Sociological Characteristics of the Farmers Practicing Fish Farming in Manipur

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A B S T R A C T

The present study was conducted with an objective to study the sociological characteristics of farmers practicing fish farming in Manipur. This study was conducted on 80 farmers in three villages viz. Ishok, Oinam, and Naorem under Nambol block of Bishnupur district. It was aimed to analyze the sociological characteristics of the widespread practice of fish farming in Manipur. The study was undertaken from December 2016 to February 2017 and the date pertains of the year 2016. In the present study, data was generated through a sample survey of farmers by personal interview methods using pretested well-structured interview schedule. Random sampling was adopted for the selection of the respondents. The finding of the study reported that the farmers engaged in fish farming have the following parameters with majority of age group showing 36-50 years (46.25%), general category (82.5%), primary occupation (83.75%), graduate (72.5%), regularly participated at social activities (71.25%), Single-family type (52.5%), family member above 5 (57.5%), land upto 5 acres (60%), no draught animals (81.25%), kutccha house (37.5%), bullock cart/cycle/radio/chair (83.75%), pond size between 1-5 acres (67.5%), less than 5 pond (67.5%), more than 1 acre in maximum water area (70%), 0.25 to 1 acre in minimum water area (85%), 1 to 2 acre in average water area (67.5%), more than 5 ft. in maximum water depth (72.5%), minimum water depth of 1 to 3 ft. (60%), average water depth between 4 to 6 ft. (62.5%), sell through middlemen (61.25%), income from fish between Rs. 1 to 5 lacs and income from others between Rs. 50000 and above (48.75%). The study concluded with the remark that understanding the sociological characteristics of the fish farming farmers can help the concerned authority to work with the farmers and develop various strategies to improve their practices.

Introduction

Fish is known for being highly nutritious, rich in protein, vitamins, and minerals which are essential to maintain good health. It is also a rich source of vitamins A, D and E. Also rich in essential omega-3 fatty acids which are essential for a healthy brain, eye and nerve

development in babies and children. The importance of fish as a source of high quality, balanced and easily digestible proteins is well known.

Fish has always been an important food item for a large section of people, especially in India. To the fish-eating population, it is an essential and integrated item of their daily diet and many rituals and social occasions. One important benefit of consuming fish is the nutritional and health benefits that one can acquire from its valuable content. Many of the world's poorest countries, especially in Asia and Africa, get a substantial portion of the animal protein from fish. In lowland areas, around 40-80% of animal protein comes from aquatic animals.

Fish production in the world rose from 23.50 million tonnes in 1950-1951 to 140.48 million tonnes in 2003-2004. Approximately 50 million people worldwide depend on fishing for almost all or most of their family earnings, while another 150 million depend on fish processing and the fleet servicing industry. More than 10 million people work in 2.5 million small- scale fishing vehicles and account for 50 percent of the world's catch. The world fish production has increased from 140.48 million tonnes in 2004 to 143.6 million tonnes in 2006.

Fish production in India rose from a mere 0.75 million tonnes in 1950-1951 to 6.40 million tonnes in 2003-2004 and the total fish production of our country stood at 6.87 million tonnes in 2006-2007. The share of our country in global fish production has grown gradually from about 2.66 percent during the 1960s and 1970s to 4.56 percent in 2003-2004. Overall, the share of developing countries in the total world fish production increased from 43 percent in 1973 to about 73 percent in 1997, which has been mainly due to the increasing contribution from countries like China and India (Delgado *et al.,* 2003).

The production of fish in Manipur for the year 2007-08 was estimated to be 18.65 thousand tonnes as against 18.53 thousand tonnes in 2006-07. The present level of annual fish production of the state is to the tune of 19,200 tonnes as against the total requirement of about 27,500 tonnes

Manipur has no marine fishes. But it vast potential of fishery resources, the swamps, and marshy areas are lying barren without any effective utilization. The lakes, reservoirs, beels, tanks, canals, etc. cover an area of about 13,221.45 ha. Whereas rivers, streams, etc. account for 13,888.27 ha.

