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Knowledge level of fish farmer of Latur District of Maharashtra State

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Abstract

The present study was conducted to assess knowledge level of fish farmer about scientific fish culture practices. The study was conducted with 90 fish farmers randomly selected from ten blocks of Latur Districts of Maharashtra state. Fish farmers of Latur districts were of comparatively middle age, education up to XII STD, low income level, with moderate family size. The present study revealed that majority of farmers were having low level of knowledge related to pond manuring (53%), feed management (45.55%), water quality management (87.77%), health management (92.22%), marketing management (68.88%). In case of seed stocking, majority of farmers were having moderate level of knowledge (45.55%). The knowledge about fish seed stocking and Training are positively correlated. The overall level of knowledge about scientific fish culture practices is poor which might be due to lack of awareness of technology and recently started fish culture enterprises. It is essential to provide technical knowledge through conducting training programme, farmer meet, workshop, field demonstrations to the fish farmers.

Keywords: Fish farmer, knowledge, fish culture

Introduction

Fresh water aquaculture plays a significant role in progressing national economy and in providing nutritional food to the society. This sector has great potential in providing employment generation to the rural and unemployed youth. The fisheries and aquaculture sector holds enormous potential to contribute to national development agendas by promoting gender equality, social inclusivity, and sustainable livelihoods, Tongia (2019) [1]. The fisheries sector has been transformed from a traditional livelihood activity in the fifties and sixties to science and technology led commercial enterprise in the past few decades (Ayyappan, 2012; Ayyappan *et al.*, 2013) [2-3]. Maharashtra state is the 9th largest producer of fish and contributes 3.63% of country's fish production. Total fish production of Maharashtra state is 5.90 Lakh tonnes during 2021-2022, out of which marine fish production is 4.43 Lakh tones and inland fish production is 1.57 Lakh tones. (Handbook on Fisheries Statistics, 2022) [4]. Maharashtra state is endowed with vast aquatic resources comprising of marine and inland water resources%. Rivers, lakes, reservoirs, tanks, canals, farm ponds, backwater and

estuaries along coastline stretching 720 km. Recently large no. of farm ponds are constructed in Maharashtra for the purpose of water storage for agriculture and horticulture production. It has been proved that farm ponds are the best resources for generation of additional income through fish culture practices. High levels of fish production is possible by adopting modern and scientific tools and techniques such as high stocking density, intensive feeding, appropriate fertilization regime, aeration, multiple harvesting etc. For adoption of scientific culture practices, Knowledge is foremost important aspect. Success of fish culture is almost dependent on the Knowledge of the farmer. To improve the adoption level of scientific fish culture practices, it is necessary to assess the knowledge of farmers. This would form outline for need based extension efforts. Considering the facts in view, the present work was carried out with an objective.

- 1) To identify socio-economic characteristics of fish farmers of Latur district
- 2) To assess level of knowledge of fish farmers regarding scientific fish culture practices.

Materials and Methods

The present study is carried out in Latur district of Maharashtra state and is based on primary and secondary data. To carry out the study the required data have been collected from Office of Agricultural Technology Management Agency, Latur. The study cover's a period of 2 years from 2021-22 to 2022-23. The collected data have been arranged in the tabular form and analyzed to understand the level of knowledge of farmers about scientific fish farming.

A list of total 90 farmers was prepared from 10 blocks of Latur District%. Ahmedpur, Ausa, Chakur, Deoni, Jalkot, Latur, Nilanga, Renapur, Shirur Anantpal and Udgir by taking personal interviews of farmers. The same information was filled in the pre-structured and tested interview

schedule. The data was collected by personal interview of fish farmer at their respective field. In the present study, data collection was mainly focused on Socio-personal, socio-economical and knowledge of scientific practices mainly focused on pond manuring, seed stocking, feed management, water quality management, health management and marketing management.

Results and Discussions

Total 90 farmers who are holding either fish pond or farm pond were studied. Out of 90 farmers 63 farmers (70%) are engaged in fish farming practices while 27 farmers (30%) are not engaged in fish farming practices. Socio-economic characteristics of fish farmers of Latur District are presented in Table 1.

Table 1: Socio-economic characteristics of fish farmers of Latur District

Sr. No.	Variables	Particulars	Frequency (N=90)	Percentage (%)
1	Gender	Male	88	98
		Female	02	02
2	Age group	20-30	12	13
		30-40	22	24
		40-50	34	38
		50-60	9	10
		Above 60	13	14
3	Family size	< 5	11	12.22
		5 -7	64	71.11
		> 7	15	16.66
4	Education status	Illiterate	0	0
		Primary school	22	24.44
		High school	48	53.33
		Graduation	20	22.22
5	Marital status	Married	78	86.66
		Unmarried	12	13.33
6	Occupation of respondent farmer having water resources	Engaged in Fish farming	63	70
		Not engaged in Fish farming	27	30
7	Annual Income	Less than Rs. 50,000	15	37.5
		Rs. 50,000 to 1,00,000	22	55
		More than Rs. 1,00,000	03	7.5

Out of total 90 farmers, majority of farmers are male (98%) and female (02%) with majority of age group between 40-50 years (38%). Maximum number of farmers (55%) are found

with annual income between Rs. 50,000 to 1,00,000 followed by Less than Rs. 50,000 (37.5%) and More than Rs. 1,00,000 (7.5%).

