

# *Internship Report*

On

**“AN OVERVIEW OF SCIENTIFIC METHOD OF TILAPIA FISH FARMING**

**(A CASE STUDY ON IFAD AGRO COMPLEX LIMITED; BHALUKA,  
MYMENSINGH)”**

BY

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**DHAKA- 1207**

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BY

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**Reg. No. 08-03041**

*Internship Report*

*Submitted to the Faculty of Agribusiness,  
Sher-e-Bangla Agricultural University, Dhaka  
In partial fulfillment of the requirements  
for the degree of*

**MASTERS OF BUSINESS ADMINISTRATION**

*In*

**AGRIBUSINESS**

**Approved by:**

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*DEDICATED  
TO  
MY BELOVED  
PARENTS*

## *Acknowledgement*

*For the very first of all I would like to express my gratefulness and harmony to the “Almighty Allah” the supreme authority of the Universe. Next I would like to express my gratitude to all the people that were involved both directly and indirectly in the preparation of this report. I apologize to the people whose names that I have not mentioned and their contribution is highly appreciated by me.*

*My sincere gratitude and appreciation to my honorable Supervisor Assistant Professor **Md. Ghulam Rabbany**, Department of Agribusiness and Marketing, Sher-e-Bangla Agricultural University, Dhaka, for his scholastic supervision, helpful commentary, valuable suggestions and constant encouragement from the very beginning to the end of the research work. Despite heavy pressure of academic preoccupation, he made himself available whenever I needed his help and suggestions.*

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*Finally, I am, indeed, proud and delighted for my parents for their affections and numerous sacrifices they have made for my study. Last but not the least, my heartiest thanks to my beloved sister and friends for their never ending inspiration throughout the Internship period.*

**November, 2016**

**SAU, Dhaka**

**The Author**

## *Letter of Transmittal*

November 15, 2016

To

**Md. Ghulam Rabbany**

Assistant Professor

Department of Agribusiness and Marketing

Sher-e-Bangla Agricultural University

**Subject:** Submission of Internship Report for kind acceptance.

**Dear Sir,**

With due respect & honor, I am submitting my Internship Report on “**(An overview of scientific method of Tilapia fish farming. A case study on IFAD Agro complex Limited, Bhaluka, Mymensingh)**” which you have assigned me as partial requirement of MBA (Agribusiness) degree. I have tried no stone unturned to prepare this report sincerely according to your advice, guidance, instructions and suggestions. Despite my great caution, I cannot but express my great concern to make any sort of mistakes. If such condition takes place, I would expect your sympathetic and graceful consideration.

I believe that the knowledge and experience I have gathered during my report preparation will immensely help me in my future life. I will be obliged if you kindly approve this effort.

Sincerely Yours

Afrana Sultana

Reg.No: 08-03041

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**Md. Ghulam Rabbany**  
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## *SUPERVISOR'S CERTIFICATE*

*This is to certify that the internship report entitled "An overview of scientific method of Tilapia fish farming (A case study on IFAD Agro complex ltd. Bhaluka, Mymensingh)" submitted to the Faculty of Agribusiness, Sher-e-Bangla Agricultural University, Dhaka, in partial fulfillment of the requirements for the degree of **MASTERS OF BUSINESS ADMINISTRATION (MBA)** in **AGRIBUSINESS**, embodies the results of a piece of bona fide internship carried out by **AFRANA SULTANA**, Reg. No. **08-03041** under my supervision and guidance. No part of this report has been submitted for any other degree or diploma.*

*I further certify that such help or source of information as has been availed of during the course of this investigation has duly been acknowledged.*

*Dated: 15.11.16*

*Dhaka, Bangladesh*

.....  
*(Md. Ghulam Rabbany)*

*Supervisor*

## *Declaration*

November 15, 2016

To

**Md. Ghulam Rabbany**

Assistant professor

Dept. of Agribusiness and Marketing

Faculty of Agribusiness Management

Sher-e-Bangla Agricultural University.

Subject: Declaration regarding the validity of Internship Report.

Dear Sir,

This is my truthful declaration that the Internship Report on “**An overview of scientific method of Tilapia fish farming (A case study on IFAD Agro complex Ltd. Bhaluka, Mymensingh)**” I have prepared is not a copy of any internship report previously made by any other student.

I also express my honest confirmation in support of the fact that said internship report has neither been before to fulfill any other course related purpose nor it will be submitted to any other person or authority in future.

Sincerely Yours

.....

Afrana Sultana

Reg.No: 08-03041

Faculty of Agribusiness Management

Sher-e-Bangla Agricultural University.

## *ABSTRACT*

The report is originated in result of my internship, which I have done, as a requirement of MBA program. This report is done based on 16 weeks internship at IFAD Agro complex Limited, Bhaluka, Mymensingh. The people of Bangladesh, one of the most densely populated countries in the world, are commonly referred to as “ Macche- Bhate Bangali ” ( Fish and Rice make a Bengali). The most important food crops for the 140 million people of Bangladesh are rice and fish. The contribution of fish in our GDP is 3.65% and in agriculture the GDP is 23.81%.IFAD Agro complex Ltd. is situated in Bhaluka, Mymensingh and has been established in 2004. Since its inception, the company has worked to establish itself as one of the most advanced and largest fish hatcheries in Bangladesh. Firstly, it was produced all kinds of Bengali fish but recently it produced only the mono-sex Tilapia for better competition. Fish farming has rapidly increased in the Mymensingh area since 1995 along the Dhaka- Mymensingh corridor. Many farmers have recently switched to Tilapia farming due to its profitability. In order to meet the soaring demand for food, there is a huge potential of Tilapia farming in Bangladesh. There is a long history of Tilapia farming in Bangladesh and it was expected that Tilapia would act as a miracle fish in aquaculture. Genetically Improved Farmed Tilapia (GIFT) was introduced to Bangladesh by ICLARM and BFRI in 1994 and GIFT has now become a popular fish among farmers. “An Overview of Scientific method of Tilapia fish farming” has been prepared to know the basic concepts of scientific method, to find out the potentialities and future prospects and farmers acceptance towards the scientific farming of Tilapia. I gathered information from both farmers and employees of IFAD Agro complex through Questionnaire and FGD. Thus a guideline has been proposed in this study with aim of facilitating the Scientific method of Tilapia farming for the development of Fisheries sector and for the economic development of our country.



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**LIST OF ABBREVIATED TABLE**

ADB	Asian Development Bank
BFRI	Bangladesh Fisheries Research Institute
BBS	Bangladesh Bureau of Statistics
BAU	Bangladesh Agricultural University
Contd.	Continue
DOF	Department of Fisheries
et al.	et alia (for others)
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GIFT	Genetically Improved Farmed Tilapia
GDP	Gross Domestic Product
HRM	Human Resource Management
ICLARM	International Center for Living Aquatic Resources Management
MBA	Masters of Business Administration
NGO	Non-Government Organization
SWOT	Strengths, Weakness, Opportunities, Threats
SAU	Sher-e-Bangla Agricultural University
UNICEF	United Nations International Children's Emergency Fund
Tk	Taka ( Bangladeshi currency)
\$	Dollar
%	Percentage



**CHAPTER I**  
**INTRODUCTION**

**AN OVERVIEW OF SCIENTIFIC METHOD OF TILAPIA FISH FARMING  
(A CASE STUDY ON IFAD AGRO COMPLEX LIMITED, BHALUKA,  
MYMENSINGH)**

**CHAPTER I  
INTRODUCTION**

**1.1 Background**

Fish farming in Bangladesh is playing an important role to the total national income of this country. Bangladesh is considered one of the most suitable countries in the world for freshwater aquaculture because of its favorable agro-climatic conditions. A sub-tropical climate and vast areas of shallow water provide ideal conditions for fish production and a major part of the total population of our country are directly or indirectly involved with fish or fish related business. Fish account for about 70% of the animal protein intake with annual fish consumption of about 14 kg per person (ADB). Fish production of Bangladesh is increasing every year and the yearly rate of increase at 5.35% during last several years. The production was 3.68 million MT in 2014-2015. The contribution of Fisheries sector in our GDP is 3.65% and in Agriculture is 23.81%. More than 11% of our total population is involved in fisheries sector for their livelihood in which more than 14 lakhs are women.

Tilapia is a global fish and it has taken an importance in the commercial fish farming sector. There is a long history of Tilapia farming in Bangladesh and it was expected that Tilapia would act as a miracle fish in aquaculture. The Mozambique Tilapia (*Oreochromis mossambicus*) was introduced to Bangladesh from Thailand in 1954. However, this species was not widely accepted because of its early maturation and prolifically breeding lead to overcrowd in ponds. The Bangladesh Fisheries Research Institute (BFRI) introduced Nile Tilapia and Red Tilapia from Thailand in 1987 and 1988. GIFT (Genetically Improved Farmed Tilapia) was introduced to Bangladesh by ICLARM and BFRI in 1994 and technology was developed to produce all male Tilapia or sex-reversed GIFT locally known as mono-sex Tilapia because of avoid the unwanted reproduction. Mono-sex GIFT Tilapia is the leading in aquaculture of Bangladesh as it is

well adapted to Bangladeshi condition, easy to propagate, grows fast, converts the artificial food very efficiently and tolerates the changes in water quality as well as disease resistant compared to other cultured species. Mainly due to population growth there is a growing gap between supply and demand of Tilapia in markets. Narrowing the gap not only requires increasing production of Tilapia but also improvements of all aspects of and marketing and distribution systems. Tilapia is produced in a wide range of culture systems, including small-scale, low-input, rural ponds, semi-intensive, intensive and commercial operations. In last decades over 400 Tilapia hatcheries have been established and producing about 4-5 billion fry every year. Presently, the Tilapia production in Bangladesh is 2.98 lakh MT. As a result, many hatcheries are established in Bangladesh by the help of Fisheries Research Institute (FRI) & the World Fish center.

IFAD Agro complex Ltd. is situated in Bhaluka, Mymensingh and has been established in 2004. Since its inception, the company has worked to establish itself as one of the most advanced and largest fish hatcheries in Bangladesh. Firstly, it was produced all kinds of Bengali fish but recently it produced only the mono-sex Tilapia for better competition. It has the Capacity to produce 500kgs of renu (fish eggs) per season. It has 35 employees and 19 pond in where the Tilapia is produced. Over an expanse of 400 acres, the project also capacitates the production of 10 million fingerlings and as well as 1500 tons per year in fish culture for local consumption. IFAD Agro complex is very popular to the farmers locally and it also marketing their mono-sex fingerling in B-barria, Comilla, Noakhali, Jossore, Sylhet, Chapainawabganj and other regions in Bangladesh. As the Tilapia is one of the very testy and fast growing fish species, so it has a great demand to the fish farmers and consumers. The best time for Tilapia farming is April to October. 17Alpha Methyl Testosteron Hormone is used for producing mono-sex Tilapia. In IFAD Agro complex 95% mono-sex Tilapia is produced and Tk. 1-1.5 crore is earned by Tilapia farming in per year. It has made a revolution in the field of fish farming. By farming Tilapia fish in modern ways using up to date technology and technique, desired income can be made within a very short time. With a strong foothold as the one industry leaders, the IFAD Agro-complex company has already received accreditation from Cornell University and the Thai Fish Institute.



## **1.2. Rationale of the study**

In today's world academic education is not adequate to enable a student to compete with confidence and reach his/ her goal without having experience with the outside world. Practical knowledge is fundamental for the application of theoretical intelligence. Bearing this in mind an internship report was being included in the MBA curriculum. Each student of MBA (Agribusiness) program is required to undergo the internship program and prepare an internship report according to a format specified by the supervising teacher. Bangladesh has a tremendous potential for fish farming both for export and domestic market. Agricultural land is gradually converting to homestead and other uses to meet the vast and fast population growth. At this situation, we have to ensure maximum of the production from limited land area. For this, we should change our traditional agricultural practices. The study might provide ideas about the potential factors and profitability of fish culture. IFAD Agro-complex is very popular for providing good quality Tilapia fingerlings and Tilapia fish for the customers by scientifically. So I comply with the authority when I see that the employees of IFAD Agro complex are very busy with the "Scientific method of Tilapia farming", I try to know about it. And as a student of Agribusiness suddenly it comes in my mind that it may be a very good topic for my internship report. My Supervisor also permit me to prepare report on this topic. And I have come from Mymensingh district, this is how I assigned to make an internship report titled "An Overview of Scientific method of Tilapia fish farming (A case study on IFAD Agro-complex Ltd. Bhaluka, Mymensingh )" to expand my practical knowledge.

## **1.3. Objective of the study**

The objective of the report mainly divided into two parts, the parts are given below-

**A. Academic purpose:** To fulfill the course requirement for completion of the degree of MBA(Agribusiness), Sher-e-Bangla Agricultural University.

### **B. Practical Purpose:**

- a) To know the basic concept of scientific method of Tilapia farming.
- b) To find out the potentialities and problems related to Tilapia farming.
- c) To analyze farmers acceptance towards the scientific farming of Tilapia.
- d) To know the future prospects of Tilapia fish farming.

