



# Chapter 4

## Fish Farmers in Manipur: A Socio-economic analysis

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## 4.1 INTRODUCTION

The present chapter identifies and discusses different socio-economic conditions of agripreneur in taking up fish farming in Manipur. The socio-economic characteristics of farmers strongly influence their response in taking up farming as a well established activity and to become an agripreneur. Lack of authentic information on the socio-economic conditions of the targeted group is one of the serious impediments in the successful implementation of developmental programmes. Fish farming in most of the cases been adopted by strata of societies which are economically and socially in better position than the majority in rural areas. In the fisheries sector, several micro and macro level socio-economic surveys had been conducted by various agencies and research workers in different regions of our country to study one or the other problems of fishermen and fish farmers community (Goswami, et.al.,2002, Surapa, 2010, Upadhyay, 2010, Bisoyi, 2005, Joshi,1996, Jha, 2009, Talukdar & Sontaki, 2005). However, attempts have been made to study the socio-economic conditions of fish farmers in Manipur.

Entrepreneurship must not be misunderstood as the establishment of large industry or mass scale methods of production. Such an interpretation is apt to miss much of the activities of the innovators in the traditional agriculture in the course of its transformation involving a large number of small changes such as the introduction of new crops, cleaning of land in new regions for extension of cultivation, development of trading connection and routes and improvement in transformation and communication facilities. (Narayana: 1966)

J.B .Say described entrepreneur as the agent who combines the necessary factors into productive organism, thereby playing a crucial role both in production and distribution, whether it is agriculture or industry (Narayana: 1966). David Ricardo, who was a contemporary of J.B. Say and a great systematize of classical political economy, treated



the industrial manufacturer and agricultural farmers synonymously as entrepreneur throughout his famous book, “The Principles of Political Economy and Taxation”. In his words” the farmer and manufacture can no more live without profit than the labourer without wages” (Ricardo,1962).

“Agribusiness” in board term encompassing all aspects of agricultural production, processing and distribution. John Davis and Rav Goldberg defined agribusiness as the sum total of all operations involved in the manufacture, and distribution of farm supplies; production operations on the farm; and the storage, processing, and distribution of the resulting farm commodities and items (ct. in Hans,2006).

A total of 370 fish farmers were interviewed to collect the data relating to the socio-economic profile and production of fish. The production of fish is then converted into productivity in kilograms (kgs.) per hectare per annum. The data is tabulated and statistical analysis like percentage and correlation are used.

#### **4.2 SOCIO-ECONOMIC CONDITION OF FISH FARMERS: RESULTS AND DISCUSSION**

In the fisheries sector, socio-economic conditions of fish farmers plays vital role in the production of fish. Socio-economic parameters such as age, gender, caste and religion, educational qualification, nature and size of the family of the fish farmers influence their response to new technology and in production process.

##### **Age and gender of sampled fish farmers:**

The age of entrepreneur plays an important role in the growth and expansion of business because the adoption of new methods and techniques of production, progressive outlook, innovative spirit, risk taking are closely related to the age factor of the entrepreneur (Hussain, 2003). The distribution of sample fish farmers at the time of survey reveals that fish farming were mainly taken up mainly by the



age group of 40-50 years with 51.4% of the total population. The study also reveals that 24.6% were in the age group of 30-40 years and 17% were in the age group of 50-60 years.

Table 4.1: Classification of age groups of the sampled respondents

Age	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
20-30	1 (1)	6 (3.8)	1 (1.1)	1 (3.8)	9 (2.4)
30-40	29 (30.2)	37 (23.8)	21 (22.8)	4 (15.4)	91 (24.6)
40-50	49 (51.0)	86 (55.1)	46 (50.0)	9 (34.6)	190 (51.4)
50-60	12 (12.6)	23 (14.7)	18 (19.6)	10 (38.6)	63 (17.0)
60-70	4 (4.2)	4 (2.6)	6 (6.5)	1 (3.8)	15 (4.1)
70-80	1 (1)	0 (0)	0 (0)	1 (3.8)	2 (.5)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

Table 4.2 reveals classification of sex groups of the sampled respondents. The table reveals that 93.5% of the respondents belonged to male groups and only 6.5% of the sampled respondents belonged to the female groups. Majority of the respondents belonged to males and females respondents are negligible. Patriarchal type of society exists in Manipur society, property of the family is in the name of the father, so most of the fish farmers are male.