The main objectives of this study, to find the sociological characteristics of the farmers practicing fish farming in Manipur

Materials and Methods

The study was conducted in three villages viz. Ishok, Oinam and Naorem with 80 sample farmers from Nambol block of Bishnupur district in Manipur. Simple random sampling technique was adopted in studying the farmers. The selection of district, block and villages were purposively selected for the study. Twenty two independent variables were taken up in other to study the sociological characteristics of the farmers practicing fish farming. The data collected for the study were tabulated and statistical tools like frequency and percentage were used for the conclusion.

Results and Discussion

The study on the sociological characteristics of the fish farming farmers of Manipur were presented and discussed in terms of age, caste, occupation, education, social participation, family type, family size, land holding, farm power, house type, material possession, pond size, number of ponds, maximum water area, minimum water area, average water area, maximum water depth, minimum water depth,

average water depth, market sale, income from fish and income from others. The results of the investigation are presented and discussed below with their separate table with frequency and percentage.

Analysis of the date from the table 1 on age indicates that majority of the fish farming farmers fall in the middle age category (36-50 years) with a percentage of 46.25% in first category, (43.75%) of old age (51 years and above) in the second category and (10%) of young (upto 35 years) in the third category.

Analysis of the data from table 2 on caste indicates that majority of the fish farming farmers (82.5%) fall in the general category, (12.5%) in schedule caste as in second category and (5%) in schedule tribe in the third category.

Analysis of the data from table 3 on occupation indicates that majority of the fish farming farmers (83.75%) falls in the primary occupation and (16.25%) in secondary occupation in the second category.

Analysis of the data from table 4 on education indicates that majority of the fish farming farmers (72.5%) were graduate and (27.5%) were studied upto high school in second category.

Analysis of the date from table 5 on social participation indicates that majority of the fish farming farmers (71.25%) were regularly take part in the social activities, (20%) were occasionally participated as in second category and (8.75%) were never take part in social activities as in third category.

Analysis of the data from table 6 on family type indicates that majority of the fish farming farmers (52.5%) were single family type category and (47.5%) were joint family type category in second category.

Analysis of the data from table 7 on family size indicates that majority of the fish farming farmers (57.5%) were having family members above 5 and (42.5%) of family members is upto 5 in second category

Analysis of the date from table 8 on land holding indicates that majority of the fish farming farmers (60%) were having a land upto 5 acres, (17.5%) were having land upto 1 acre in second category, (13.75%) were having land upto 10 acres in third category, (5%) were having land upto 15 acres in fourth category, (2.5%) were having land upto 20 acres in fifth category and (1.25%) were having land above 20 acres in the sixth category.

Analysis of the data from table 9 on farm power indicates that majority of the fish farming farmers (81.25%) have no draught animals, (13.75%) have 5-6 draught animals or tractor or power tiller in the second category, (3.75%) have 1-2 draught animals in the third category, (1.25%) have 3-4 draught animals or 1 or more prestige animals in the fourth category.

Analysis of the data from table 10 on house type indicates that majority of the fish farming farmers (37.5%) were having kutccha house, (33.75%) were having mixed house in second category and (28.75%) were having pucca house in the third category.

Analysis of the data from table 11 on material possession indicates that majority of the fish farming farmers (83.75%) were having bullock cart/cycle/radio/chair and (16.25%) were having improved agricultural implements in the second category.

Analysis of the data from table 12 on pond size indicates that majority of the fish farming farmers (87.5%) were having pond size between 1 to 5 acres, (6.25%) have pond size

between 6 to 10 acres in the second category, (5%) have pond size between 11 to 15 acres in the third category and (1.25%) have pond size between 16 to 20 acres in the fourth category.

Table.1 Distribution of the respondents on the bases of Age: (N=80)

Items	Category	Frequency (N=80)	Percentage
Age	Young (upto 35 years) (1)	8	10
	Middle Age (36-50 years) (2)	37	46.25
	Old Age (51 years and above) (3)	35	4 483.75

Table.2 Distribution of the respondents according to Caste: (N=80)

Items	Category	Frequency (N=80)	Percentage
Caste	General (3)	66	82.5
	Scheduled caste (2)	10	12.5
	Scheduled tribe (1)	4	5

Table.1.3 Distribution of the respondents according to occupation: (N=80)