#### **1.4. Scope of the study**

Since I were working in the IFAD Agro complex Ltd. I got the opportunity to gain knowledge of scientific method of Tilapia farming .Mainly I got opportunity to work in a fish farm and it is very important for me. Fisheries sector is a very potential sector for Bangladesh. I hope that I will be capable of doing this type of fish culture in future. This report will cover only the Tilapia fish farming. Mono-sex GIFT Tilapia is very profitable for the Bangladeshi farmers. In recent times, getting a job is very difficult and very competitive for the students. Fish farming in Bangladesh is already a major source of employment and many working facilities can be created through high tech commercial Tilapia farming system. Even the unemployed educated people can also contribute this business and create a lucrative business and earning opportunity for them. So, fish culture may be a vital issue for the unemployed persons. It can be reduced the unemployment problem of Bangladesh. Bangladesh Government has given more importance in fisheries sector to create employment opportunities for the rural people. This report may also be helpful for the Tilapia farmers to be more effective, profitable and sustainable fish production.

#### **1.5. Limitation of the study**

Though I have given utmost effort to prepare this paper but there are some limitations of the study. Such are as follows:

- The main constrain of the study was insufficiency of information, which was required for the study.
- Most of the data collected through interview of the farmers. So sometimes they were not well co-operated.
- Sometimes respondents were not interested to give information to the authors.
- Due to time limitation some aspects couldn't be discussed in the present report.
- As it is my second time to prepare this type of report so I was not enough experienced.
- Since the Agro-complex personnel were very busy, they could not provide enough time to me.
- Lack of knowledge and experience among the employees.
- Large scale research was not possible due to constraints and restrictions posed by the organization.



**CHAPTER II**  
**REVIEW OF LITERATURE**

## CHAPTER II

### REVIEW OF LITERATURE

Review of literature in any research is essential because it provides a scope for reviewing the stock of knowledge and information relevant to the proposed research. But there is little information regarding knowledge and information relevant to the present study. Literature and research of the major past works in connection with the present study were searched because this knowledge and information provide guideline in designing the future research problem and validation of the new findings. Some studies relating to fish culture along with Tilapia are reviewed here-

Hussain et al (2004) conducted a study that GIFT strain was 35.74% superior than the red Tilapia strain in terms of growth. In a comparative on farm trial of a local NGO, the GIFT strain performed significantly higher growth and better survival than others.

Hasan (2007) conducted experiment on the growth and production performance of GIFT Tilapia (*Oreochromis niloticus*) in pond culture system at "Nagla Fisheries Ltd.", Haluaghat, Mymensingh.

Rashid (2008) conducted a study on the production and growth performance of GIFT Tilapia. Reducing the fingerling cost and better FCR as well as reduced production costs rather than the higher stocking density.

Alam (2009) conducted experiment on growth and survival of mono-sex Nile Tilapia (*Oreochromis niloticus*) fry in hapa in private hatchery farm "Agro 3" in Trishal Upazilla, Mymensingh considering the fish growth performances, percent weight gain (%), specific growth rate(%), survivability and production.

Nesar Ahmed and Faisal Ahmed (2009) conducted a study on the development of Tilapia marketing systems in Bangladesh: Potential for food supply. The study was to understand the current practices of Tilapia marketing systems in Bangladesh for its sustainable development

to food supply. The profitability of Tilapia farming is largely determined by market conditions.

Md. Idris Ali (2012) conducted marketing of major fish species in Bangladesh : A value chain analysis that Food and Agriculture Organization (FAO) of the United Nations was implementing a research project entitled A value chain analysis of International Fish trade and food security.

M. Gulam Hussain , B. kumar Barman and Erik H. J. Keus (2014) reported on the Progress and the future for the Tilapia farming and seed production in Bangladesh. It showed the development of commercial Tilapia hatcheries and farming process.

The above review indicates that a few studies have been conducted on fish culture along with Tilapia. The result of these studies varies widely in different reasons. Most of these studies dealt with marketing system of Tilapia, but there is hardly any study related to the scientific method of Tilapia farming and potential factors of Tilapia culture. So, the present study aims to gather information on Scientific method of Tilapia farming and potential factors of Tilapia culture of IFAD Agro complex Ltd. in Bhaluka , Mymensingh district of Bangladesh.



**CHAPTER III**  
**METHODOLOGY**

## **CHAPTER III**

### **METHODOLOGY**

#### **3.1. Type of Research**

Methodology is an indispensable and integral part of any study. The reliability of a specific Study finding depends to a greater extent on the appropriate methodology used in the study. Methodology provides various strategies and techniques to solve research problems. Methodology refers to the essential part of the study and the process of collecting information and arranging it in the terms of the relevant issues of the study. It is designed in a way so that it correspondent to achieve the objectives of the study. The following methodology will be followed for my study:

In this study, investigative (Exploratory Research) research will be conducted to find out and understanding of the overall scientific method of Tilapia fish farming and it's problems, prospects and acceptability of IFAD Agro complex Ltd. in Bhaluka, Mymensingh.

#### **3.2. Investigative Research**

Investigative research is conducted into an issue or problem where there are few or no earlier studies to refer to. The focus is on gaining insights and familiarity for later investigation. Secondly, descriptive research describes phenomena as they exist. Here data is often quantitative and statistics applied. It is used to identify and obtain information on a particular problem or issue. Finally causal or predictive research seeks to explain what is happening in a particular situation. It aims to generalize from an analysis by predicting certain phenomena on the basis of hypothesized general relationships.

#### **3.3. Opinion Poll Preparation**

I designed a structure and unstructured questionnaire. This structured questionnaire was the major tools of this research project. 25 questions are selected which focus the 4 objectives. And also for my study purpose, I have taken 50 respondents as my sample in another way. And 10 employees of IFAD Agro complex Ltd. as respondents for some different questions. Five points scale is also used here for evaluation. The maximum number under each criterion is 250 (50x5).

The state different criteria in terms of the satisfaction of the customers is expressed in the points-

Satisfaction level	Total Score	Out of 250
Very Good	201-250	Out of 250
Good	151-200	Out of 250
Satisfactory	101-150	Out of 250
Moderate	51-100	Out of 250
Poor	00-50	Out of 250

→ **Target Group**

Individual Customer's and farmers of IFAD Agro complex Ltd. and its employees.

**3.4. Sources of Information**

⊗ **Primary Data:**

**Primary data** (also called field research data) involves the collection of data that does not already exist, which is research to collect original data. Primary Research is often undertaken after the researcher has gained some insight into the issue by collecting secondary data. This can be through numerous forms, including questionnaires, direct observation and telephone interviews amongst others. This information may be collected in things like questionnaires and interviews. I have collected primary data by variety of ways, first of all by interviewing employees of IFAD Agro complex Ltd. and directly communicating with the customers. I have also conducted a questionnaire survey of the customers minimizing interruptions in their farming activities.

⊗ **Secondary data**

Secondary data is data collected by someone other than the user. Common sources of secondary data for social science include censuses, surveys, organizational records and data collected through qualitative methodologies or qualitative research. I have elaborated different types of secondary data in my research. Sources of my secondary information's are:



- ‖ Field notes
- ‖ Observation records
- ‖ Other personal
- ‖ Research-related documents
- ‖ Different books and periodicals related to the fisheries sector
- ‖ Internet
- ‖ Newspapers and journals

### **3.5. Data Collection**

**In-depth interview:** During the exploratory research, I conducted in-depth interviews with employees and customers of IFAD Agro complex Ltd.

**Questionnaire survey:** I also designed a structure and unstructured questionnaire for the customers of IFAD Agro complex and its employees. This structured questionnaire was the major tools of this research project.

### **3.6. Method and Sample Size**

#### **⌘ Technique / Method:**

During the survey of this project, customers were given copies of the questionnaire and were asked to fill them. I gave continuous support to the customers for any problems that they faced while filling up questionnaire so that the validity of the questionnaire increases. As the simple random sampling is easily understood and results are assessable it is best suited for my study. I asked questions to the farmers and employees of IFAD Agro complex and the customers of the Agro complex.

#### **⌘ Sample size**

In this report I selected 60 people for different analysis .I select the sample in following ways-

**⌘ Sample Size:**

Types of respondents	Number of respondents
Employees of Agro-complex	10
customers	30
Tilapia farmers	20
Total	60

**3.7. Investigation system / Tools**

The analysis of collected data is completed with the help of the statistical tools. Here the value of Likert scale (5, 4, 3, 2, and 1) is counted as the weight. The response of the survey including the level of importance and the customer's perception are tallied at first and then the weighted average of those responses is prepared. Likert scale is a measurement scale with five response categories ranging from "strongly disagree" to "strongly agree" (1= strongly disagree , 2= Disagree , 3= Neither agree nor disagree , 4= Agree , 5= Strongly agree) Which requires the respondents to indicate a degree of agreement or disagreement with each of a series of statements.



**CHAPTER IV**  
**ORGANIZATIONAL PROFILE**

## **CHAPTER IV**

### **ORGANIZATIONAL PROFILE**

#### **4.1. A Brief Overview of IFAD Group Limited:**

##### **IFAD GROUP**

The contribution of IFAD Group of companies in Bangladeshi economy has become very crucial with their expansion of business. They are the 6th biggest importer in Bangladesh as of 2012-2013 fiscal year and according to Bangladesh Bank, they are one of the top 10 creditworthy groups in Bangladesh; total group liability exposure with bank is over 300 million us dollar. The basic HR strategies have been followed by IFAD group of companies. But few unique strategies exist over there as well. They have more than 3000 employees and among them more than 50 people are working for last twenty years. Companies provide unique benefit plan for these loyal employees and that is, they get 50% of their salary per month rest of their lives after their retirement. IFAD Group initiated and encourages women empowerment. Currently there are more than 300 women working in different department in four companies of this Bangladeshi conglomerate with a very high employee retention rate. HRM is completely related with its management process in IFAD. From recruitment to compensation, employee increments, salary structure and all other future probable actions are built by consulting with the management. The companies deal with employee need analysis, recruitment and selection, evaluation, motivation, training, compensation etc. They believe their HR is completely fine-tuned with IFAD Group's organizational goals and strategies as they know what kind of people for what kind jobs are needed; hence, they always build workforce in a way that will meet organizational goals. All the four concerns of IFAD Group maintain quality very strictly. Hence, they got president award for quality and production in 2011. Along with this, Bangladesh bank has declared them as one of the 10 top most creditworthy groups in the country. Furthermore, they got "Krishi Rotno" award from Prime Minister.

## 4.2. Company Mission & Vision

### ‣ **Mission Statement:**

Mission of IFAD Group is to expand and continually improve utilizing quality practices and employee involvement to produce food products and fish while practicing highest standard in quality and hygiene for human consumption both in the domestic and international markets that results in customer and employee satisfaction.

### ‣ **Vision Statement:**

- ⊖ IFAD Group's vision summaries who they are, where they want to reach and how they desire the whole world to see them as a corporate citizen.
- ⊖ They are a leading organization and their belief in being a leading company does not only mean striving to be bigger but it also means pursuing the best in terms of customer services, employees, consumer values, talent as well as constant and foreseeable growth where they want to reach is at the deepest core of the consumers mind, where they want to instill that they are not just a business that produces and delivers food but rather an everyday companion of all their valued customers to meet their requirements.
- ⊖ They want to build a culture that envelops every single employee of theirs within a sphere of ethics, Loyalty as well as job satisfaction.
- ⊖ They will always take into consideration the impact of their activities on the environment and they will take every required step to protect the stage that has given them the room to flourish for generations to come.

**⌘ COMPANIES OF IFAD GROUP**

<b>Features</b>	<b>Company</b>	<b>Figure</b>
Year of establishment	IFAD Autos Limited	1985
	IFAD Enterprises Limited	1988
	IFAD Multi products Limited	2003
	IFAD Agro complex Limited	2004
Industry	IFAD Autos Limited	Automobiles
	IFAD Enterprises Limited	Electronics
	IFAD Multi products Limited	Consumer good
	IFAD Agro complex Limited	Agro
Product	IFAD Autos Limited	Bus, covered van, open truck, special vehicle
	IFAD Enterprises Limited	Industrial compressors
	IFAD Multi products Limited	Flour, salt, noodles, water, biscuits, whole spices
	IFAD Agro complex Limited	Fish farming
Total workforce	IFAD Group	3000
Total working capital	IFAD Group	7000 core BDT(approx.)
Total managerial and non-managerial employee	IFAD Group	More than 300 managerial employees
Total Export to Foreign country	IFAD Group	\$350000(last year approx.)
Core Export Items(last 5 years)	IFAD Group	Biscuit, Noodles, Salt, Snacks items
Employee Retentions Rate	IFAD Group	95%
Total production capacity	IFAD Group	Flour-200 tons per day Biscuit-10 tons per shift Noodles-6 tons per shift Water-16000 tons per shift Salt-40000 tons per year

### **4.3. Industries of IFAD Group**

IFAD Group of Companies, currently operating in four industries in Bangladesh which are automobiles, consumer goods, electronics and agro industries by operating through its four different concerns.