Table.4.2: Classification of sampled respondents according to gender

Gender	Districts				
	Bishnupur	Imphal East	Imphal West	Thoubal	Total
Male	95 (99)	135 (86.5)	90 (97.8)	26 (100)	346 (93.5)
Female	1 (1)	21 (13.5)	2 (2.2)	0 (0)	24 (6.5)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

### Religion and caste

Table 4.3 depicts classification of the respondents according to their religion. The table reveals that 88.6% of the sampled respondents belonged to Hindu. The table also reveals that 3.5% belonged to Christian, 3.8% belong to Muslims and other which includes Meitei accounts only 4.1% of the sampled respondents. In the sample area, fish farming has been taken up mostly by Hindu community.

Table 4.3: Classification of sampled respondents according to religion

Religion	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Hindu	90 (93.8)	140 (89.7)	81 (88)	17 (65.4)	328 (88.6)
Christian	0 (0)	8 (5.2)	5 (5.4)	0 (0)	13 (3.5)
Islam	4 (4.2)	2 (1.3)	2 (2.2)	6 (23.1)	14 (3.8)
Other	2 (2.1)	6 (3.8)	4 (4.4)	3 (11.5)	15 (4.1%)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

Figure 4.1: Classification of sampled respondents according to religion

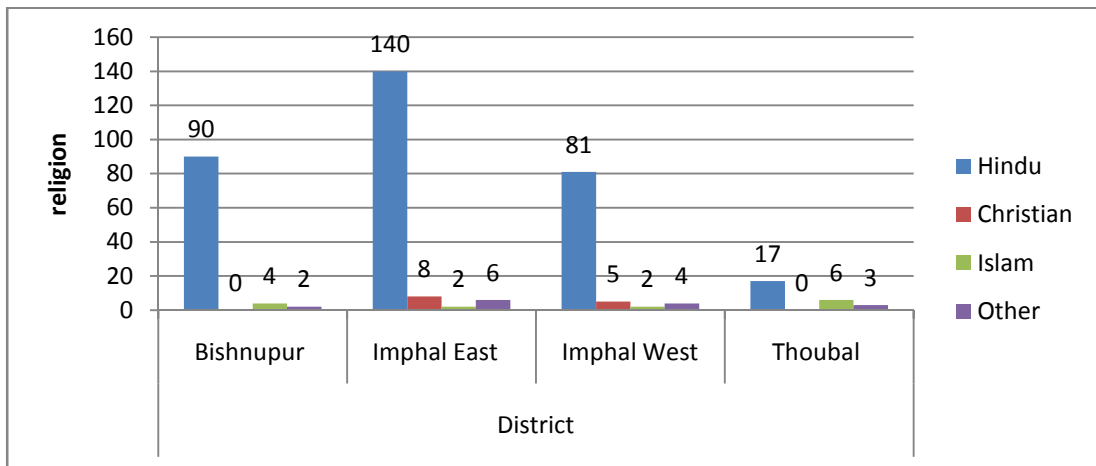


Table 4.4 shows the distribution sampled respondents according to social groups. The social groups have been classified into four categories viz. (i) scheduled Tribes (ST) (ii) Scheduled Castes (SC) (iii) other Backward Castes (OBC) (iv) General. The study reveals that 66.5% of the respondents belonged to OBC, 32.7% belonged to General and the remaining 0.8% of the respondents belonged to ST and SC. Thus, most of the respondents belonged to OBC.

Table 4.4: Classification of sampled respondents according to social groups

Caste	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
ST	0 (0)	0 (0)	1 (1.1)	0 (0)	1 (.3)
SC	0 (0)	2 (1.3)	0 (0)	0 (0)	2 (.5)
OBC	70 (72.9)	140 (89.7)	20 (21.7)	16 (61.5)	246 (66.5)
General	26 (27.1)	14 (9)	71 (77.2)	10 (38.5)	121 (32.7)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

## Occupation

The standard of living and earning of fish farmers depends on their occupation. Table 4.5 depicts distribution of respondents according to occupation. The table shows that whether fish farming has been conducted both as primary and secondary occupation. The study reveals that of 370 samples, 331 samples performed fish farming as their primary occupation which accounts for 89.5% of the total respondents. The remaining 10.5% respondents performed fish farming as their secondary occupation. Fish farming activities is associated with other activities. Respondents did not perform single activities. Other activities like agriculture, business, artisans, handlooms and handicrafts, services are performed simultaneously.

