



Fish Farmers' Information Needs: Implications for Fisheries Extension

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Abstract

The farming community requires an offset of varied information for their day to day agricultural activities. Assessing farmers information needs is an important aspect of any endeavour aimed to enhance the availability of, and access to information among farmers. The study investigated the information needs of farmers engaged in fish farming in Alappuzha district, Kerala State. A well-structured and pre-tested interview schedule was used to collect information from sixty randomly selected fish farmers from two fish farmers' agencies in the area. The identified needs were ranked in terms of weighted score. Information on extension service providers, emerged as the most needed information among the respondents. The recommendations of the study are given for developing and implementing extension service and delivery mechanism with relevant modification and redesigning of available technologies and setting up of awareness and capacity building programmes for fish farmers regarding aquaculture farm information and related needs.

Keywords: Aquaculture, capacity building, extension agency, fisheries

Introduction

Fisheries and aquaculture sector prevail as essential sources of income, nutrition, and livelihoods for hundreds of millions of people around the world (FAO, 2016). After significant growth in the earlier few decades, the world capture fisheries is becoming

restricted in physical and biological capacities, due to deteriorating environments and excessive levels of exploitation. Owing to the limitation in capture fisheries production, aquaculture has been considered as the main source of growth in fisheries production since the 1990s (DoF, 2012). Aquaculture has the capacity to alleviate under nutrition and poverty (Adefalu et al., 2013) and also contribute significantly to the local fish production in the country, if improved aquaculture technologies are introduced and adopted (Olaoye et al., 2016). Aquaculture practices can be operated on a small scale, utilizing family labour or at medium and high cost under intensive operation (Adefalu et al., 2013). Fish farming offers livelihood for millions of people around the world (Greenfacts, 2004) and in 2016, an estimated 19.3 million people engaged in aquaculture and 40.3 million people engaged in fisheries (FAO, 2018).

Information is vital for any development strategy and a necessary ingredient for success in all human endeavours (Ogboma, 2010) and in many cases, information is considered more valuable than monetary resources (Rashid & Akanda, 2015). The fish farmers must be enriched with adequate information on fish farming technologies which covers pond construction and management, breeds and spawning, feed, pest and disease control, fish processing, storage, marketing and credit facilities (Ofuoku et al., 2008; Ogboma, 2010). All these information on fish farming techniques, when acquired and effectively utilized by the fish farmers can help them realise increased production, improvement of marketing and distribution strategies and improved standard of living (Richard et al., 2014). Ofuoku et al., (2008) defines fish farming information as all published or unpublished knowledge in all aspects of culture fish. Among the various information and communication needs service through mobile followed by setting up of

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village information centres and visual aids & radio programme on fisheries technologies were given higher ranks by shrimp farmers (Dona et al., 2016). Self-learning and information from peer group has been found to be the major source of information among the fishers of Andhra Pradesh and West Bengal (Abraham et al., 2010) This indicates the lack of scientific information source provider in the fisheries sector. According to Ijatuyi et al. (2016) a huge gap exists in the information needs of fish farmers. In this era, information needs are constantly changing, so it has to be surveyed from time to time.

Kerala state has a fisher population of about 10.23 lakhs, out of which 2.3 lakhs are engaged in inland fisheries (Department of Fisheries, 2016). The state is endowed with abundant inland water resources including natural and manmade. Even though the inland fish production from the extensive network of backwaters, rivers, and reservoirs is seen low, there is considerable scope for a further expansion involving diversification of various species and culture systems in inland and coastal waters. Fishing and aquaculture are the major income generating activities of the coastal community. Fish farmers require current and reliable information in order to explore maximum potential out of the available inland resources. The main objective of the study was to study the information needs of farmers that would enable them to achieve higher returns from their fish farming practices in the future.

Materials and Methods

Alappuzha district of the Kerala was selected purposively for this study as it ranks first in the number of active inland fisherfolk population *viz.*, 13396 fishers. The study was undertaken with 60 fish farmers randomly selected from different villages of the district. A well structured and pre-tested interview schedule was developed incorporating all the variables to accomplish the objectives set for the study.