-  Since 1985, IFAD Autos has played a crucial role in building the transport industry of Bangladesh. IFAD Autos Limited is operating in automobile industry via assembling and ensuring availability of bus, covered van, open truck, special vehicles.
-  IFAD Enterprises Limited is an Electronics Industry of industrial compressors.
-  IFAD Multi Products Limited is recognized as one of the largest consumer food producers in Bangladesh. The company is a major manufacturer and supplier of instant noodles, stick noodles, a varied range of biscuits and cookies, packaged whole spices and bottled drinking water extracted from local aquifers, salt etc. all of which has been established in its own industrial park. The company has a number of other products in its pipeline which will manifest itself in the very near future.
-  Finally, IFAD Agro Complex Limited is operating in agro industry of Bangladesh by farming as well as establishing and running fisheries. Currently, more than 3000 employees are working in IFAD Group with a very high retention rate (95%) and among them 9 employees are citizens of foreign countries and more than 300 are managerial employees with decision making power.

Each of the companies is contributing the country's economy very significantly. This giant group of industries has started exporting one year back and total export as of last year is \$350000 by exporting biscuit, noodles, salt, snacks items. In contrast, IFAD Group imports annually \$100 millions (approx.) worth of goods from foreign countries.

### **4.4. Quality Maintenance and Safety Policy:**

-  IFAD Group intensely believes that customer satisfaction is the basic component of the quality and food safety Policy.
-  IFAD Agro complex Ltd. is highly concerned for the quality fish and fry production for the human consumption and farmers in domestic market.
-  They are committed to produce high quality wheat products (e.g. Atta, Maida and Suzi), which are safe for human consumption to our customers and end users. IFAD Multi Products Limited is committed to achieve this by using high quality raw wheat

with the help of automatic plant & machinery, trained & skilled manpower and following the requirements of ISO 9001:2000 Quality Management System (QMS), HACCP and regulatory body.

- ‖ It is the responsibility of all employees of IFAD Multi Products Limited to follow personal hygiene, sanitation, pest control and plant safety rules.
- ‖ The Quality & Food Safety Policy is communicated to all personnel by presenting it at prominent locations and via awareness sessions. The Top Management of IFAD Multi Products Limited is devoted to constant improvement of its process.

#### **4.5. Employee Code of Ethics:**

- ‖ Employees honesty must be practiced at all time.
- ‖ No confidential company information should ever be revealed to third parties and all of the personnel must respect the workplace and private properties of their fellows.
- ‖ Company assets must never be misused or occupied for personal usage.
- ‖ Personal business should never be commenced during business hours without prior authorizations of the company.
- ‖ No employee or any of their immediate family members may have any monetary interest (direct or indirect) in any business that competes with the company.
- ‖ An employee may not enter into any other remunerated employment or provide consultancy where he/she might get any kind of compensation from another organization.
- ‖ The use of company vehicle is only allowed for the purpose of performing regular company business.

#### **4.6. SWOT Analysis**

The SWOT analysis is a classic strategic planning tool originating from business and marketing analysis that encourages groups (or individuals) to reflect on and assess the Strengths, Weaknesses, Opportunities and Threats of a particular strategy and how it can best be implemented.



SWOT Analysis is a tool by which an organization can also study its current position, it can also be considered as an important tool for making changes in the strategic management of the organization.

**Strengths:**

- IFAD Agro complex has the reputation of being the provider of good quality Tilapia Fish and fingerling to its potential customers.so, the customers and farmers prefer it as a best Farm for Tilapia production.
- IFAD Agro-complex has already achieved good amount of savings from Tilapia production and it has a strong network among farmers and market actors.
- IFAD has sufficient production to meet the customers need in rural and urban area.
- The lead researcher has strong reputation within the policy community.

**Weaknesses:**

- Many farms has already been provided better service in Tilapia Farming.
- IFAD Agro-complex failed to provide a strong quality fingerlings and Farming system which is helpful for Farmers.
- The poor service quality has become a major problem for IFAD Agro-complex.
- Scarcity of man power and instrument is also a weakness of IFAD Agro-complex.
- Inadequate infrastructure including poor road and transportation.

**Opportunities:**

- It will be a greater opportunity in providing better Tilapia fish in our country.
- Tilapia farming has a direct impact on profitability and prestige of the IFAD Agro-complex.
- Employment opportunities increase in income.
- IFAD has a good number of staff to meet the customers demand.

**Threats:**

- Other company is more preferable to farmers for Tilapia production.
- The low compensation package of the employees from medium level to lower level position threatens the employee motivation. As a result, good quality employees leave the organization and its effects the organization as a whole.



**CHAPTER V**  
**RESULT AND DISCUSSION**

## CHAPTER V

### RESULT AND DISCUSSION

#### **5.1. An Overview of Scientific Method of Tilapia fish Farming (A case study on IFAD Agro complex Ltd. Bhaluka, Mymensingh)**

Tilapia is a global fish that is considered the most important fish species in the 21<sup>st</sup> century. Though it was first imported from Thailand in 1974, it started to become popular at the beginning of present century. Mainly, it has gained its popularity for endeavour of “Fish Research Institute”. It gains the power to give birth fast and birth a lot of off springs at a time, as a result it is profitable commercially. On the other hand it grows rapidly. So, the cultivation of mono-sex species is a popular & profitable process in all over the world. Many hatcheries are established in Bangladesh by the help of Fisheries Research Institute (FRI) & the world Fish center.

At the present time, mono-sex Tilapia is produced from super Tilapia of Fisheries Research Institute (FRI) & improved species of the world Fish center. The growth of Tilapia of Vietnam species is 20-25% more than the other species of mono-sex Tilapia which is found in Bangladesh.

#### **} Importance of Mono-sex Tilapia cultivation**

- ⊖ Its growth is more than any other species.
- ⊖ Its weight may be (500-800) g after 5-8 month.
- ⊖ Its market prize is more for its color & size.
- ⊖ Process of cultivation is easy & amount of profit is more.

#### **} Cultural Time of Tilapia**

The best time for Tilapia farming is April- October. In this time , the growth rate of fish is higher as a result the production is higher. If fish kept in the pond more days, it takes more time to grow.

## } **Water Quality**

Water quality should be in an appropriate level for mono-sex Tilapia fish culture. For better production water quality should be better. Some considerations are given below –

- Clean water should be provided in the pond according to necessity.
- Water should be examined regularly.
- Water depth should be kept in 3 to 4 feet.
- Temperature of water should be remained in 24-30<sup>0</sup> C.
- P<sup>H</sup> of water should be kept in 7.0-8.0.
- Water clarity should be kept in 30 cm.
- The amount of oxygen should be kept in 5 to 8 mg/ L in the pond water.

## } **Mono-sex Tilapia Farming**

### **i. Pond Selection:**

A pond will be selected with less muddy & having water up to (4-6) month. The area of Nursery pond may be (15-20) decimals & culture pond 20-100 decimals. It may be more or less.

### **ii. Pond Preparation:**

- Unnecessary fish & other beings should be removed from pond by irrigation.
- The pond of clay loam is best for Tilapia production.
- The side of the pond should be repaired and the length should be 4-5 feet.
- If there is more muddy at the bottom of the pond, that should be removed.
- 1 kg lime should be used in one decimal.
- Water should be given after 1-3 days of lime application.
- 50g urea and 50g T.S.P should be used in one decimal after 3-5 days of lime application.
- Offspring should be preserved after 2-3 days of fertilizer application.

### **iii. Fry collection:**

The fry of mono-sex Tilapia should be collected from IFAD Agro complex Ltd. into polythene bag by using oxygen. 1000 fry may be transported for 8-10 hours in per poly bag according to distances.

**iv. Nursery management of mono-sex Tilapia (Nursery Pond):**

The size of offspring 0.20-0.25g (4000-5000 piece/kg) should be delivered from hatchery. This small size of offspring should be nursed in nursery pond. When its weight will be 10-15g , it should be used in culture pond for cultivation.

)} **Fry Stocking:**

1500-2000 off springs should be preserved in Nursery pond. Fry should be stocked according to the level of water.

)} **Feed Application:**

Feed should be used in Nursery pond for 4-5 week according to rate given by below-

**Chart of feed application in the Nursery pond**

Size (piece/kg)	Using rate	Using times	Size (piece/kg)	Using rate	Using times
5000	100%	4 times	800	30%	2 times
4000	75%	4 times	500	25%	2 times
3000	50%	3 times	400	20%	2 times
2000	40%	3 times	300	15%	2 times
1000	35%	3 times	100	10%	2 times

**V. Management of Mono-sex Tilapia cultivation (Farming Pond):**

)} **Fry stocking:** 250 pieces good quality fry of 10-15g should be stocked in every decimal.

)} **Feed application:** After stocking fry, feed containing 25-30% protein should be used according to the following chart-

**Chart of using feed in the farming pond**

Size (piece/kg)	using rate	using times	Size (piece/kg)	using rate	Using times
100	10%	2 times	40	5%	2 times
80	8%	2 times	30	4%	2 times
60	7%	2 times	20	3%	2 times
50	6%	2 times	100	2.5%	2 times

#### **Vi. Post stocking management:**

- Rate of feed should be examined by observing the growth of fishes after 7-10 days using net in the pond.
- Taking feed of the fishes should be observed regularly.
- 25g lime should be used in the pond in every month.
- 20-30% of water should be changed in every 15-20 days after one month of fry stocking.
- The quality of water should be examined such as temperature, oxygen, pH after every 15 days.

#### **} Harvesting and Production**

If the Vietnam Tilapia is cultivated by following the above mentioned rules or semi-intensive process then the average weight of Tilapia fish will be 200-250g after 3-4 month. In this process, it is possible to produce 5-6 tons fish in every acre.

#### **} Maintenance of Tilapia Fish / Control Measure of Disease**

Tilapia is highly potential to disease. But when the stock size is rapidly increased and the environment of the habitat is hazardous then the survivability of Tilapia fish may be decreased. Various viral disease if once occurred in the farm then it's controllable is very much tough. That's why we should take proper steps to control the viral attacks or outbreaks of disease. Such types of steps are given below-

- Disease free and healthy fry should be collected.
- The instruments of farm should be disinfected.
- One farm's net should not be used to other's farm.
- High stock size should be avoided.
- Balanced diet should be provided.
- Caring of farm and fish should be maintained regularly.

In winter season outbreaks of disease can be occurred in Tilapia farm. In this season some measures are taken to control the risk of disease. That's measures are given below-

- 250gm salt and 150gm lime or Geolyte should be applied from the beginning of winter.
- Disinfectant should be used to control the alceratic disease. 5gm Oxytetracycline and 2gm vitamin C in 1kg feed should be used.

#### )} **Some important advice for Tilapia Farming**

- High quality supplementary feed with 28-30% protein should be provided in the culture pond.
- Pond should be observed after 1 hour giving feed. If feed is found in the pond then it can be cleared that the pond or fish have any problem or excess feed has given to the pond.
- In summer season, temperature of water is increased because of coming down the pond water. In this time necessary amount of water should be provided in the pond.
- In a cloudy weather or in excess the amount of feed should be decreased or giving feed in the pond should be closed.

#### **5.2. Acceptability**

It has a great impact in our society. Farmers can know about the Tilapia farming scientifically. A large number of farmers can earn a good profit by Tilapia farming. It decreased the unemployment problem of our country. Poor farmers can earn easily their livelihood by this farming. Yong generation and educated people are also be interested in fish farming because it's a very profitable business and it takes less time to establish. So, Tilapia farming in Mymensingh region is very popular and profitable to the farmers. The acceptability of Tilapia fish farming is increasing day by day to all kinds of farmers.

ϖ **Calculation of Expenditure and Income:**

→ Calculation of Income and Expenditure of mono-sex Tilapia fish in one acre (100 decimal):

<b>Expenditure sectors</b>	<b>Expenditure(TK)</b>
1. Pond Rent(for 6 month)	25000
<b>2. Pond preparation:</b>	
i. Pond construction and irrigation	4000
ii. Lime application	1250
iii. Fertilizer application	1500
iv. Water supply	2000
<b>3. Fry:</b>	
i. Tilapia (30000)	30000
ii. Carp's species(1500)	7500
<b>4. Feed: (FCR: 1.5)</b>	
i. Mortality rate 15-20%, 25000 fish	
ii. By calculating per 250gm: (6250kg fish x 1.5 x 47.00)	440625
5. Disease maintenance	5000
6. Labour (1 person x 6 month x 5000)	30000
7. Fish collection and others	10000
<b>Total Expenditure</b>	<b>556875</b>
Income:	
i. Tilapia:( 6250kg x 110.00)	687500
ii. Carp's species:(900kg x 120.00)	108000
<b>Total Income</b>	<b>795500</b>
<b>Net Income:</b> (Total Income - Total Expenditure)	<b>238625</b>



### **5.3. Benefits**

- IFAD Agro complex provides good quality fry of mono-sex Tilapia which can play an important role for the expansion of Tilapia farming.
- Local fish farmers will get facilities from the Agro complex for any problems.
- It has gained its popularity in locally so it will help the Tilapia fish farmers to culture Tilapia scientifically.
- Farmers and consumers have no objection or not any claim against the Agro complex.
- The Agro complex will get future customers for their honesty and better performances.
- IFAD Agro complex will earn more or getting more savings by Tilapia farming scientifically.