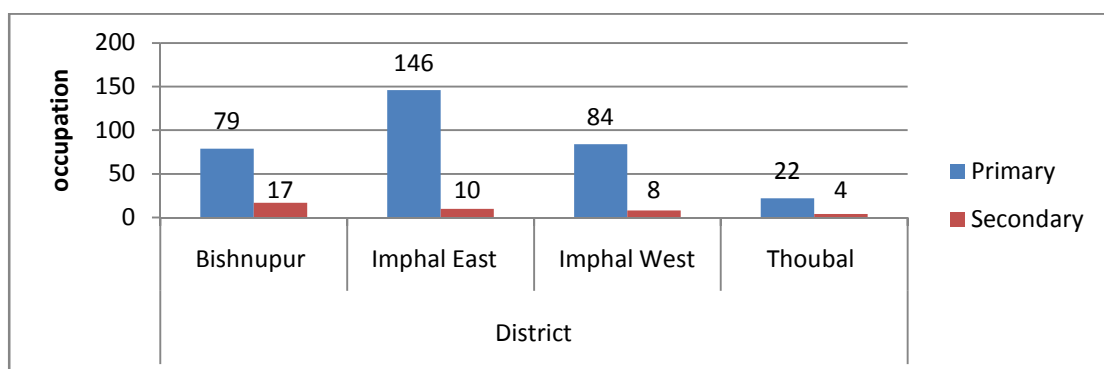
Table 4.5: Classification of respondents according to occupation

Occupation	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Primary	79 (82.3)	146 (93.6)	84 (91.3)	22 (84.6)	331 (89.5)
Secondary	17 (17.7)	10 (6.4)	8 (8.7)	4 (15.4)	39 (10.5)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

Figure 4.2: Classification of respondents according to occupation





The table below depicts the classification of respondents according to type of ownership. The study reveals that 86.6% respondents have their own fish farm while 13% of the total respondents work in co-operative fish farm.

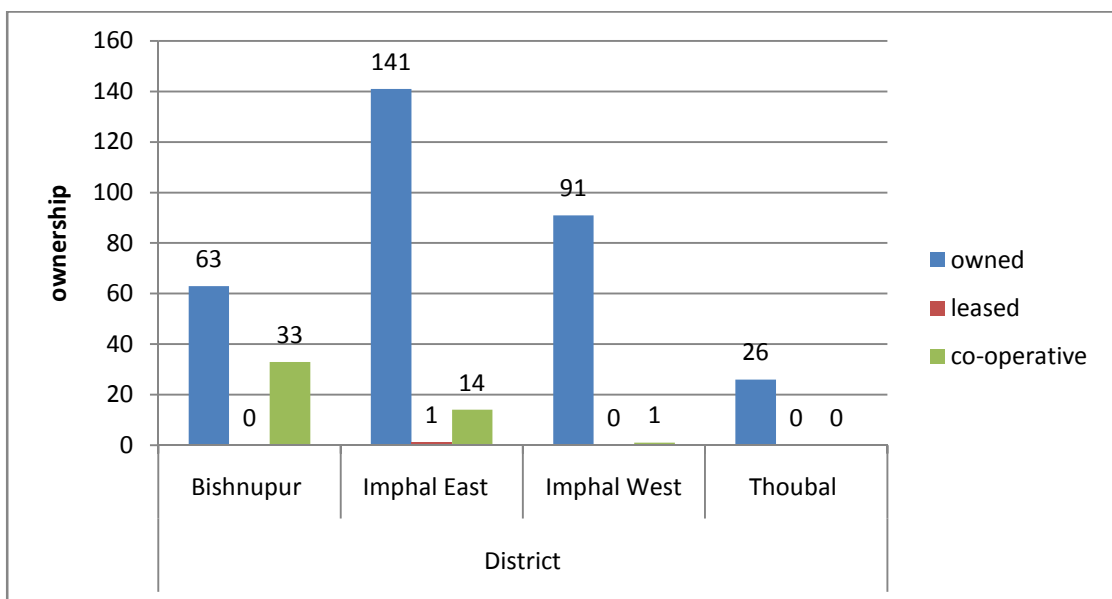
Table 4.6: Classification of respondents according to ownership

Type of ownership	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Owned	63 (65.6)	141 (90.4)	91 (98.9)	26 (100)	321 (86.7)
Leased	0 (0)	1 (0.6)	0 (0)	0 (0)	1 (.3)
Co-operatives	33 (34.4)	14 (9)	1 (1.1)	0 (0)	48 (13.0)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

Figure 4.3: Classification of sampled respondents according to ownership







## Educational status

Table 4.7 reveals the classification of respondents according to educational qualifications. Education is said to be an important variable which influence the supply and performance of entrepreneurs. There is enough evidence to show the importance of education as a factor in economic development. As Authur Lewis rightly observed that the basic reason why poor countries remain poor is unquestionable because they lack knowledge, i.e., education. Business growth depends on the literacy of the entrepreneur and it influences the decision of the business. The present study reveals that fish farmers with graduate have the highest percentage of education with 27.8% of the total respondents. Among the sample farmers 3.5% of the respondents have no education, another 3.5% have education upto primary, 20.8% have education upto matric, 15.4% respondents have education upto higher secondary and 4.6% respondents have education upto post graduate. Thus, it can be said that maximum sampled fish farmers are educated.

