matrixes of three variables on training needs

	TN	Difficulty	Importance	Performance	Age
TN	1.000	.854**	-.102	-.395**	.164
Difficulty	.854**	1.000	.050	.141	.272*
Importance	-.102	.050	1.000	.283*	-.027
Performance	-.395**	.141	.283*	1.000	.168
Age	.164	.272*	-.027	.168	1.000

** correlation is significant at the 0.01 level (2-tailed) b* correlation is significant at the 0.05 level (2 tailed)

Source: Field Survey, 2006