Items	Category	Frequency (N=80)	Percentage
Occupation	Primary (2)	67	83.75
	Secondary (1)	13	16.25

Table.1.4 Distribution of the respondents according to education: (N=80)

Items	Category	Frequency (N=80)	Percentage
Education	Illiterate (0)		
	Can read only (1)		
	Can read and write (2)		
	Primary (3)		
	Middle (4)		
	High school (5)	22	27.5
	Graduate (6)	58	72.5

Table.1.5 Distribution of the respondents according to Social Participation: (N=80)

Items	Category	Frequency (N=80)	Percentage
Social participation	Regularly (3)	57	71.25
	Occasionally (2)	16	20
	Never (1)	7	8.75

Table.1.6 Distribution of the respondents according to family type: (N=80)

Items	Category	Frequency (N=80)	Percentage
Family type	Single (1)	42	52.5
	Joint(2)	38	47.5

Table.1.7 Distribution of the respondents according to family size: (N=80)

Items	Category	Frequency (N=80)	Percentage
Family size	Upto 5 members (1)	34	42.5
	Above 5 members (2)	46	57.5

Table.1.8 Distribution of the respondents according to Land Holding: (N=80)

Items	Category	Frequency (N=80)	Percentage
Land	No land (0)		
	Upto 1 acre (1)	14	17.5
	Upto 5 acres (2)	48	60
	Upto 10 acres (3)	11	13.75
	Upto 15 acres (4)	4	5
	Upto 20 acres (5)	2	2.5
	Above 20 acres (6)	1	1.25

Table.1.9 Distribution of the respondents according to farm power: (N=80)

Items	Category	Frequency (N=80)	Percentage
Farm power	No draught animal (0)	65	81.25
	1-2 draught animals(2)	3	3.75
	3-4 draught animals or 1 or more prestige animals(4)	1	1.25
	5-6 draught animals or tractor or power tiller (6)	11	13.75

Table.1.10 Distribution of the respondents according to house type: (N=80)

Items	Category	Frequency (N=80)	Percentage
House type	No house (0)		
	Hut (1)		
	Kutccha house (2)	30	37.5
	Mixed house (3)	27	33.75
	Puccahouse (4)	23	28.75
	Mansion (5)		

Table.11 Distribution of the respondents according to material possession: (N=80)

Items	Category	Frequency (N=80)	Percentage
Material possession	Bullock cart /Cycle /Radio /Chair (1)	67	83.75
	Improved agricultural implements (2)	13	16.25

Table.12 Distribution of the respondents according to pond size: (N=80)

Items	Category	Frequency (N=80)	Percentage
Pond size	1-5 acres (1)	70	87.5
	6-10 acres (2)	5	6.25
	11-15 acres (3)	4	5
	16-20 acres (4)	1	1.25

Table.13 Distribution of the respondents according to number of ponds: (N=80)

Items	Category	Frequency (N=80)	Percentage
Number of ponds	Less than 5 ponds(1)	54	67.5
	5 ponds (2)	10	12.5
	More than 5 ponds (3)	16	20

Table.14 Distribution of the respondents according to maximum water area: (N=80)

Items	Category	Frequency (N=80)	Percentage
Maximum water area	Less than 1 acre (1)	3	3.75
	1 acre (2)	21	26.25
	More than 1 acre (3)	56	70

Table.15 Distribution of the respondents according to minimum water area: (N=80)

Items	Category	Frequency (N=80)	Percentage
Minimum water area	0.25 to 1 acre (1)	68	85
	1 to 2 acre (2)	12	15

Table.16 Distribution of the respondents according to average water area: (N=80)

Items	Category	Frequency (N=80)	Percentage
Average water area	0.25 to 1 acre (1)	26	32.5
	1 to 2 acre (2)	54	67.5

Table.17 Distribution of the respondents according to maximum water depth: (N=80)

Items	Category	Frequency (N=80)	Percentage
Maximum water depth	Less than 5ft (1)		
	5ft (2)	22	27.5
	More than 5ft (3)	58	72.5

Table.18 Distribution of the respondents according to minimum water depth: (N=80)

Items	Category	Frequency (N=80)	Percentage
Minimum water depth	1 to 3 ft (1)	48	60
	4 to 6 ft (2)	32	40