### **5.4. Problems**

- Some farmers think that scientific method of Tilapia culture is difficult and costly.
- Most farmers are not educated so they can't understand how Tilapia is produced scientifically.
- Some farmers think that Tilapia farming is not profitable.
- As Tilapia is a fast growing species, it can be damaged by various fish diseases such as tail and fin rot disease, fungal disease, dropsy, white spot disease etc.
- It may be loss in income when flood or excess rain is occur.
- A number of poor fish farmers are not capable of farming the mono-sex Tilapia scientifically.

## 5.5. Questionnaire ( Discussion)

\*\*\* (To know the basic information from the Tilapia fish farmers.....)

### (1)Age: How old are you?

- a ) 35-40years
- b) 40-45years
- c) 45-50years
- d) more than 50 years

**Comment:** For this question I asked 50 people both in the agro-complex and outside the complex. Majority of the respondents said that most of the Tilapia farmers 75% are young (35-40years) and 20% are 40-45years and rest of them 5% are more than 50 years.

### (2) Please mention your educational qualifications.....

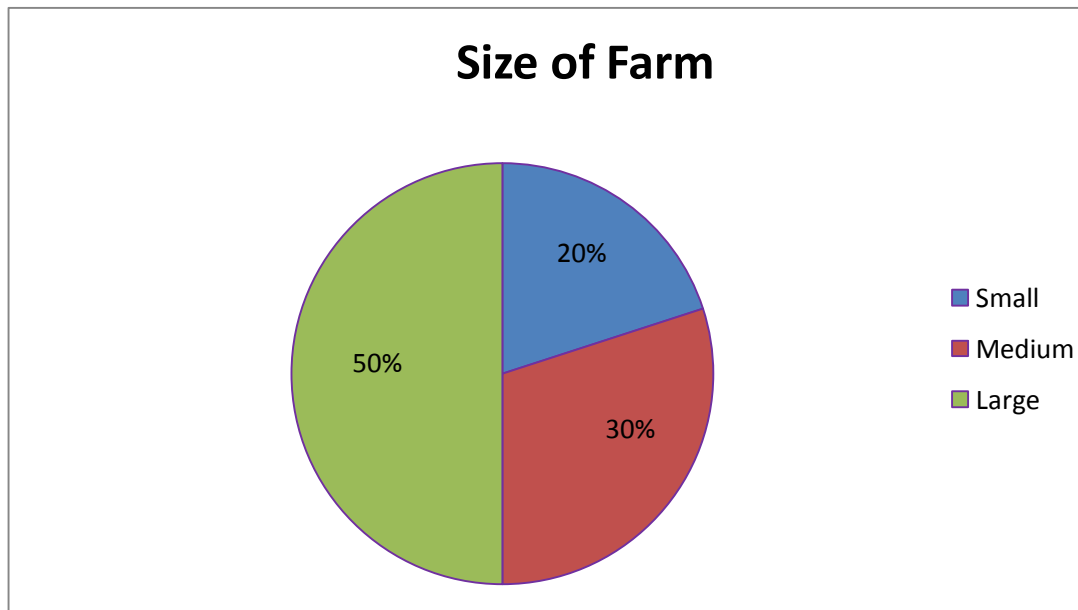
- a) Primary
- b) Secondary
- c) Above

**Comment:** From this statement, 20% farmers complete their primary education, 30% complete secondary and 50% farmer's educational level is higher or above than the secondary level. It can say that, most of the young farmers are higher educated and doing the Tilapia farming business along with their job.

### (3) Size of the Farm: please mention your farm size.....

- a) Small
- b) Medium
- c) Large

**Comment:** The respondents 20% had small farm, 30% had medium and 50% had larger farm.



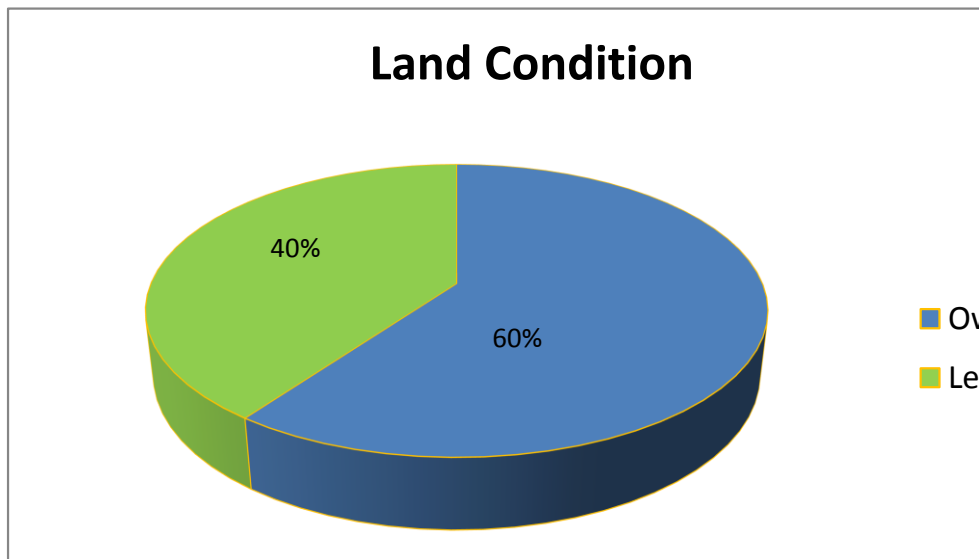
**Figure 1: Size of Farm**

Source: Survey of primary data

**(4) What is your land condition?**

- a) Own
- b) Lease

**Comment:** Most of the farmer's land (60%) is owned by farmers and the (40%) land is leased by the farmer's to run the Tilapia farming.



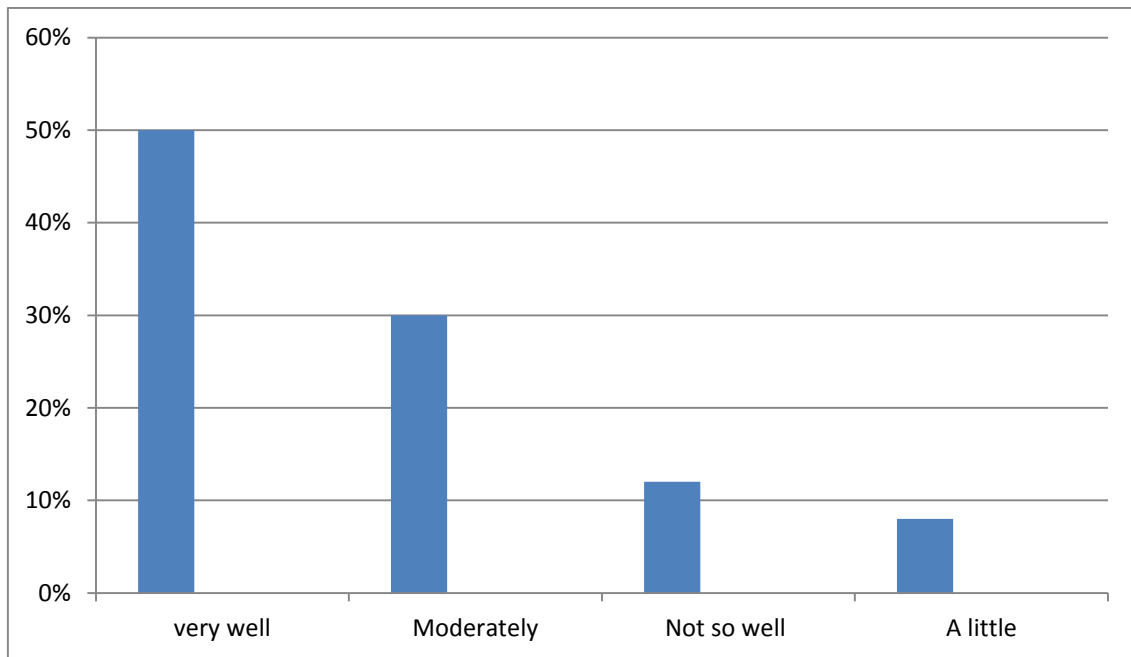
**Figure 2: Farmers Land Condition**

Source: Survey of primary data

**(5) How much you know about Tilapia farming?**

- a) Very well
- b) Moderately
- c) Not so well
- d) A little

**Comment:** 50% respondent know the Tilapia farming business very well, 30% know it moderately, 12% say that they know it not so well and 8% have a very little knowledge.



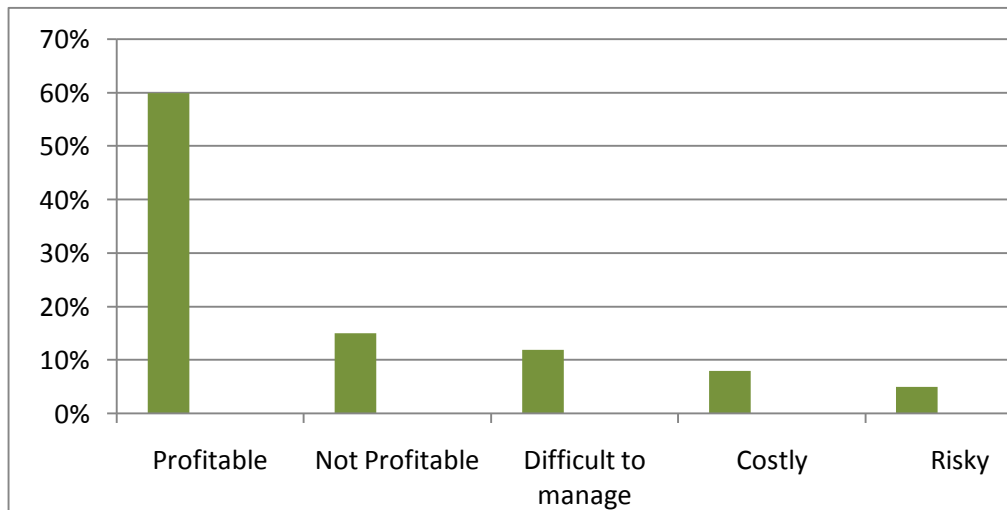
**Figure 3: Farmers level of Knowledge**

Source: Survey of primary data

**(6) Why you are interested /not interested in farming?**

- a) It's profitable
- b) Not profitable
- c) It's difficult to manage
- d) It's costly
- e) It's risky

**Comment:** Different people feel interest for different reason. In this study I found that 60% respondent think that Tilapia farming is a profitable business ,for that reason they are interested on it.15% say it's not profitable,12% say it's difficult to manage,8% think it's costly and 5% considered it is a risky business.



**Figure 4: Reasons of farmers interested in Tilapia Farming**

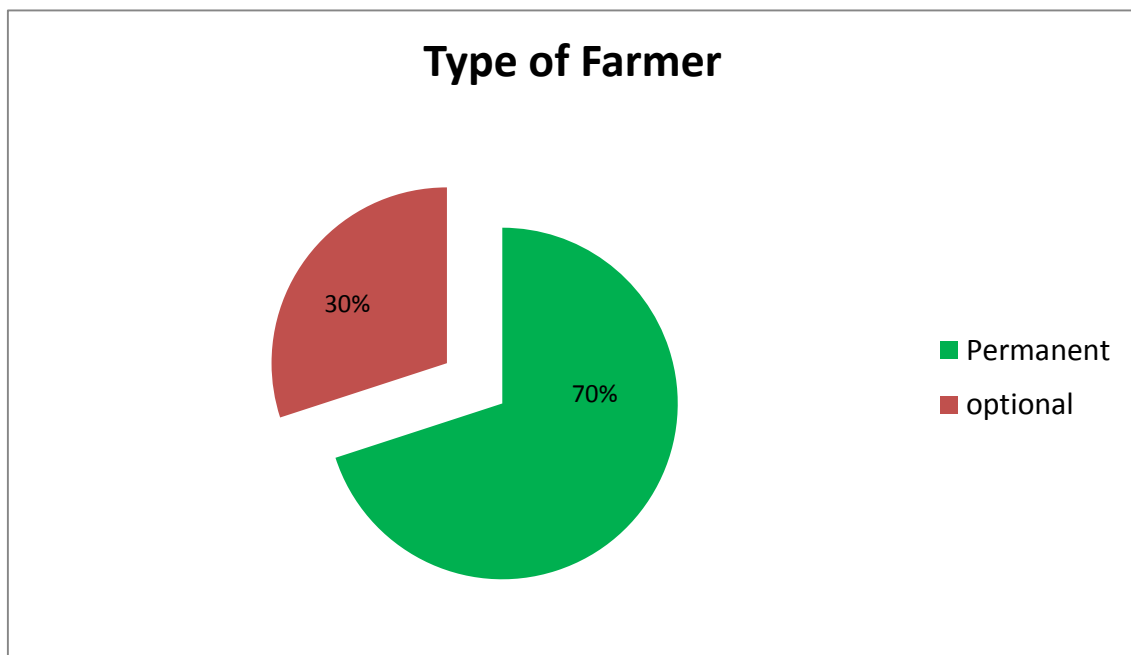
Source: Survey of primary data

**(7) What types of Farmer you are.....?**

a) Permanent

b) Optional

**Comment:** Most of the farmer's (70%) are permanent type who farming the Tilapia fish and remainders (30%) are optional farmers.