Table 4.7: Classification of sampled respondents according to educational qualifications

Educational qualifications	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Illiterate	3 (3.2)	4 (2.6)	4 (4.3)	2 (7.7)	13 (3.5)
Upto primary	0 (0)	10 (6.4)	3 (3.3)	0 (0)	13 (3.5)
Under matriculate	5 (5.2)	55 (35.3)	27 (29.3)	3 (11.5)	90 (24.3)
Matriculate	22 (22.9)	25 (16)	24 (26.1)	6 (23.2)	77 (20.8)
Higher secondary	19 (19.8)	22 (14.1)	9 (9.8)	7 (26.9)	57 (15.4)
Graduate	46 (47.9)	27 (17.3)	23 (25)	7 (26.9)	103 (27.8)
Post graduate	1 (1)	13 (8.3)	2 (2.2)	1 (3.8)	17 (4.6)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.



### Nature and size of family

Table 4.8 depicts the distribution of respondents according to the nature of family. The table reveals that 49.7% of the total respondents belong to nuclear family while 40.6% of the total respondents to joint family and the remaining 9.7% belonged to extended family. The present study reveals that the respondents equally belong to nuclear and joint family.

Table 4.8: Classification of sampled respondents according to nature of family

Nature of family	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Nuclear	20 (20.8)	130 (83.3)	26 (28.3)	8 (30.8)	184 (49.7)
Joint family	75 (78.2)	18 (11.5)	43 (46.7)	14 (53.8)	150 (40.6)
Extended	1 (1)	8 (5.2)	23 (25)	4 (15.4)	36 (9.7)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

The table below shows the distribution of respondents according to size of family. Table 4.9 reveals that 53.8% respondents have family members ranging from 5-8 while 19.2% respondents have 1-4 members and 22.4% of the total respondents have 9-12 family members. Member of the family are large than they do not have to hire labour in fish farming. And the study also reveals that maximum of the respondents have 5-8 family members.



Table 4.9: Classification of sampled respondents according to size of the family

Family size (in number)	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
0-4	7 (7.3)	52 (33.4)	8 (8.7)	3 (11.6)	71 (19.2)
5-8	25 (26)	93 (59.6)	68 (75)	13 (50)	199 (53.8)
9-12	55 (57.3)	10 (6.4)	13 (14.1)	5 (19.2)	83 (22.4)
13-16	9 (9.4)	1 (.6)	2 (2.2)	5 (19.2)	17 (4.6)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

### Housing, drinking water and lighting:

Housing pattern is one of the most important indicators used to assess the economic well-being of any community. The table below shows the distribution of respondents according to the type of house they stayed. The study reveals that 19 respondents i.e. 5.1% stayed in pucca house while 47% stayed in semi pucca house and 47.9% of the respondents stayed in kutcha house. Thus, fish farmers have good housing condition.

Table 4.10: Classification of sampled respondents according to type of house they stay

Type of house	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Pucca	2 (2.1)	9 (5.8)	3 (3.2)	5 (19.2)	19 (5.1)
Semi- pucca	91 (94.8)	32 (20.5)	34 (37)	17 (65.4)	174 (47.0)
Kutcha	3 (3.1)	115 (73.7)	55 (59.8)	4 (15.4)	177 (47.9)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.



The table below shows the distribution of respondents according to the sources of drinking water. For the purpose of the study, the source of drinking water is divided into five types i.e. (i) own tap (ii) public tap (iii) own pond (iv) public pond (v) other. The study reveals that from 370 respondents 121 respondents i.e. 32.7% used their own tap as their source of drinking water, 33.5% used public tap as a source of drinking water. 87 respondents which occupied 23.5% of the total respondents used public pond as their source of drinking water.