Table.19 Distribution of the respondents according to average water depth: (N=80)

Items	Category	Frequency (N=80)	Percentage
Average water depth	1 to 3 ft (1)	30	37.5
	4 to 6 ft (2)	50	62.5

Table.20 Distribution of the respondents according to market sale: (N=80)

Items	Category	Frequency (N=80)	Percentage
Market sale	Direct sale (2)	31	38.75
	Middlemen (1)	49	61.25

Table.21 Distribution of the respondents according to income from fish: (N=80)

Items	Category	Frequency (N=80)	Percentage
Income from fish cultivation	Rs. 10,000-50,000 (1)	1	1.25
	Rs. 50,000- 1 lac (2)	24	30
	Rs. 1 lac- 5 lacs (3)	38	47.5
	Rs. 5 lacs-10 lacs (4)	14	17.5
	Rs. 10 lacs and above (5)	3	3.75

Table.22 Distribution of the respondents according to income from other: (N=80)

Items	Category	Frequency (N=80)	Percentage
Income from other source	Rs. 5000-10,000 (1)	16	20
	Rs. 10,000-50,000 (2)	25	31.25
	Rs. 50,000 and above (3)	39	48.75

Analysis of the data from table 13 on number of ponds indicates that majority of the fish farming farmers (67.5%) were having less than 5 ponds, (20%) were having more than 5 ponds in the second category and (12.5%) were having 5 ponds in the third category. Analysis of the data from table 14 on maximum water area indicates that majority of the fish farming farmers (70%) have maximum water area of more than 1 acre, (26.25%) have maximum water area of 1 acre in the second category and (3.75%) have less than 1 acre in the third category.

Analysis of the data from table 15 on minimum water area indicates that majority of the fish farming farmers (85%) have least minimum water area between 0.25 and 1 acre and (15%) have least minimum water area between 1 and 2 acre in the second category.

Analysis of the data from table 16 on average water area indicates that majority of the fish farming farmers (67.5%) have average water area between 1 and 2 acre and (32.5%) have average water area between 0.25 and 1 acre in the second category.

Analysis of the data from table 17 on maximum water depth indicates that majority of the fish farming farmer (72.5%) have more than 5ft depth of water and (27.5%) have 5ft depth of water in the second category.

Analysis of the data from table 18 on minimum water depth indicates that majority of the fish farming farmer (60%) have lower minimum water depth of 1 to 3 ft., (40%) have higher minimum water depth 4 to 6 ft. in the second category.

Analysis of the data from table 19 on average water depth indicates that majority of the fish farming farmers (62.5%) have higher average depth between 4 and 6ft. and (37.5%) have less average water depth between 1 to 3 ft. in the second category.

Analysis of the data from table 20 on market sale indicates that majority of the fish farming farmers (61.25%) have sell through middlemen and (38.75%) have sell through direct sale in the second category.

Analysis of the data from table 21 on income from fish indicates that majority of the fish farming farmers (47.5%) have an income from fish between Rs. 1 lac to 5 lacs, (30%) have an income from fish in between Rs. 50000 to 1 lac in the second category, (17.5%) have an income from fish between Rs. 5 lacs to 10 lacs in the third category, (3.75%) have an income from fish between Rs. 10 lacs and above in the fourth category and (1.25%) have an income from fish between Rs. 10000 to 50000 in the fifth category.

Analysis of the data from table 22 on income from other indicates that majority of the fish farming farmers (48.75%) have an income from other between Rs. 50000 to above, (31.25%) have an income from other between Rs.10000 to 50000 in the second category and (20%) have an income from other between Rs. 5000 to 10000 in the third category.

Acknowledgments

References

Katiha, P.K., Jena, J.K., Pillai, N. G. K., Chakraborty, C., and Dey, M. M. (2005). Inland aquaculture in India: past trent, present status and future prospects. *Aquaculture Economics and Management.* 9 (1/2): 237-264.

Pandey, D.K., H. K. De, B. Hijam (2014). Fish Farmers' perceived constrains in transfer of aquaculture technology in

Bishnupur district of Manipur, India. *Indian Journal of Fisheries and Aquatic* *Studies.* 2(1): 01-04.