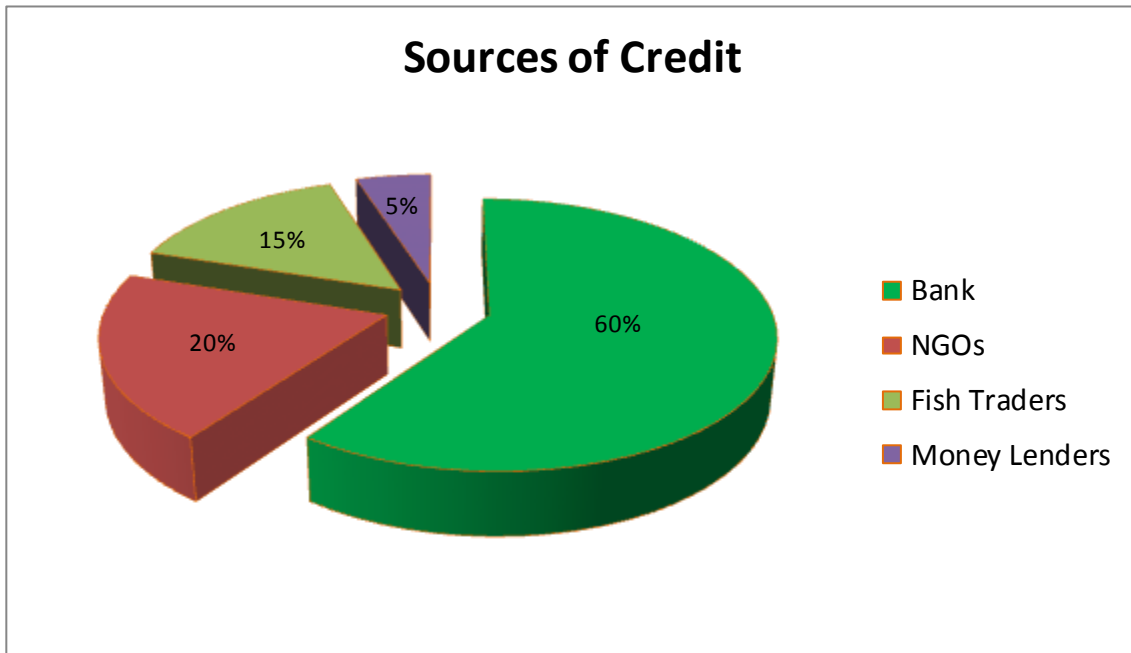
**Figure 5: Types of Farmer**

Source: Survey of primary data

**(8) Sources of credit: please give the information of your credit sources.....**

- a) Bank
- b) NGOs
- c) Fish traders
- d) Money lenders

**Comment:** Finance play an important role in Tilapia farming system.60% respondent say that Bank is the main source of credit.20% say that NGOs give them credit, 15% respondent say that fish traders give money and the rest of the 5% respondent say that the money lenders also help them by giving money when they are needed.



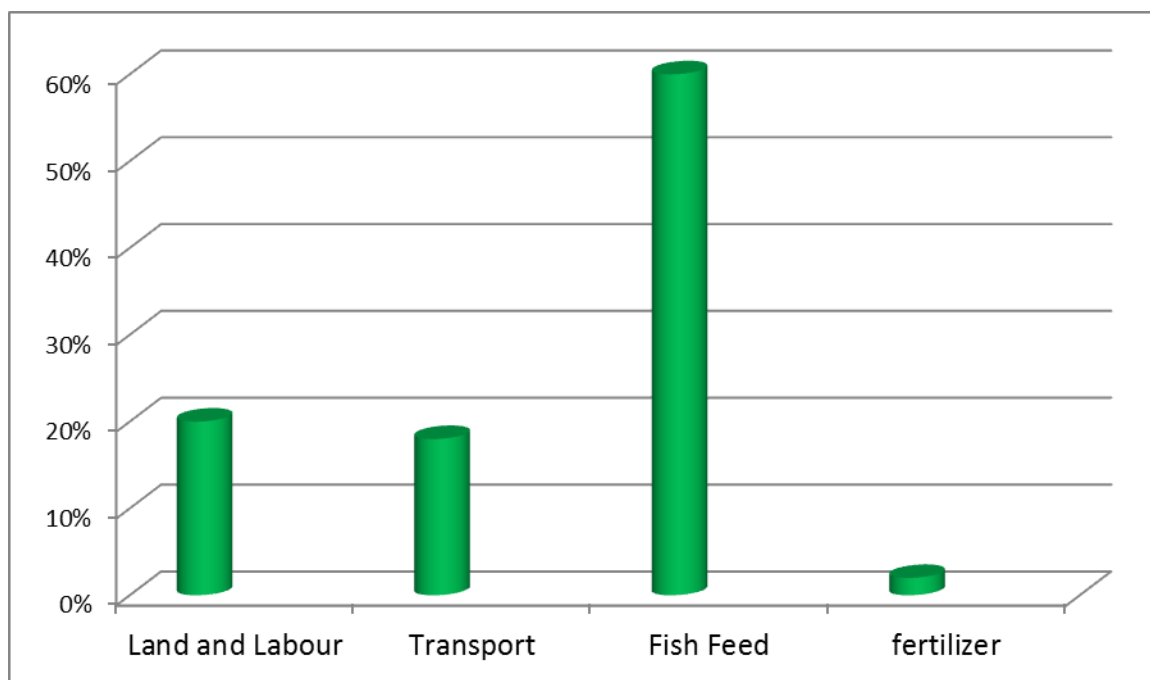
**Figure 6: Farmers Sources of Credit**

Source : Survey of primary data

**(9) Please mention the costs of your farming.....**

- a) Land and labour
- b) Transport
- c) Fish feed
- d) Fertilizer cost

**Comment:** 20% respondent say about the land and labour cost, 18% say about the transport cost, 60% respondent say that the main cost is fish feed cost to run their business and rest of 2% say about the fertilizer cost.



**Figure 7: Farming cost of Farmers**

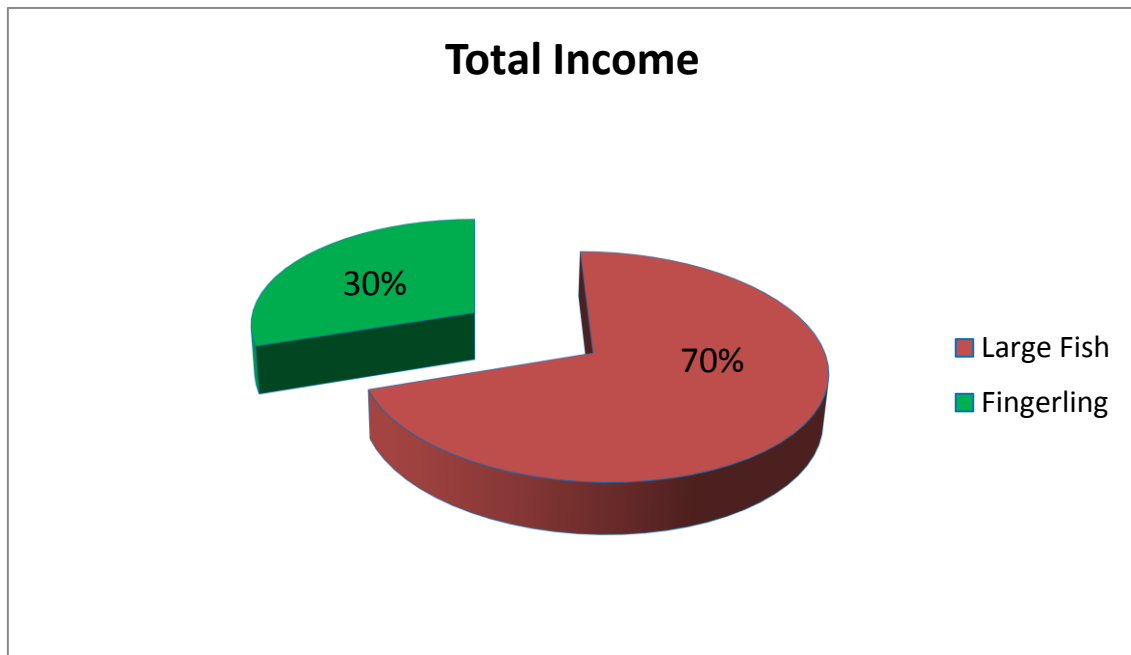
Source: Survey of primary data

**(10) Total Income : please tell the amount of your income in a year.....**

- a) Large fish
- b) Fingerling

**Comment:** Income was earned by selling the fingerling and selling the larger fish. The farmer's total annual income is earned by selling fingerling approximately is 40 to 50 lakhs (30%) and by selling larger fish is 1 to 2 crore (70%).





**Figure 8: Total income of Tilapia Farmers**

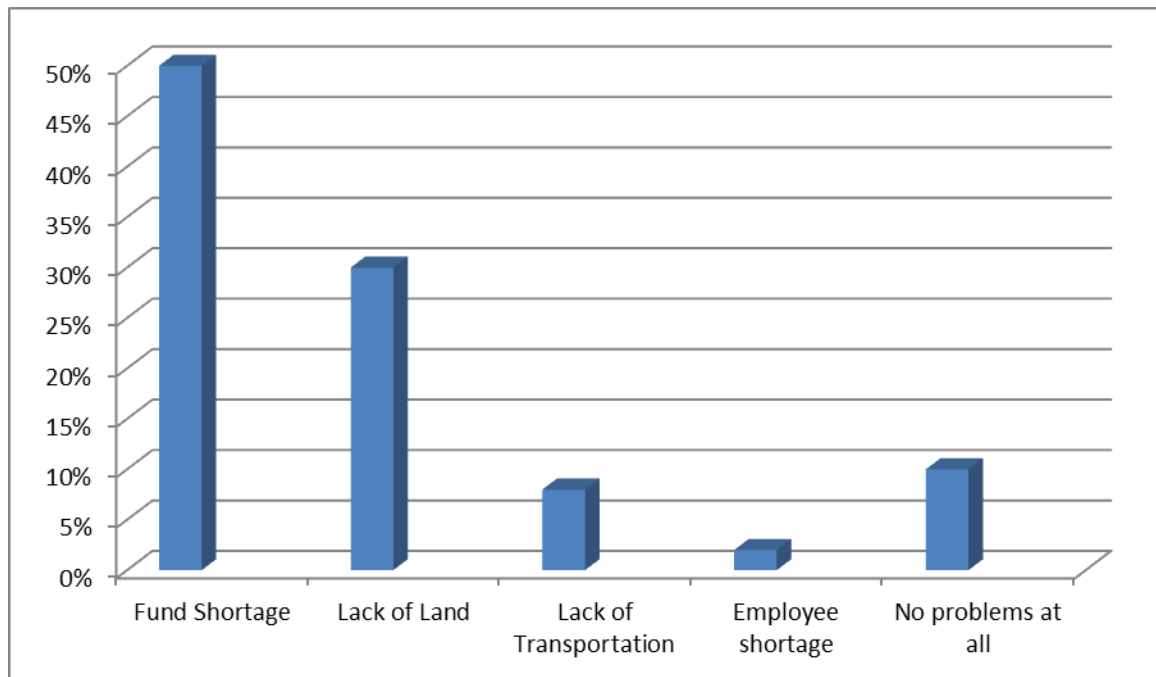
Source: Survey of primary data

**⌘ To know the problems ( From Farmers) :**

**(11) What type of problems you faced when starting the farming ?**

- a) Fund shortage.
- b) Lack of labour/ Employee shortage.
- c) Lack of transportation/poor transportation.
- d) Lack of land.
- e) No problems at all

**Comment:** 50% respondent faced problem of fund shortage, 30% faced land problems, 8% respondent faced transportation problem, 2% faced employee shortage and 10% respondent faced no problem at all.