Table 4.11: Classification of sampled respondents according to sources of drinking water

Sources of drinking water	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
own tap	12 (12.5)	101 (64.7)	5 (5.4)	3 (11.5)	121 (32.7)
public tap	32 (33.4)	46 (29.5)	29 (31.5)	17 (65.4)	124 (33.5)
own pond	37 (38.5)	4 (2.6)	42 (45.7)	4 (15.4)	87 (23.5)
public pond	14 (14.6)	3 (1.9)	16 (17.4)	2 (7.7)	35 (9.5)
other	1 (1)	2 (1.3)	0 (0)	0 (0)	3 (.8)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

The table below depicts the distribution of respondents according to the sources of lighting. For the purpose of the study the source of lighting is divided into four types of lighting viz. electricity, kerosene, both electricity and kerosene and other source of lighting.



The study reveals that 17 respondents that occupy only 4.6% of the total respondents uses electricity as a medium of lighting. 2.2% of the total respondents use only kerosene as a medium of lighting and 344 respondents that occupy 93% of the total respondents uses both electricity and kerosene as a medium of lighting.

Table 4.12: Classification of sampled respondents according to medium of lighting

Medium of lighting	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Electricity	10 (10.4)	4 (2.6)	0 (0)	3 (11.5)	17 (4.6)
Keroeine	6 (6.3)	1 (0.6)	1 (1.1)	0 (0)	8 (2.2)
Both 1&2	80 (83.3)	151 (96.8)	90 (97.8)	23 (88.5)	344 (93.0)
Other	0 (0)	0 (0)	1 (1.1)	0 (0)	1 (.3)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

**Consumption habit:**

The table 4.13 depicts the distribution of respondents according to their consumption habit. The study reveals that out of the total 370 respondents, only 24 respondents (6.5%) have the habit of consuming beedi, 28 respondents (7.6%) consume cigarate, 22 respondents (5.9%) consumes khaini and 269 respondents which account for 72.7% are not in habit of consuming the above mention things.



Table 4.13: Classification of sampled respondents according to consumption habit

Consumption habit	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Beedi	3 (3.1)	0 (0)	18 (19.6)	3 (11.5)	24 (6.5)
Cigarette	5 (5.2)	3 (1.9)	16 (17.4)	4 (15.4)	28 (7.6)
Liquor	0 (0)	1 (0.6)	18 (19.6)	3 (11.5)	22 (5.9)
Khaini	0 (0)	0 (0)	16 (17.4)	4 (15.4)	20 (5.4)
Other	2 (2.1)	0 (0)	0 (0)	5 (19.5)	7 (1.9)
None	86 (89.6)	152 (97.4)	24 (26)	7 (26.9)	269 (72.7)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

### Experience and purpose of fish farming

The table below shows the distribution of fish farmers according to the experience of fish farming. The study reveals that 172 respondents (46.4%) of the total respondents have an experience of fish farming for less than 10 years, followed by 10-20 years of experience represented by 36.8% and respondents with 20-30 years of experience accounts for only 14.9%.

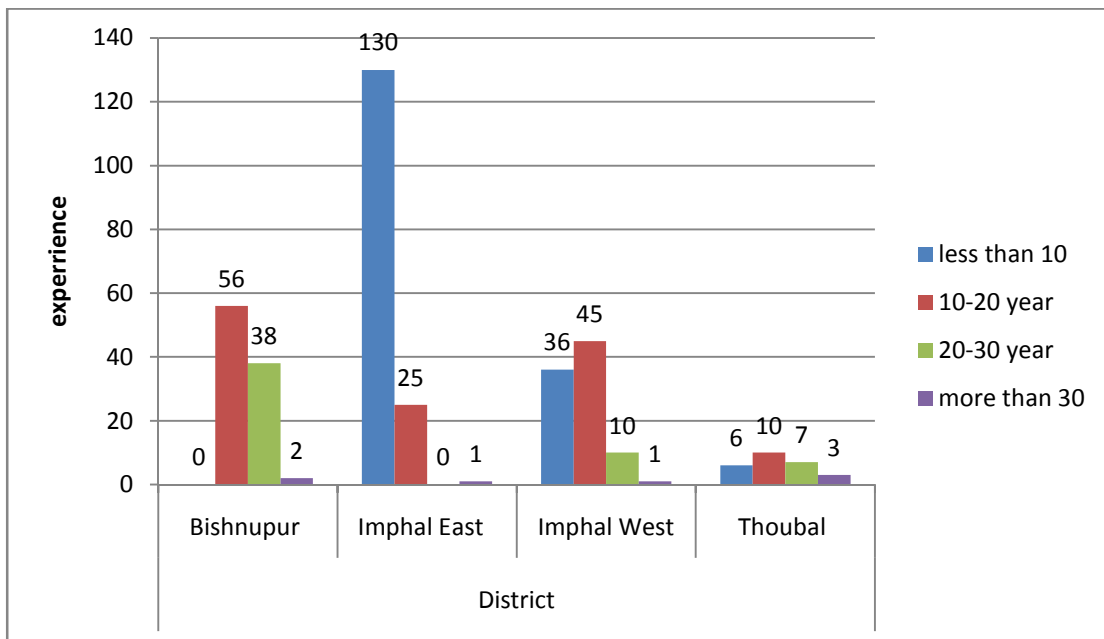
Table 4.14: Classification of sampled respondents according to experience of fish farming

