

# **INTERNSHIP REPORT**

**ON**

## **“Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upozilla in Dinajpur District”**

### **SUPERVISED BY**

**Md. Abdur Rouf**

**Lecturer**

Department of Marketing  
Faculty of Business Studies  
HSTU, Dinajpur

### **SUBMITTED BY**

**Md. Asaduzzaman Sagor**

**Student ID- E-140503060**

M.B.A. (Evening), 3<sup>rd</sup> Batch  
Major in Marketing  
HSTU, Dinajpur

This internship report is submitted to the faculty of Business Studies, Hajee Mohammad Danesh Science and Technology University, Dinajpur, in partial fulfillment of the requirements for the degree of MBA (Evening) program.



**Faculty of Business Studies**

**HAJEE MOHAMMAD DANESH SCIENCE AND TECHNOLOGY  
UNIVERSITY, DINAJPUR-5200**

**OCTOBER, 2016**

# **INTERNSHIP REPORT**

**ON**

## **“Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upozilla in Dinajpur District”**

**By-**

**Md. Asaduzzaman Sagor**

**Student ID- E-140503060**

**M.B.A. (Evening), 3<sup>rd</sup> Batch**

**Major in Marketing**

**HSTU, Dinajpur**

### **Supervisor**

**Md. Abdur Rouf**

**Lecturer**

Department of Marketing

Faculty of Business Studies

HSTU, Dinajpur

### **Co-Supervisor**

**Rony Kumar Datta**

**Assistant Professor**

Department of Finance and Banking

HSTU, Dinajpur

**Master of Business Administration (Evening)**



**Faculty of Business Studies**

**HAJEE MOHAMMAD DANESH SCIENCE AND TECHNOLOGY  
UNIVERSITY, DINAJPUR-5200**

**OCTOBER, 2016**

## **Student's Declaration**

I, am **Md. Asaduzzaman Sagor**, Student ID No. **E140503060**, MBA (Evening) Major in Marketing, Department of Marketing, submitted my internship report entitled **“Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upazilla in Dinajpur District”** after completing my internship program. I have tried my level best to get together as much information as possible to enrich the report. I believe that it was a great experience and it has enriched both my knowledge and experience.

This report has been submitted in partial fulfillment of the requirement for the degree of Master of Business Administration (MBA) Evening, Major in Marketing at Hajee Mohammad Danesh Science and Technology University, Dinajpur.

---

**Md. Asaduzzaman Sagor**

Student ID No. E140503060

MBA (Evening), 3<sup>rd</sup> Batch

Major in Marketing

HSTU, Dinajpur.

## **Declaration of Supervisor**

It's my pleasure to certify that Md. Asaduzzaman Sagor, student Id: E-140503060, MBA (Evening) Major in Marketing, 3<sup>rd</sup> Batch has successfully completed MBA (Evening), Internship report titled “**Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upozilla in Dinajpur District**” under my supervision and guidance.

Therefore, he is directed to submit his report for evaluation. I wish his success at every sphere of his life.

---

**Md. Abdur Rouf**

**Lecturer**

Department of Marketing

Faculty of Business Studies

HSTU, Dinajpur

## **Declaration of Co-Supervisor**

It's my pleasure to certify that Md. Asaduzzaman Sagor, student Id: E-140503060, MBA (Evening) Major in Marketing, 3<sup>rd</sup> Batch has successfully completed MBA (Evening), Internship report titled “**Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upozilla in Dinajpur District**” under my supervision and guidance.

Therefore, he is directed to submit his report for evaluation. I wish his success at every sphere of his life.

---

**Rony Kumar Datta**  
**Assistant Professor**  
Department of Finance and Banking  
Faculty of Business Studies  
HSTU, Dinajpur

## **Acknowledgement**

At first I would like to thank my honorable supervisor of internship program, **Md. Abdur Rouf**, Lecturer, Department of Marketing, and co-supervisor **Rony Kumar Datta**, Assistant Professor, Department of Finance and Banking, HSTU, Dinajpur for providing me such an opportunity to prepare an Internship Report on “**Profitability Analysis of Poultry Farming in Bangladesh: A Case Study on Sadar Upozilla in Dinajpur District**” Without his helpful guidance, the completion of this project was unthinkable.

During my preparation of the project work I have come to very supportive touch of different individuals & friends who lend their ideas, time & caring guidance to amplify the report's contents. I want to convey my heartiest gratitude to them for their valuable responses.