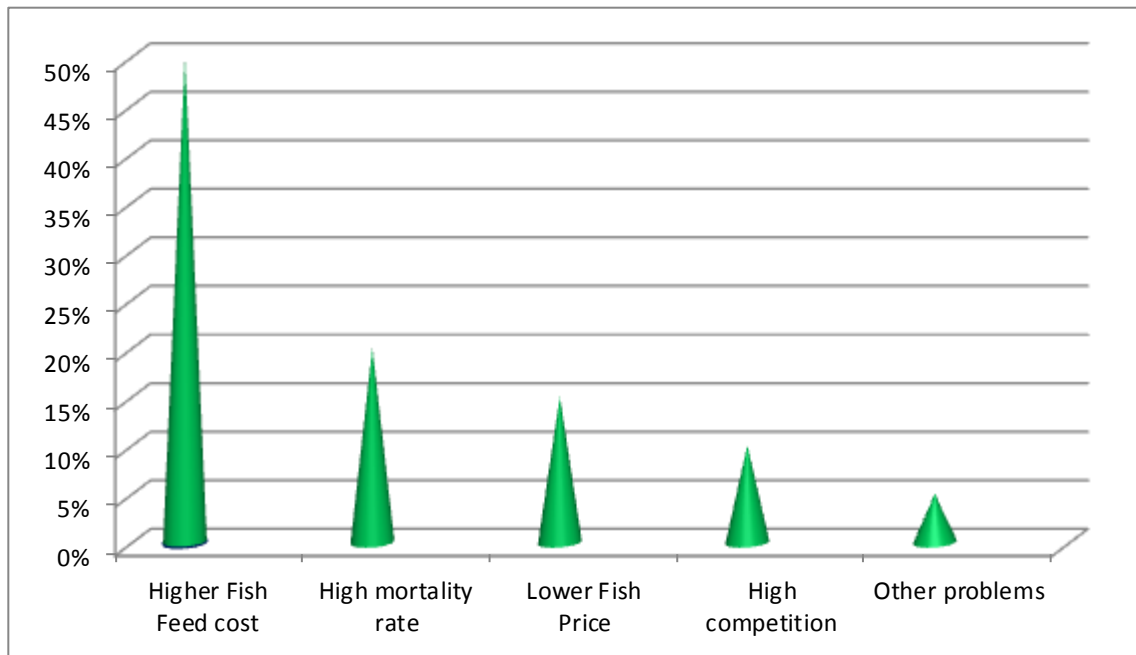
**Figure 9: Problems faced by Farmers at the beginning of farming**

Source: Survey of primary data

**(12) What type of problems you faces at now?**

- a) Fish feed cost is higher than before
- b) High mortality rate
- c) Price of fish is Lower/Less
- d) High competition /very competitive business
- e) Other problems

**Comment:** 50% respondent say that the fish feed cost is higher than before, 20% respondent say about the high mortality rate of fingerling , 15% respondent say that the problem of lower price of fish,10% think it is a competitive business and 5% respondent faced other problems.



**Figure 10: Current problems faced by Farmers**

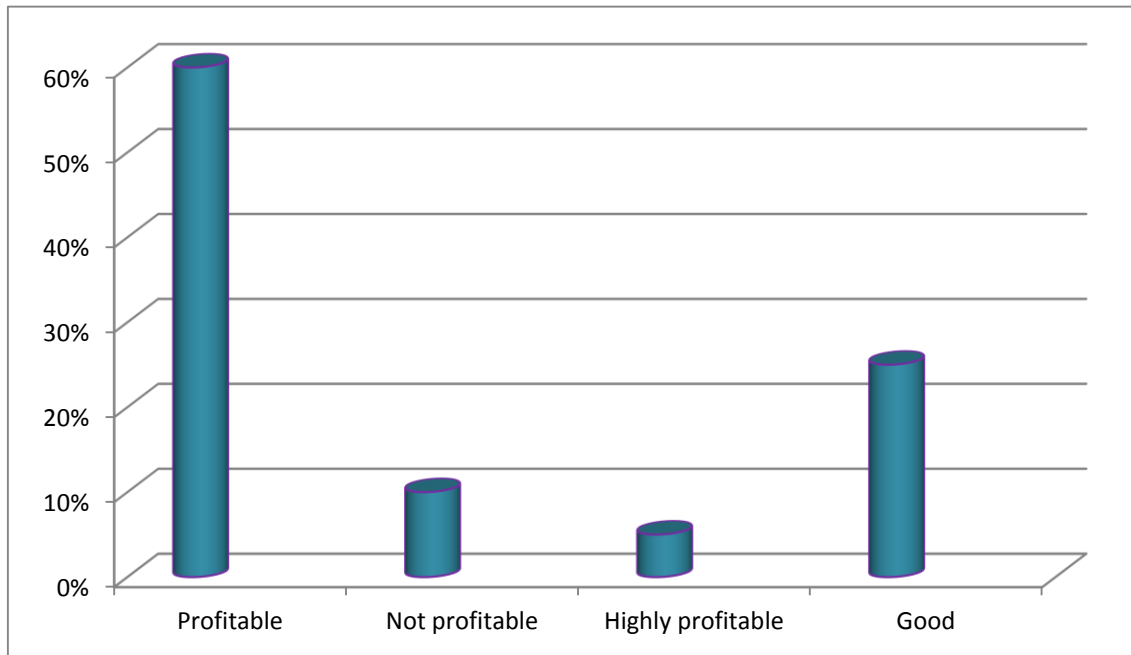
Source: Survey of primary data

**\*\*\* Finding Farmers Outlook/ Acceptance :**

**(13) The Tilapia Farming business is a.....**

- a) Profitable
- b) Not profitable
- c) Highly profitable
- d) Good

**Comment:** 60% respondent marked that it is a profitable business, 10% think that it is not profitable, 5% respondent marked it is highly profitable and 25% respondent considered that it is a good business.



**Figure 11: Farmers outlook about the Farming**

Source: Survey of primary data

**(14) Have you started the Tilapia farming ?**

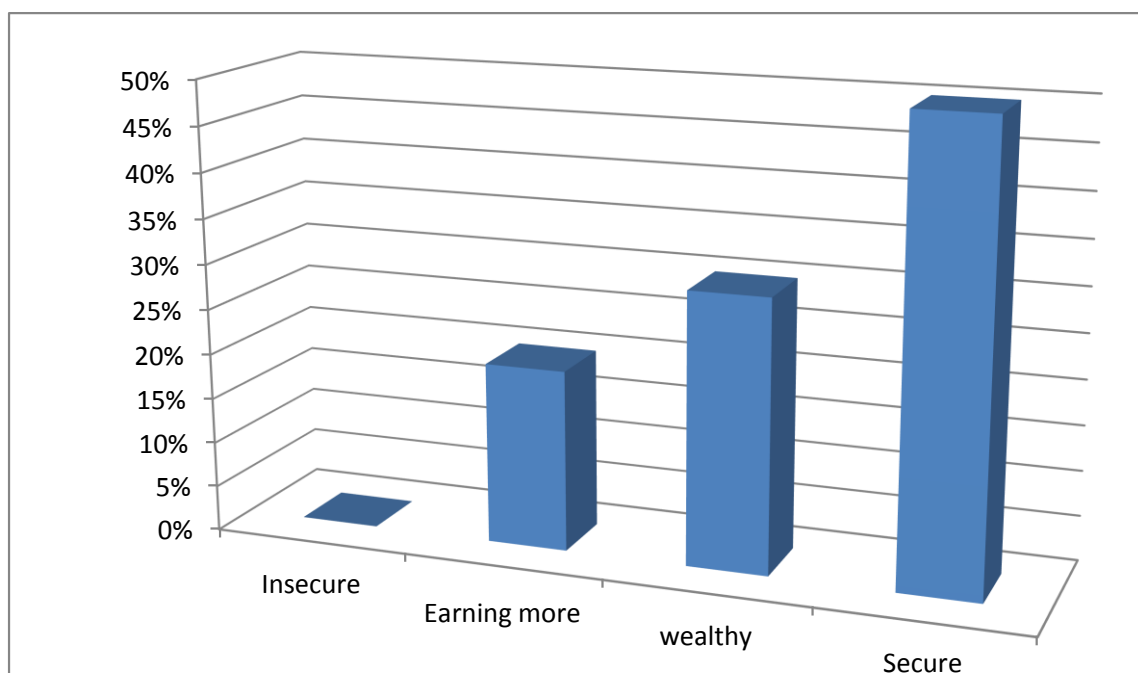
- a) Yes
- b) No
- c) Will start after some days

**Comment:** Most of the respondents (50%) have already started the Tilapia farming, 30% farmers haven't started and the other 20% respondents hope that they will start Tilapia farming in near future.

**(15) How you feel after starting the Tilapia farming ?**

- a) Secure
- b) Insecure
- c) Wealthy
- d) Earning more than before

**Comment:** 50% farmers feel them secure after starting the Tilapia farming, 30% feel wealthy, 20% farmers feel that earning is more than before but no one feel insecure.



**Figure 12: Feelings of farmers after starting Tilapia farming**

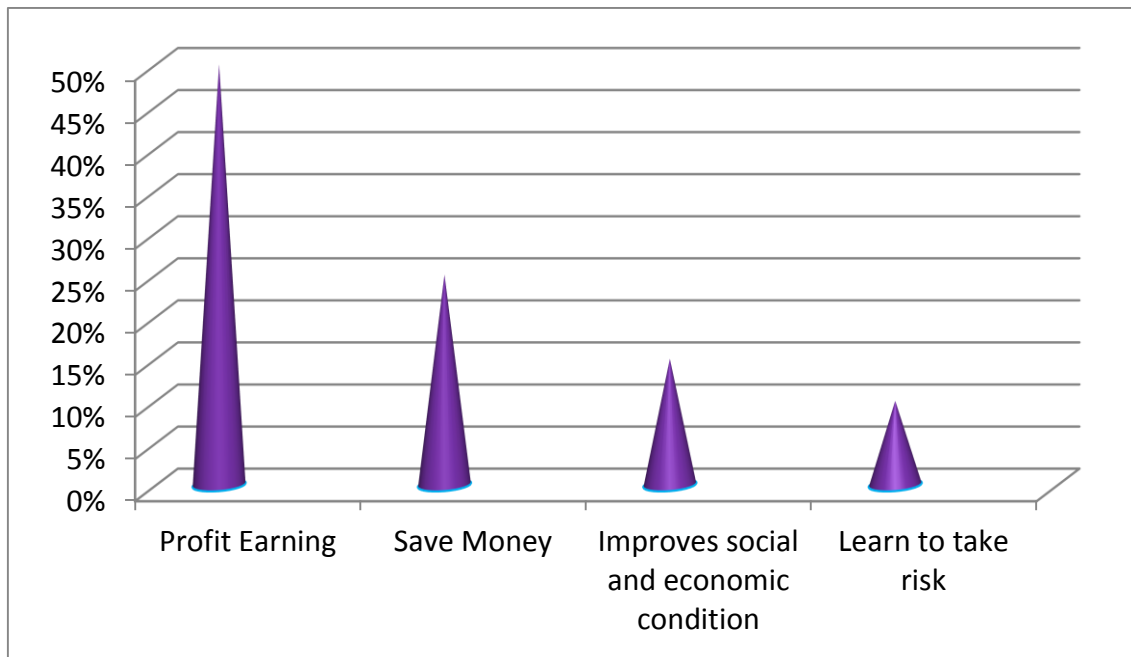
Source: Survey of primary data

**\*\*\* Finding future prospects ( Farmers) :**

**(16) How it helpful for you ?**

- a) Profit earning
- b) Save money
- c) Improves the social and economic condition
- d) Learn to take risk

**Comment:** 50% farmers think that it will be profit earning business, 25% farmers will save their money, 15% respondent think that it will improves the social and economic condition of their own 10% farmers say that it will learn how to take risk in a business.



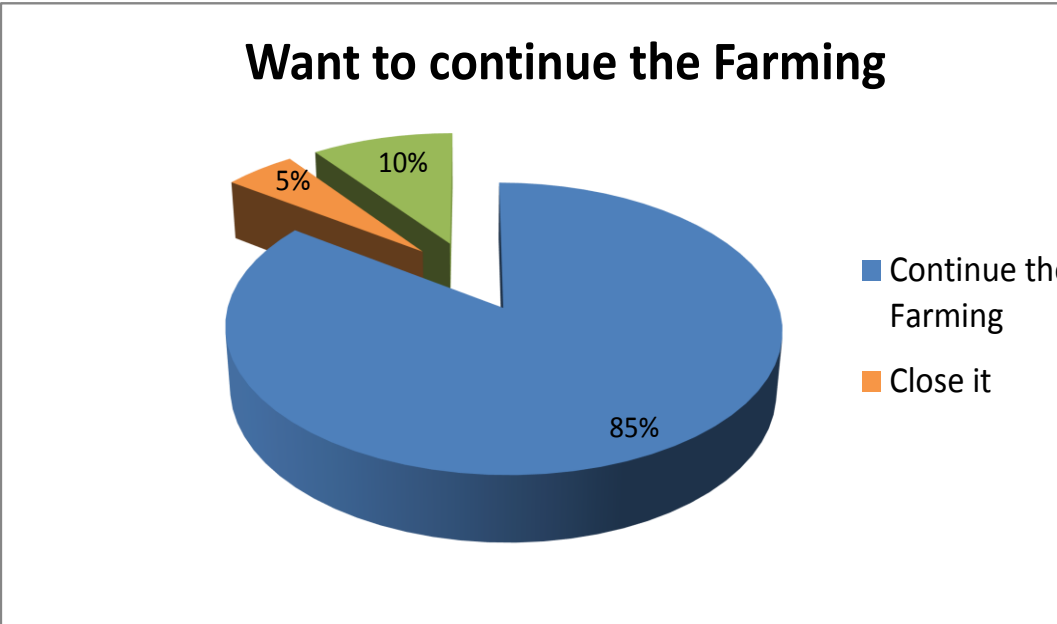
**Figure 13: How it helpful for fish farmers**

Source: Survey of primary data

**(17) What will you do in future (after 10/12 years)?**

- a) Continue the farming
- b) Close it
- c) Start other business

**Comment:** 85% farmers say that they will continue the Tilapia farming , only 5% respondent said that they will close it in near future and 10% farmers say that they will start other business with the farming.