Experience	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
Less than 10	0 (0)	130 (83.4)	36 (39.1)	6 (23.1)	172 (46.4)
10-20 year	56 (58.3)	25 (16)	45 (48.9)	10 (38.5)	136 (36.8)
20-30 year	38 (39.6)	0 (0)	10 (10.9)	7 (26.9)	55 (14.9)
More than 30	2 (2.1)	1 (0.6)	1 (1.1)	3 (11.5)	7 (1.9)
Total	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

Figure 4.4: Classification of sampled respondents according to experience of fish farming





The table below shows the distribution of fish farmer according to production of fish in kgs. per hectare. The table reveals that 34.1% respondents produce 1001-2000 kg. of fish, while 31.4% respondents produce fish between 0-1000 kgs. Remaining 34.6% of the total respondents produce fish ranging from 2000 kgs and more per hectare.

Table 4.15: Classification of respondents according to level of production

Production per hectare(kgs)	Districts				Total
	Bishnupur	Imphal East	Imphal West	Thoubal	
0-1000	9 (9.4)	26 (16.7)	68 (73.9)	13 (50)	116 (31.4)
1001-2000	36 (37.5)	64 (41.0)	19 (20.6)	7 (26.9)	126 (34.1)
2001-3000	40 (41.7)	64 (41.0)	3 (3.3)	1 (3.8)	108 (29.2)
3001-4000	5 (5.2)	0 (0)	1 (1.1)	2 (7.7)	8 (2.2)
4000 and more	6 (6.2)	2 (1.3)	1 (1.1)	3 (11.5)	12 (3.2)
	96 (100)	156 (100)	92 (100)	26 (100)	370 (100)

Source: Field survey

N.B. Figures in the parentheses indicate percentage

The table 4.16 shows the distribution of annual income of fish farmers in the study area. It is seen in the table that more than half of the fish farmers (65.40%) earn income below `1,50,000. Only 39.19 % fish farmers earn annual income from ` 1,50,000 to 2,50,000 and remaining 5.41% fish farmers earn annual income from ` 2,50,000 and more.





#### 4.16: Net income of fish farmers

Annual Income (₹)	Number of fish farmers	% of total fish farmers
50,000-1,00,000	116	31.35
1,00,000-1,50,000	126	34.05
1,50,000-2,00,000	58	15.68
2,00,000-2,50,000	50	13.51
2,50,000 and more	20	5.41
Total	370	100

*Source: Field survey*

*N.B. Figures in the parentheses indicate percentage*

Table 4.17 shows the distribution of fish farmers according to their saving. It can be seen from the table that 43.78% respondents save from ₹10,000-15,000 only and only 17.30 respondents save from ₹15,000-20,000. Only 5.95 % respondents save from ₹40,000 and more. Here we can see that saving made by fish farmers in the study area is very less.

#### 4.17: Saving of fish farmers

Yearly saving (₹)	Number of fish farmers	% of total fish farmers
10,000-15,000	162	43.78
15,000-20,000	64	17.30
20,000-25,000	30	8.11
25,000-30,000	14	3.78
30,000-35,000	23	6.22
35,000-40,000	55	14.86
40,000 and more	22	5.95
Total	370	100

*Source: Field survey*

*N.B. Figures in the parentheses indicate percentage*

The table below shows the relationship between socio-economic variables and productivity of fish. The study reveals that age, gender, occupation and experience in fish farming of sample fish farmers have



no relationship with productivity of fish. Type of ownership, educational qualification and purpose of fish farming has a positive relationship with the productivity of fish. The productivity of fish increases when the fish farmers are members of co-operative society then. When the fish farmers are producing both fish seeds and table fish then productivity of fish also increase. Land area and productivity of fish has negative relationship i.e. with the increase in area of fish farm the productivity of fish goes down.