The parameters selected for socio-economic analysis were age, education, type of family, type of house, experience in fish farming and source of credit. Information needs were operationally defined for the study as the degree of needs expressed by farmers pertaining to the information requirement on fish farming practices goaled for achieving maximum production out of their venture. The

dimensions of information needs selected for the study encompass Extension advisory service providers, seed suppliers, fish marketing, schemes and subsidies, water quality management, identification of disease symptoms, feed formulation, terms of loan, pond construction, post harvest technology and harvesting methods. The responses were collected in a three-point continuum of 'very much needed', 'needed' and 'not needed' which were assigned scores of 3, 2 and 1, respectively. The information needs of fish farmers were ranked in terms of weighted score using the formula:

$$\text{Weighted Score (WS)} = (\text{No. of VMN} \times 3) + (\text{No. of N} \times 2) + (\text{No. of NN} \times 1)$$

VMN: Very Much Needed, N: Needed, NN: Not Needed.

Results and Discussion

The profile of fish farmers are shown in Table 1. The age distribution of the respondents spread between 31 and above 50 years. The analysis showed that 56.7% were middle aged and the remaining was in old age category. All the members interviewed

Table 1. Profile of respondents

Category	Percentage
Age	
Young (Up to 30)	0
Middle (31-50)	56.7
Old (>50)	43.3
Education	
Primary	3.3
Secondary	80
Higher secondary	16.7
House Type	
Tiled	48.3
Terraced	51.7
Type of Family	
Nuclear	66.7
Joint	33.3
Farm size	
<1 ha	23.3
1-2 ha	35
>2 ha	41.7
Experience in fish farming	
Low (Up to 10 y)	25
Medium (11-20 y)	70
High (>20 y)	5

Table 2. Information needs of respondents

Information needs	Very much needed	Needed	Not needed	Weighted score	Rank
Extension advisory service providers	48(80)	12(20)	-	168	1
Seed suppliers	42(70)	18(30)	-	162	2
Fish marketing	45(75)	10(16.7)	5(8.3)	160	3
Schemes and subsidies	35(58.3)	25(41.7)	-	155	4
Water quality management	38(63.3)	18(30)	4(6.7)	154	5
Identification of disease symptoms	26(43.3)	28(46.7)	6(10)	140	6
Feed formulation	25(41.7)	27(45)	8(13.3)	137	7
Terms of loan	28(46.7)	18(30)	14(23.3)	134	8
Pond construction	6(10)	30(50)	24(40)	102	9
Post-harvest technology	10(16.7)	11(18.3)	39(65)	91	10
Harvesting methods	4(6.7)	20(33.3)	36(60)	88	11

during this study were able to read and write. A large number (51.7%) of the respondents were residing in terraced houses and the rest in tiled houses. The majority (66.7%) of the respondents had nuclear family and rest (33.3%) had a joint family system. About 40% of the respondents had a farm size of more than 2 ha and 70% had more than a decade of experience in the fish farming (Table 1).

Information needs of fish farmers in Alappuzha district is presented in Table 2. Information on extension advisory service emerged as the most needed information area and is ranked I with weighted score of 168 which indicated the lack of demand driven extension and advisory service providers in the study area. All the farmers seek to acquire complete, high quality and timely information to make decisions related to their farming practice. For this they require a reliable information source with which they can depend upon, when required. Other information areas in descending order of information need score were information regarding seed suppliers, fish marketing, schemes and subsidies, water quality management, identification of disease symptoms, feed formulation, terms of loan, pond construction, post-harvest technology and harvesting methods.

Results of this study, imply that high priority should be given to planning, developing, and implementing an extension service delivery mechanism for fish farmers regarding aquaculture information. Strate-

gies and programme delivery mechanism of existing extension agencies needs to be reformed to better meet the needs of diverse group of farmers. It is also important that formatting and packaging of farm information should be need specific and targeted. Therefore, in order to make sure that the aquaculture sector contributes maximally to agriculture and economic development, the study recommends extension agencies for a strong capacity building of fish farmers in the areas of information needs. They should ensure that the fish farmers have access to consistent and continuous information that will equip them with the required knowledge on fish marketing, processing and preservation, water quality management, source of good fingerlings for stocking and identification of disease symptoms. Moreover, government and other relevant non-government organizations should provide assistance for fish farmers by assuring formal credit facilities; this would enable them to increase their production output thereby help in bridge the gap between demand and supply of fish and fishery products. These can lead to a rapid transformation of the aquaculture sector thus enhancing the development of aquaculture in Kerala.

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