In presenting this completed paper in partial fulfillment of the requirements for an academic degree. I understand the university maintains one or more copies of the work in its institutional archive as the percent record of the work's acceptance toward the degree, with the underrating that the university will maintain achievable copies of the work in such form as best ensures its permanent preservation and continued public accessibility.

October, 2016

*The Author*

## CONTENTS

CHAPTER	TITLE	PAGE NO.
<b>CHAPTER I</b>	<b>INTRODUCTION</b>	<b>1-3</b>
1.1	Objectives of the Study	3
<b>CHAPTER II</b>	<b>LITERATURE REVIEW</b>	<b>4-8</b>
2.1	Egg Production	4
2.2	Meat Production	5
2.3	Facilities on a Poultry farm	5
2.4	Waste Handling	5
2.5	Management of Poultry Farms	6
2.5.1	Feeding	6
2.5.2	Vaccination	6
2.5.3	Cleaning and Sanitizing	7
2.6	Photos of Broiler Farm	7
<b>CHAPTER III</b>	<b>METHODOLOGY</b>	<b>9</b>
<b>CHAPTER IV</b>	<b>RESULT</b>	<b>10-20</b>
4.1	Importance of Poultry Farming in Bangladesh	10
4.2	Economic importance	10
4.3	Nutritional Importance	11
4.4	Poultry Farming Condition of Sadar Upazila, Dinajpur District According to Field Survey	12
4.5	Profitability Analysis	13
<b>CHAPTER IV</b>	<b>RECOMMENDATIONS AND CONCLUSION</b>	<b>21</b>
	<b>REFERENCES</b>	<b>22-23</b>
	<b>APPENDIX</b>	<b>24</b>

## **Abstract**

Poultry farms, mainly chicken farms producing meat or eggs, can be highly specialized operations. To maximize profits and plan future enterprise activities, a feasibility analysis prior to investment and proper management during the operation are required. Proper management ensures efficient production and good quality products (meat or eggs).

This is accomplished by controlling diseases, maintaining feed efficiency, proper handling of wastes, and proper sanitizing of the poultry house. Due to short turnover rates of poultry flocks and strong market demand, the poultry business could potentially be a profitable enterprise.

This study details a profitability analysis on a flock of broilers raised for the purpose of meat production. A farm and its facilities were rented to grow and finish the flock for market delivery. This study aimed to determine the cost, return, and profitability of broiler production in some selected areas of Sadar Upozilla in Dinajpur District, Bangladesh.

It was mainly based on primary data which were collected through well-structured questionnaire from the respondents of poultry production during the month of September, 2016. Selected samples consisted of 30 poultry farm owners selected by using purposive sampling technique. In the selected area maximum people are related with agriculture. The findings revealed that poultry production was a profitable enterprise. The people of this area said that, poultry farming and vegetables cultivation are profitable farm activity in a short run.

This study also identified some problems in the production of poultry in the study area. Finally, based on the findings of the study, some recommendations were made for the development of poultry production in Bangladesh. Market prices of chicks, meat, and feed vary and these variations can affect enterprise profitability. When the price per kg of meat goes down, feed costs tend to decrease (compensating for the low meat price). When the price per chick increases, the price per kg of meat also tends to increase, thus compensating for the increased cost per chick. Since price variations are critical factors in determining future profitability.

**Keywords:** Poultry farming, Production, Cost, Return, Profitability.



## **CHAPTER I**

### **INTRODUCTION**

Bangladesh is a densely populated developing country and its economy is very much dependent on agriculture. Poultry is a part of agricultural farming system in Bangladesh. Even though raising poultry birds is mostly a subsistence practice in Bangladesh. Poultry farms are farms that raise chickens, ducks, turkeys, and other birds for meat or egg production. In the past, poultry farming involved raising chickens in the back yard for daily egg production and family consumption. However, poultry farming today is a huge business that is split into several operations including hatcheries, pullet farms for meat production, or farms for egg production. This paper will focus on poultry farms raising chicken. As the human population increases, the poultry industry continues to grow to meet the demand for poultry products in world markets. The importance of poultry farms lies in the quality of products that are provided to humans. Broiler farms provide meat that supplies the human body with high quality proteins. Layer farms provide eggs rich in proteins and vitamins, especially the fat soluble vitamins (A, D, E, and K). Poultry farms are fast-paced operations that can fulfill the demand for meat and eggs, and can be expanded easily to meet the ever-growing demand (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016).