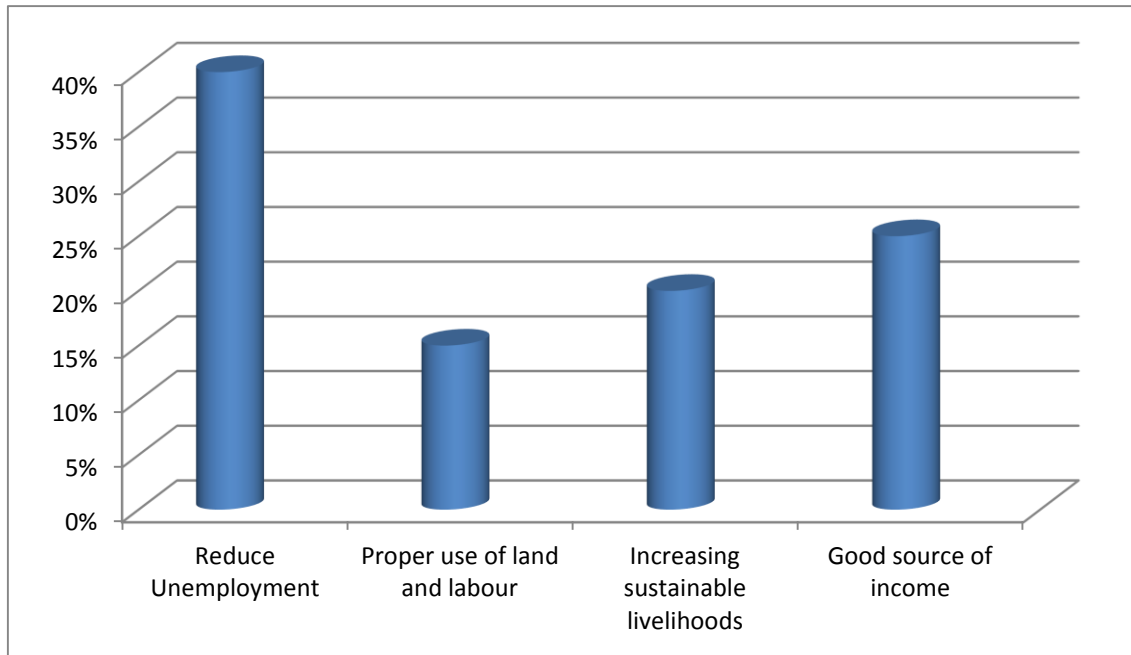
**Figure 14: Respondents want to continue the Tilapia culture in future**

Source: Survey of primary data

**(18) What do you think about the benefits of Tilapia farming ?**

- a) Reduce the unemployment
- b) Proper use of land and labour
- c) Increasing the sustainable livelihoods
- d) Good source of income

**Comment:** 40% respondent think that it will help to reduce the unemployment , 15% farmers think that it will ensures the proper use of land and labor , 20% farmers say that it will increase the sustainable livelihoods and 25% respondent think that it will a good source of income.



**Figure 15: Benefits of Tilapia Farming**

Source: Survey of primary data

**\*\*\* To know the function and activities ( 10 employees of IFAD agro complex) :**

In IFAD agro complex Limited, I have found only ten employees who expressed their views. The maximum numbers under each criterion is 50(10x 5). The state of different criterion in terms of the satisfaction of the farmers is expressed in the points.....

Satisfaction level	Total score	Out of 50
Very good	41-50	Out of 50
Good	31-40	Out of 50
Satisfactory	21-30	Out of 50
Moderate	11-20	Out of 50
Poor	01-10	Out of 50

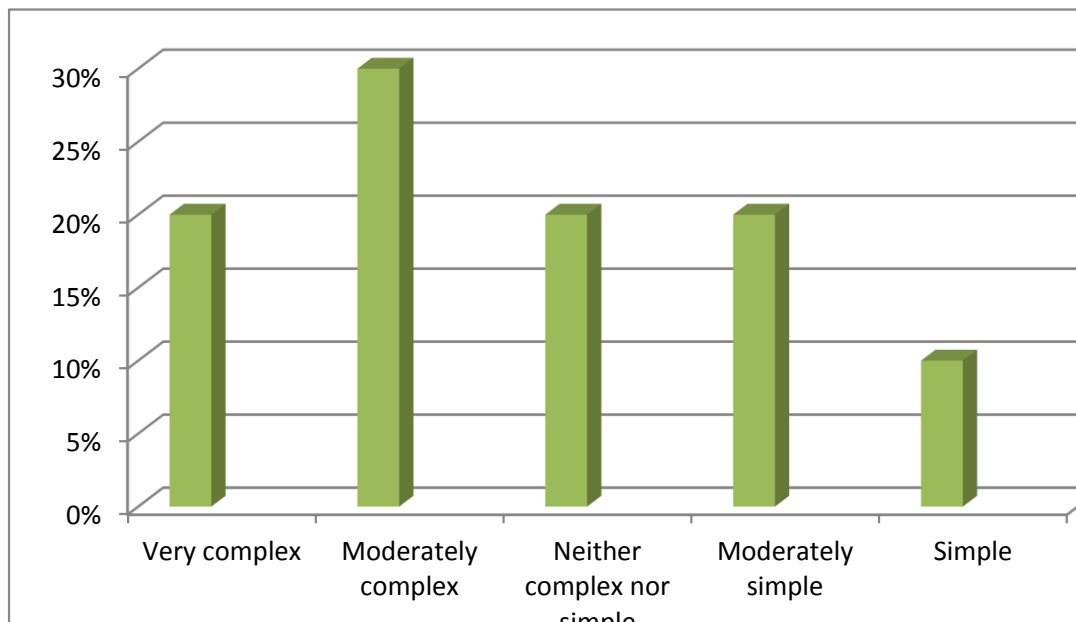


Results are shown below:

**(19) Is the process of Tilapia farming complex ?**

- a) Very complex
- b) Moderately complex
- c) Neither complex nor simple
- d) Moderately simple
- e) Simple

**Comment:** 20% employees think it as a very complex, 30% consider it as moderately complex, 20% say it's neither complex nor simple, 20% judge it as moderately simple and 10% think it's simple. Average score is 33 out of 50 (Good) which indicates that the process is complex to many farmers.



**Figure 16: Complexity of Farming**

Source: Survey of primary data

Very good	Good	Satisfactory	Moderate	Poor	Score	Position
02	03	02	02	01	33	Good

**(20) How many parties are needed here?**

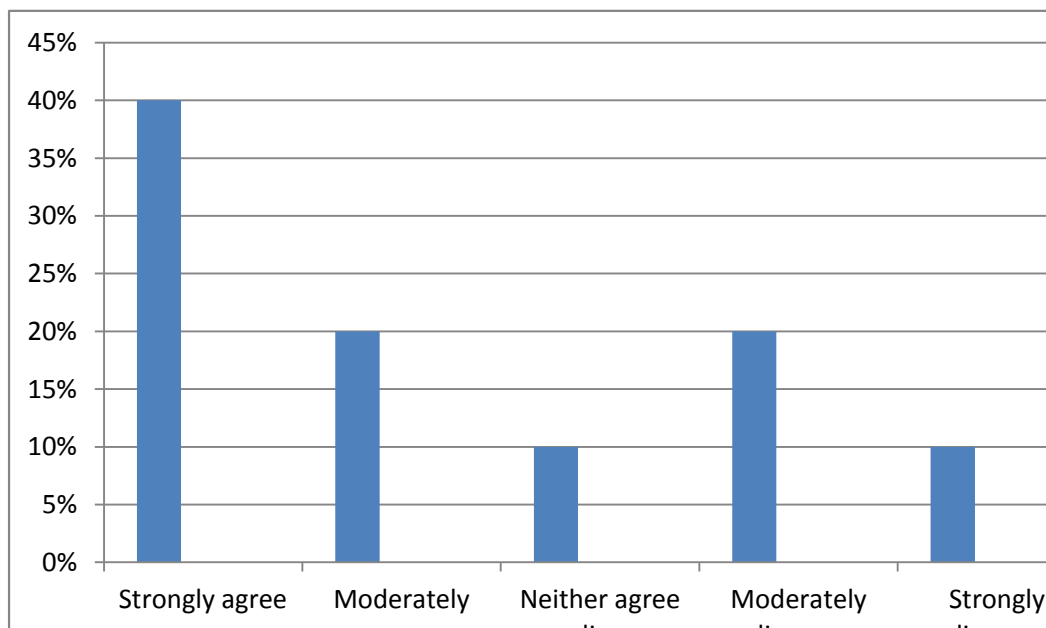
- a) The farmer’s and fish traders /paikers
- b) The fish buyers/customers
- c) Many parties

**Comment:** 80% of the respondent answered that here needed two parties fish farmer’s and fish buyers/ fish traders. 20% said that there’s needed many parties.

**(21) Are the customers accepted it cordially ?**

- a) Strongly agree
- b) Moderately agree
- c) Neither agree nor disagree
- d) Moderately disagree
- e) Strongly disagree

**Comment:** 40% employee strongly agreed, 20% moderately agreed, 10% neither agree nor disagree, 20% moderately disagreed and 10% strongly disagreed with this statement . The average score is 36 out of 50.which indicates satisfactory result. Customers accepted it cordially.



**Figure 17: Customers acceptance**

Source: Survey of primary data

Very good	Good	Satisfactory	Moderate	Poor	Score	Position
04	02	01	02	01	36	Good

⌘ **Finding problems ( Employess/officers of IFAD Agro complex):**

**(22) How you convinced the customers ?**

- a) Give knowledge about it
- b) Try to encourage to start farming
- c) Convinced the familiar/nearby farmers
- d) By good reputation and good managing power

**Comment:** All the employees of IFAD Agro complex are trying their best to convince the farmers or customers for starting the Tilapia farming .For this 30% employee try to encourage them,40% give them knowledge about it's benefits, 20% convinced the familiar or nearby farmers and 10% try to convince them by the reputation and good managing power of IFAD Agro complex.

**(23) Where are you get them ?**

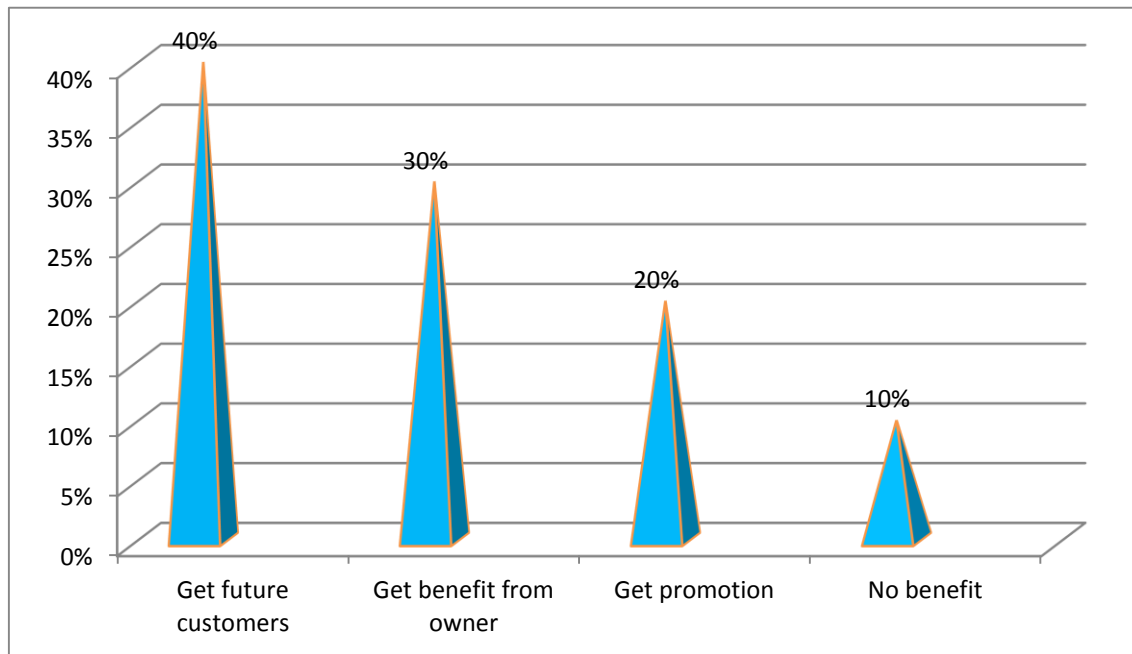
- a) Nearby villages
- b) In your locality/area
- c) Nearby the fish loving customers
- d) Long distance customers
- e) Others

**Comment:** IFAD Agro complex employees are collecting customers from different places. They get 50% customers from nearby villages, 20% from their locality/area.20% customers from long distance such as B-baria, comilla, Chandpur, Barisal and 10% from other sources.