Table 4.18: Relationship between selected Socio-economic variables and productivity of fish.

Sl. No.	Variables	“r” value
1	Age	.039 NS
2	Gender	.013 NS
3	Occupation	.093 NS
4	Type of ownership	.177**
5	Educational qualification	.117*
6	Land area	-.262**
7	Experience in fish farming	.032 NS
8	Purpose of fish farming	.177**

*NS: Non significant*

*\*\* : Significant at 1% level*

*\* : Significant at 5% level*

Entrepreneur came from diverse economic, social and geographic backgrounds that influence entrepreneurial sprits. However, it is rightly pointed out, what immediately a concern is not their milieu, rather the factors which have ultimately influenced them to take to the present line of business (Sharma: 1980). Table 4.19 reveals that 39.92% has taken up fish farming due to lack of employment while 29.23% said that they have chosen it they think that it is a profitable venture. Of the sample population 19.02% has



started fish farming as they have interest in this type of venture and only 11.83% which rank the least has taken up because it is their parental occupation.

Table 4.19: Reason for taking up fish farming:

Rank	Factors	Respondents (%)
1	Lack of employment	39.92
2	Profitable	29.23
3	Self interest	19.02
4	Hereditary	11.83

*Source: Field survey*

Table 4.20 shows the classification of different respondents according to the training programme attended by different social groups. The table below reveals that 54.86 percent of respondents have attended the training programme of fish farming and 45.14 percent respondents have not attended any training programme. The study reveals that 27% respondents belong to the age group of 20-40 years and 64.8% respondents belong to the age group of 40-60 years. In the age group of 40-60 years, 57.31% of respondents have taken up training regarding fish farming and 50% respondents have attended training in the age groups of 20-40 years.

Here, chi square statistic is also made to test the significant of some social factors and training. For this we make a null hypothesis ( $H_0$ ) i.e. social factors and training are independent (no relationship between variables). The significant level is taken at 5%.

Here, we make a sub null hypothesis that age of respondents and training are independent. The calculated chi square value i.e. 8.858 is greater than table value i.e. 5.991 at 2 degree of freedom, so we reject the null hypothesis. The inference is that there is a relationship between age of the respondents and training.



Table 4.20: Classification of respondents according to the training programme attended

Group	Got training (%)	No training (%)	Total
All data	203(54.86)	167(45.14)	370(100)
<b>Age in years</b>	<b>Chi square =8.858 df=2 significant at 5%</b>		
20-40	50(50)	50(50)	100
40-60	145(57.31)	108(42.69)	253
60-80	8(47.06)	9(52.94)	17
<b>Religion</b>	<b>Chi square=1.975 df=3 insignificant</b>		
Hindu	178(54.6)	149(45.4)	328
Christian	6(42.2)	7(53.8)	13
Islam	10(71.4)	4(28.6)	14
Others	8(53.33)	7(46.67)	15
<b>Caste</b>	<b>Chi square =13.601 df=3 significant at 5%</b>		
ST	1(100)	0	1
SC	2(100)	0	2
OBC	149(60.6)	97(39.4)	246
General	51(42.1)	70(57.9)	121
<b>Occupation</b>	<b>Chi square=10.673 df=1 significant at 5%</b>		
Primary	172(52)	159(48)	331
Secondary	31(79.5)	8(20.5)	39
<b>Type of ownership</b>	<b>Chi square= 38.348 df=2 significant at 5%</b>		
Owned	157(48.9)	164(51.1)	321
Leased	0	1(100)	1
Co-operative	46(95.8)	2(4.2)	48
<b>Educational qualification</b>	<b>Chi square= 23.681 df=6 significant at 5%</b>		
Illiterate	5(38.5)	8(61.5)	13
Upto primary	11(84.6)	2(15.4)	13
Under matriculate	34(37.8)	56(62.2)	90
Matriculate	44(57.1)	33(42.9)	77
Higher secondary	30(52.6)	27(47.4)	57
Graduate	66(64.1)	37(35.9)	103
Post graduate	13(76.5)	4(23.5)	17
<b>Nature of family</b>	<b>Chi square= 11.902 df=2 significant at 5%</b>		
Nuclear	105(57.1)	79(42.9)	184
Joint family	88(58.7)	62(41.3)	150
Extended	10(27.8)	26(72.2)	36

Source: Field survey

N.B. Figures in the parentheses indicate percentage.