Chickens are fast growing animals. In the past, it took about 4 months to produce a two kilogram chicken. However, today a two-kilogram chicken can be produced in 32 days (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016). Due to this fact, a better

understanding of husbandry practices, and use of new technologies, poultry farms can be profitable enterprises.

Each operation in the poultry business has become a huge business by itself. Some farms specialize in producing eggs for market consumption, or for hatching chicks for the purpose of meat production. Many large farms specialize in raising broilers for meat production. Other businesses are focused on feed preparation or on using the wastes of poultry farms for compost production and fertilizing farmlands. If managed and marketed well, all segments of the poultry business can be profitable.

The contribution of poultry production is vital to the national economy in case of generating employment opportunity, additional income for households and improving the nutritional level of the people. About 2.58 percent of GDP came from animal farming during the 2010/11 financial year

(MoF 2012). The poultry sector has emerged as a flourishing and promising commercial sector in Bangladesh during the recent years. The poultry sector registered a per holding increase of 38.8 percent and per capita increase of 64.8 percent for the period between 1983/84 and 2005 (Planning Commission 2011). In fact, there has been a silent revolution in the poultry sector during the last decade. During the 2000/01-2008/09 decade poultry population registered a growth of over 5 per cent (ibid.). It is one of the fastest growing sectors with bright future and plays a crucial role in supplying nutritious food and generating income. It is recognized as a profitable business by many people and getting popularity day by day as employment opportunity is being created among people. As a developing country, unemployment, inadequate nutrition and poverty, scarcity of arable land are the major problems in Bangladesh. About 31 percent of the population in Bangladesh lives below the absolute poverty line and the number of landless people has been increasing by 3.4 percent per annum (BBS, 2009). About 50 percent of the children are born underweight and 52 percent of the mothers suffer from nutrition deficiency (BBS 2007). The per capita intake of poultry meat in Bangladesh is only 11.2 grams per day (HIES 2011) compared to a standard requirement of 36 grams per day (Ahmed and Islam 1985). Commercial broiler farming serves as ready source of income among the poor people when need money and creates the employment opportunity for educated unemployed youth and also for women. It has been acting as an important tool for reducing the migration from rural poor people to the urban areas. Millions of rural

women are involved in poultry rearing under the poverty alleviation program of direct Non-Government Organizations (NGOs) and Department of Livestock Service (DLS) under its packages program. For this purpose it is necessary to help the growers. An important way of helping the growers is to reduce their production cost, so that the prices of locally produced poultry become more competitive and profitable.

### **1.1 Objectives of the Study:**

The aim of this study is to analyze the present condition of poultry production. This study aims to provide information about cost of production and return on poultry farming. The result of this study may be helpful in making right decision for the growers. Again, it will help them to allocate their resources more efficiently.

The specific objectives of the study are:

1. To assess the profitability of poultry farming through cost and return of poultry farming.
2. To identify the problems and constraints associated with poultry farming.
3. To suggest possible solutions for those problems.

## **CHAPTER II**

### **LITERATURE REVIEW**

Literature review refers the examination of other works previously done by other researchers on economic analysis of poultry farming and of Bangladesh. We have found that in our country several studies have been made by several researchers on illustrated topic.

Poultry farms can be classified into two main types: farms for egg production and farms for meat production.

#### **2.1 Egg Production**

In egg-producing farms, day-old chicks are purchased from specialized hatcheries that produce egg-producing pullets. These pullets are either raised by the egg producer or a pullet grower until they are ready to start laying eggs, which is usually at 19 weeks of age (Beutler, 2007).

The egg production cycle lasts for about one year. The pullets and laying hens are raised mainly in environmentally controlled poultry houses in cage systems. To make the maintenance process easier, automated feeding, watering, and egg collection systems were developed. Feed and water are moved on rotating belts which pass by the cages. Another rotating belt collects the eggs and sends them to the sorting chamber to be tested for fertility, graded, and sorted according to size, making them ready for delivery to the market (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016).

Laying hens in egg producing farms are usually of small body frame and body weight compared to broilers. They can be classified into two groups: dual purpose chickens or egg producing chickens. Egg producing chicken breeds have been bred and raised for maximum egg production (up to 300 eggs per year) rather than high meat yield (Beutler, 2007). Dual purpose chickens are smaller in size than commercial meat breeds. They are used for meat as well as egg production, and can produce around 200 to 250 eggs per year (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016).