**(24) What's your benefits ?**

- a) To get future customers
- b) Get benefit from the owner
- c) Get promotion/High salary
- d) No benefit

**Comment:** Through the Tilapia farming 40% employee think that they are getting future customers ,30% think they will get benefit from the owner, 20% employee hope to get promotion/high salary and 10% think they are not getting any benefit.



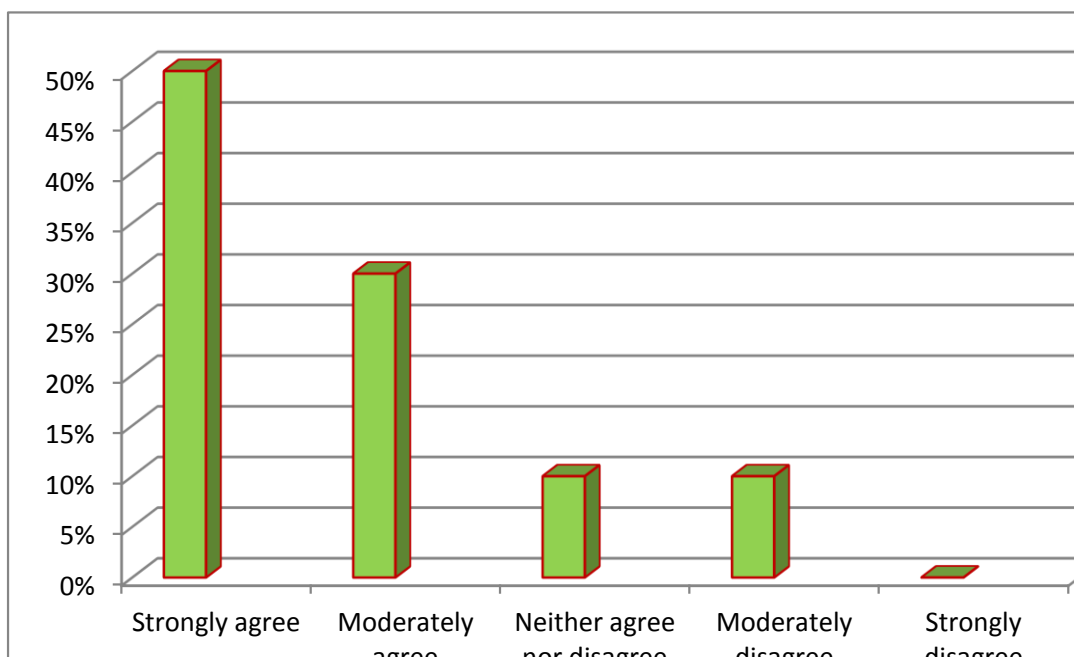
**Figure 18: Benefits of IFAD Agro complex Ltd.**

Source: Survey of primary data

**(25) Do you think it's a very tiresome job to manage / to collect customers?**

- a) Strongly agree
- b) Moderately agree
- c) Neither agree nor disagree
- d) Moderately disagree
- e) Strongly disagree

**Comment:** The agro complex employees are working hard to fulfill their target of Tilapia fish farming. 50% employee strongly agreed with this statement, 30% moderately agree, 10% neither agree nor disagree and 10% moderately disagree. The average score is 42 out of 50 (very good) which indicates that maximum employee consider it as a very hard job.



**Figure 19: It's a tiresome job for employees**

Source: Survey of primary data

Very good	Good	Satisfactory	Moderate	Poor	Score	Position
05	03	01	01	0	42	Very Good

## 5.6. Findings:

- ⊖ To develop my practical knowledge I had to attach with my respective organization (IFAD Agro complex Ltd. , Bhaluka, Mymensingh) four month and I found that their farming systems, environment, culture, discipline, norms, employee behavior towards customers was really satisfactory.
- ⊖ It has achieved its identity and popularity in locally. IFAD Agro complex is very popular with the local farmers.
- ⊖ Scientific method of Tilapia farming is accepted cordially by the fish farmers for its profitability.
- ⊖ It has great potentialities both for export and domestic market in Bangladesh.
- ⊖ Some farmers face monetary problems for Tilapia farming because of high feed cost.
- ⊖ If Tilapia is produced scientifically, the production and profitability is also increased.



**CHAPTER VI**  
**RECOMMENDATION AND**  
**CONCLUSION**

## **CHAPTER VI**

### **RECOMMENDATION AND CONCLUSION**

#### **6.1. RECOMMENDATIONS**

- ⊖ Good quality fish fry should be produced for better and profitable Tilapia farming.
- ⊖ Introduction of fish quality control measure and improvement of Tilapia distribution and handling facilities.
- ⊖ Farming activities and employee activities need to be improved.
- ⊖ Fair selling price should be ensured and information networks should be developed.
- ⊖ Some special facilities should be given to the employees to get better services.
- ⊖ Special remuneration for employees may encourage their hard workings and increase their satisfaction.
- ⊖ Transportation and infrastructure of IFAD Agro complex should be developed.
- ⊖ Skill development training is required for both the farmers and the employees for Tilapia farming.

#### **6.2. CONCLUSION**

Fish farming is one of the most popular activities in rural areas. Fisheries extension programs reached in a prominent stage for its low investment and higher profit by low labour. The Government of Bangladesh has implemented some specific plans for the overall development and management activities of fisheries sector. In recent time mono-sex Tilapia culture is most important species of fish culture than others. Tilapia farming has great potential in Bangladesh. Mono-sex GIFT Tilapia is a Hybrid species of fish. In our country this fish culture has increased broadly. Most of the fish farmers are benefited by Tilapia farming for its profitability. Despite importance of food supply not much has been done to sustain the production of Tilapia as a result of difficult production technology including marketing constraints. Provision of capacity building for the development of stakeholder organizations, government institutions make available technical advice and support on marketing, design of

market facilities and transportation, involving NGOs where appropriate and the implementation of a management plan to address existing constraints.

For food security and for the economic development , the contribution of Fisheries sectors is most important in Bangladesh. For a long time, IFAD Agro complex has been providing developed and high productive fry of mono-sex Tilapia for the farmers of Mymensingh area. It has a good reputation to the local and other fish farmers of different areas. We hope that, IFAD Agro complex will always play a vital contribution in our well known fisheries sector as well as our national economy by producing good quality fry and farming mono-sex Tilapia fish scientifically. It may also be a major source of employment. Bangladesh could become one of the leading Asian countries for Tilapia seed production and grow out farming. More research, appropriate extension work, support services and public-private partnership could make significant impact on innovation of sustainable Tilapia marketing and production.





**CHAPTER VII**  
**REFERENCES**

## CHAPTER VII

### REFERENCES

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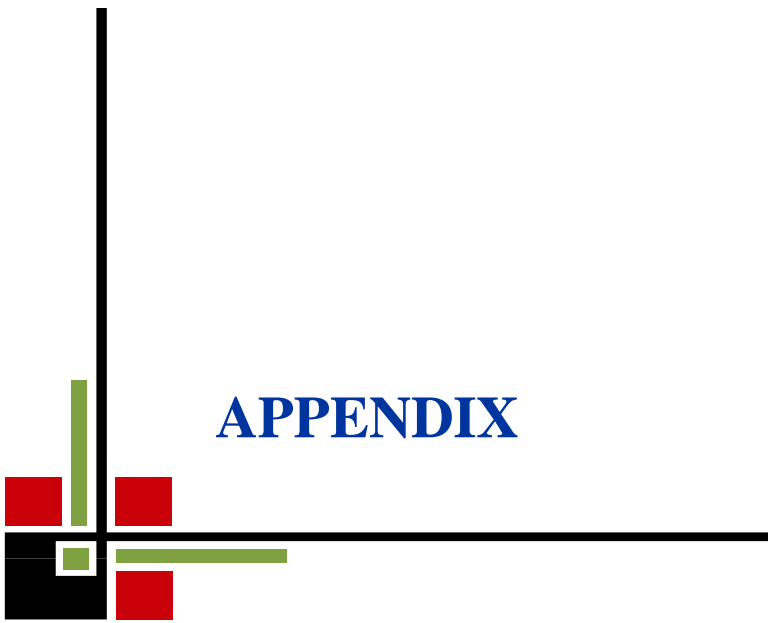
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## APPENDIX

## Appendix

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Sher-e-Bangla Agricultural University, Dhaka-1207

Interview Schedule on

**“AN OVERVIEW OF SCIENTIFIC METHOD OF TILAPIA FISH FARMING  
(A CASE STUDY ON IFAD AGRO COMPLEX LIMITED, BHALUKA,  
MYMENSINGH)”**

### Questionnaire

\*\*\* Sample No:

Farmer's Name:.....

Village:..... Thana:.....

(Please answer the following questions...)

(Basic information from the Tilapia fish farmer's...)

(1) Age: How old are you? .....years.

(2) Educational qualification please mention your educational qualifications...

SL No.	Primary	Secondary	Above

(3) Size Of the Farm: please mention Your farm size...

SL No.	Farm size		
	Small	Medium	Large

(4) Land condition: please give information related to land owners...

SL No.	Land condition	Acre
	own	
	Lease	

(5) How much you know about it ?

- a) Very well
- b) Moderately
- c) Not so well
- d) A little

(6) Why you are interested/not interested ?

- a) It's profitable
- b) Not profitable
- c) It's difficult to manage
- d) It's costly
- e) It's risky

(7) What type of farmer's you are.....?

Type	Yes/No
Permanent	
Optional	

(8) Sources of credit: please give the information of your credit sources.....

Sources	Amount
Bank	
NGOs	
Fish Traders	
Money Lenders	

(9) Farming costs of farmers (Annual) : please mention the costs of your farming.....

Costing items	Amount
Land and Labour	
transport	
Fish Feed	
Fertilizer cost	

(10) Total Income : please tell the amount of your income in a year.....

Source	Amount (TK) / %
Large Fish	
Fingerling	

\*\*\* To know the problems ( From Farmers) :

(11) What type of problems you faced when starting the farming ?

- a) Fund shortage
- b) Lack of labour/ employee shortage
- c) Lack of transportation/poor transportation
- d) Lack of land
- e) No problems at all

(12) What type of problems you faces at now ?

- a) Fish feed cost is higher than before
- b) High mortality rate
- c) Price of fish is Lower/Less
- d) High competition / very competitive business
- e) Others

\*\*\* Finding Farmers Outlook/Acceptance :

(13) The Tilapia Farming business is a.....

- a) Profitable
- b) Not profitable
- c) Highly profitable

- d) Good
- (14) Have you started the tilapia farming ?
- a) Yes
  - b) No
  - c) Will start after some days ?
- (15) How you feel after starting the tilapia farming ?
- a) Secure
  - b) Insecure
  - c) Wealthy
  - d) Earning more than before

\*\*\* Finding future prospects ( Farmers) :

- (16) How it helpful for you ?
- a) Profit earning
  - b) Save money
  - c) Improves the social and economic condition
  - d) Learn to take risk
- (17) What will you do in future (after 10/12 years)?
- a) Continue the farming
  - b) Close it
  - c) Start other business
- (18) What do you think about the benefits of farming ?
- a) Reduce the unemployment
  - b) Proper use of land and labour
  - c) Increasing the sustainable livelihoods
  - d) Good source of income



\*\*\* To know the function and activities ( 10 employees of IFAD agro complex)

The satisfaction of farmers is expressed in the points.....

Satisfaction level	Total score	Out of 50
Very good	41-50	Out of 50
Good	31-40	Out of 50
Satisfactory	21-30	Out of 50
Moderate	11-20	Out of 50
Poor	01-10	Out of 50

(19) Is the process of Tilapia farming complex ?

- a) Very complex
- b) Moderately complex
- c) Neither complex nor simple
- d) Moderately simple
- e) Simple

Very good	Good	Satisfactory	Moderate	Poor	Score	Position

(20) How many parties are needed here ?

- a) The farmer's and fish traders / paikers
- b) The fish buyers/customers
- c) Many parties

(21) Are the customers accepted it cordially ?

- a) Strongly agree
- b) Moderately agree
- c) Neither agree nor disagree
- d) Moderately disagree
- e) Strongly disagree

Very good	Good	Satisfactory	Moderate	Poor	Score	Position

\*\*\* Finding problems ( Employess /officers of IFAD Agro complex):

(22) How you convinced the customers ?

- a) Give knowledge about it .
- b) Try to encourage to start farming .
- c) Convinced the familiar/nearby farmers/customers.
- d) By good reputation/good managing power

(23) Where are you get them ?

- a) Nearby villages
- b) In your locality/area
- c) Nearby the fish loving customers
- d) Others.

(24) What's your benefits ?

- a) To get future customers
- b) Get benefit from the owner
- c) Get promotion/High salary
- d) No benefit

(25) Do you think it's a very tiresome job/work to manage ?

- a) Strongly agree
- b) Moderately agree
- c) Neither agree nor disagree
- d) Moderately disagree
- e) Strongly disagree

Very good	Good	Satisfactory	Moderate	Poor	Score	Position

*Thanks.....*