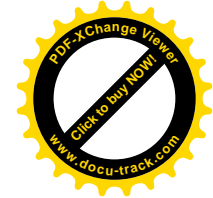
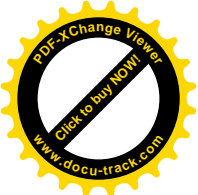


Table reveals that 88.6% of the sampled respondents belonged to Hindu, 3.5% belonged to Christian, and 3.8% belong to Muslims and other which includes Meitei accounts only 4.1% of the sampled respondents. Among the Hindu fish farmers, 54.6% respondents have attended training programme and the remaining 45.4% respondents have not attended training. The value of chi square is statistically insignificant as the calculated value is less than the table value.

The study reveals that 66.5% of the respondents belonged to OBC, 32.7% belonged to General and the remaining 0.8% of the respondents belonged to ST and SC. 149(60.6%) respondents among OBC have attended the training and the remaining 39.4% respondents have not attended the training. Among the general respondents, 42.1% respondents have attended the training programme regarding fish farming. The value of chi square is statistically significant at 5% level as the calculated value is greater than the table value. The inference is that the caste of fish farmers and training are associated.

The standard of living and earning of fish farmers depends on their occupation. The study reveals that of 370 samples, 331 samples performed fish farming as their primary occupation which accounts for 89.5% of the total respondents. The remaining 10.5% respondents performed fish farming as their secondary occupation. Fish farming activities is associated with other activities. Other activities like agriculture, business, artisans, handlooms and handicrafts, services are performed simultaneously. 172(52%) respondents among the respondents who have taken up fish farming as primary occupation have attended the training and 31 respondents who have taken up fish as secondary occupation have attended fish farming training programme. The value of chi square is statistically significant at 5% level as the calculated value is greater than the table value. So the inference is that the two variables are associated.

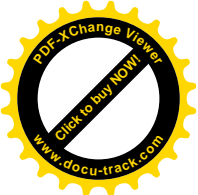
The study reveals that 86.6% respondents have their own fish farm while 13% of the total respondents work in co-operative fish farm. Out of 331 respondents who owned their fish farm, 48.9%



respondents have attended the training programme while the remaining 51.1% respondents have not attended the training programme. Among the cooperative fish farmers interviewed i.e 48 respondents, maximum respondents have attended the training programme and it account for 95.8% respondents. The value of chi square is statistically significant at 5% level as the calculated value is greater than the table value.

Education is said to be an important variable which influence the supply and performance of entrepreneur. There is enough evidence to show the importance of education as a factor in economic development. The basic reason why poor countries remain poor is unquestionable because they lack knowledge, i.e., education. Business growth depends on the literacy of the entrepreneur and it effects the decision of the business. The present study reveals that maximum respondents (61.5%) who are illiterate have not attended the training. Maximum respondents having primary education to under-matriculation have not attended training of fish farm. But with more educational qualification, respondent are more aware of the training programme conducted for fish farming. 57.1% respondents with matriculation have attended the training and 64.1% respondents with graduate degree have attended the training programmes regarding fish farming. The value of chi square is statistically significant at 5% level as the calculated value is greater than the table value. The inference is that educational qualification of fish farmers and training are associated.

The table also reveals that 49.7% of the total respondents belong to nuclear family while 40.6% of the total respondents to joint family and the remaining 9.7% belonged to extended family. 105(57.1%) respondents staying in joint family have attended the fish farming training and 58.7% respondents staying in nuclear type family have attended the training programme. 72.2% respondents staying in extended type family have not attended the fish farming



training programme. The value of chi square is statistically significant at 5% level as the calculated value is greater than the table value.

### **4.3 CONCLUSION**

Under liberalisation and globalisation, agricultural entrepreneurship has opened new vistas for growth and development of the agrarian economy in Manipur. Farming is tremendously important to Manipur's economy and culture. More than 90% of the people of the state are fish consumer. The country will not prosper fully without a vibrant and dynamic agriculture and allied sector. Fish farmers play a great role in enhancing fish production in the state. Information on socio-economic aspects of fish farmers will form a benchmark for policy formulation to develop this sector. The study reveals that most of the fish farmers are male of adult age group, most of them are educated. Housing, drinking water and lighting conditions of the fish farmers are of average level. Thus, the socio-economic condition of fish farmers has to be improved further to increase fish production in the state by adopting modern technique of fish farming. More entrepreneurship development programme has to be conducted for agripreneur.

\* \* \*





Catching of small size fish



Women catching fish in fish pond



Method of carrying fish (tin container)



Fish display in Fish Fair – cum- Fish crop competition