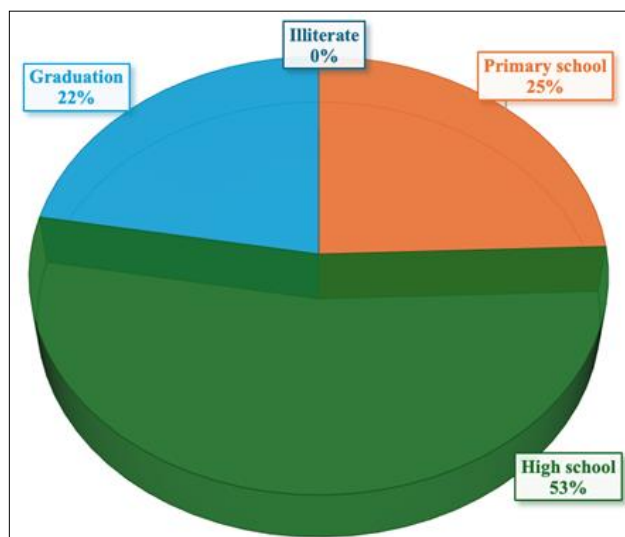


Fig 1: Educational status of fish farmers

Distribution of respondents based on their level of knowledge (all respondent) and adoption of fish farmers towards Pond manuring is presented in Table 2.

Table 2: Distribution of respondents based on their level of knowledge (all respondent) and adoption of fish farmers (engaged in fish farming practice) towards Pond manuring:

Category	Knowledge Level (N= 90)	
	No.	%
Low	53	58.88
Medium	26	28.88
High	13	12.22

Majority of fish farmers i.e. 58.88% were having low knowledge towards pond manuring followed by medium knowledge level (28.88%) and high level of knowledge (12.22%).

Distribution of respondents based on their level of knowledge and adoption of fish farmers towards seed stocking is given in the Table 3.

Table 3: Distribution of respondents based on their level of knowledge and adoption of fish farmers towards seed stocking

Category	Knowledge Level (N= 90)	
	No.	%
Low	31	34.44
Medium	41	45.55
High	18	20

Majority of fish farmers i.e. 45.55% were having medium level knowledge towards seed stocking followed by medium knowledge level (34.44%) and high level of knowledge (20%).

Table 4: Distribution of respondents based on their level of knowledge and adoption of fish farmers towards Feed management (N= 90)

Category	Knowledge level (N= 90)	
	No.	%
Low	39	43.33
Medium	36	40
High	15	16.16

Majority of fish farmers i.e. 43.33% were having low level knowledge towards feed management followed by medium

knowledge level (40%) and high level of knowledge (16.16%).

Table 5: Distribution of respondents based on their level of knowledge of fish farmers towards water quality management (N= 90)

Category	Knowledge Level (N= 90)	
	No.	%
Low	79	87.77
Medium	7	7.77
High	6	6.66

Majority of fish farmers i.e. 87.77% were having low level knowledge towards water quality management followed by medium knowledge level (7.77%) and high level of knowledge (6.66%).

Table 6: Distribution of respondents based on their level of knowledge of fish farmers towards Fish Health management (N= 90)

Category	Knowledge Level (N= 90)	
	No.	%
Low	83	92.22
Medium	5	5.55
High	2	2.22

Majority of fish farmers i.e. 92.22% were having low level knowledge towards fish health management followed by medium level of knowledge (5.55%) and high level of knowledge (2.22%).

Table 7: Distribution of respondents based on their level of knowledge of fish farmers towards Fish Harvesting and marketing management (N= 90)

Category	Knowledge level (N= 90)	
	No.	%
Low	62	68.88
Medium	18	20
High	10	11.11

Majority of fish farmers i.e. 68.88% were having low level knowledge towards fish health management followed by medium level of knowledge (20%) and high level of knowledge (11.11%).

Table 8: Correlation between knowledge about fish seed stocking and training

Sr. No	Name of the Block	No. of farmers having medium level of knowledge towards fish seed stocking	No. of Training attended
1	Ahmedpur	5	4
2	Ausa	2	2
3	Chakur	2	2
4	Deoni	4	4
5	Jalkot	5	3
6	Latur	8	6
7	Nilanga	4	3
8	Renapur	2	2
9	Shirur Anantpal	6	1
10	Udgir	7	6
Correlation Coefficient (r) = 0.696			

In the present study, level of knowledge of farmers was medium related to seed stocking while knowledge level of

farmers towards pond manuring, feed management, water quality management, health management, marketing

management were low. The knowledge about fish seed stocking and Training are positively correlated. The major reason could be due to large number of farm ponds are constructed in recent years. It also might be due lack of awareness about fish farming practices and inadequate training programme. Similar observations were made by Praveena (2019) ^[8]. Swetha *et al.* (2020) ^[10] also reported that knowledge level on scientific fish culture is low and requires training to improve the knowledge and understanding of fish farmers. According to Parvez (2013) ^[7], level of fish farmers regarding recommended practices was medium. The work carried out by Meeran (1983), Mahendra Kumar (1996) ^[5], Awasthi *et al.* (2000) ^[1], who also reported that majority of fish farmers were having medium level of knowledge related to scientific fish culture.

Conclusion

The overall conclusion is that majority of respondents were having low level of knowledge about scientific fish farming. Hence, emphasis should be given to provide technical knowledge of scientific fish farming through trainings and extension activities with main focus on the needs of farmers. It is necessary to put collective efforts Government as well as Non-Government organizations to work in collaborative mode. Considering the usefulness of social media, awareness programme, webinar etc. can be organized on digital platform for effective transfer of technology. It would be more worth to develop model farm ponds in every block or district to attract the farmers to adopt fish culture practices on scientific basis. In order to improve knowledge of fish farmers, extension officials should have frequent visit to the field with proper guidance. Authorities should provide technical and input support to the fish farmers.

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