There have been several developments to increase the marketing value of eggs. These developments include omega-3 eggs, folate and lutein enriched eggs, as well as free run and organic eggs. These specialty eggs increase the value of eggs, and have caused a noticeable change in the market (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016).

## **2.2 Meat Production**

In poultry farms focused on meat production, broiler breeders are raised mainly in environmentally controlled poultry houses. Fertile eggs are collected and transported to the hatchery, where they are placed in hatcheries for 18 days and then transferred to incubators in the last 3 days (Beutler, 2007). After hatching, broiler chicks are distributed to producers who grow out the birds, and send them for slaughtering and processing after 32 days. These broilers are chickens that are raised for the purpose of meat production and have a larger body frame and weight than layers (Beutler, 2007).

## **2.3 Facilities on a Poultry farm**

Facilities on poultry farms are related to the purpose of the farm. In general, all poultry farms share common facilities and equipment such as feeders and drinkers. However, depending on the purpose of the farm, some facilities vary. For instance, some meat production farms include slaughter house facilities. The purpose of having these slaughtering facilities on a broiler farm is to minimize cost and increase profits through vertical integration. Egg production farms are equipped with nest boxes if the breeders are raised on the floor, or, if raised in cages, automated belt systems are installed for collection of eggs. Hatcheries are equipped with incubators that maintain the eggs for 18 days and hatchers that keep the eggs for 3 days, both maintained at the right temperature and humidity required for hatching (Wood et al., 1998).

## **2.4 Waste Handling**

Wastes are produced in all types of poultry operations. After poultry houses are cleaned and sanitized, the wastes should be confined in one area for later removal by specialized companies for composting or proper disposal to avoid contaminating the environment. This confinement area can be used for all types of wastes including litter from most poultry farms and un-hatched eggs from hatcheries (Wood et al., 1998).

Poultry litter can also be considered to be a by-product with economic potential. At the end of a production cycle in a broiler or egg-production operation, litter is removed mechanically from the poultry house, and can be used as fertilizers for crop production. Litter can also be removed and sold to commercial processors for composting operations or nursery preparations. It can also be composted on the farm in a confined area, and then applied to farm lands.

## **2.5 Management of Poultry Farms**

### **2.5.1 Feeding**

Feed costs have a major impact on the profitability of poultry farm operations. The high cost of feed is related to the energy and protein contents of the diet. In an unbalanced diet, with an excess protein, feed would cost more, thus increasing production costs. With low protein diets, chickens would take more time to grow, and could be at a higher risk of catching diseases. Chickens have different nutrient (feed) requirements depending on their type, age, and sex. Rations formulated to meet nutrient requirements produce faster growing, and healthier chickens, and thus better products and more profits (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016). Excess dietary nutrients are often excreted in the feces. The excess nitrogen and phosphorus in feces could cause a threat to the environment. For this reason, managing feed formulas for accuracy is an important step in the poultry farm management to safeguard the environment, and reduce operating costs (Karcher, 2009).

### **2.5.2 Vaccination**

Vaccination is an effective way to reduce the negative effects of diseases that can cause losses in a poultry operation. Diseases can be caused by viruses, mycoplasma, bacteria, fungi, protozoa, and parasites. Viruses are the number one cause of poultry disease and are considered to be the largest threat to poultry farms. Viral diseases can be reduced by proper sanitation on the farm, biosecurity measures, and vaccination of the chicks and chickens (Dr. Md. Haidar Ali, Assistant Professor, HSTU and Dr. Abdus Salam, Veterinary Surgeon, Biral, Dinajpur, personal communication, 2016).

Viruses can cause several diseases; the major ones include: Marek's disease, Newcastle disease, infectious bronchitis, laryngotracheitis, fowl pox, fowl cholera, and avian encephalomyelitis (Jacob et al., 1998). Vaccination is mainly done to prevent Marek's disease, which can infect laying hens and hence, a whole flock if the eggs are infected. There are several vaccination methods. Some vaccines are administered via drinking water. Others can be sprayed, whereby the spray enters the nostril or the eye to form antibodies. Another way is by injection using an automatic syringe in the neck (Jacob et al., 1998). Chicks are usually vaccinated between 2 to 16 weeks of age, depending on the type of vaccine and disease. Some vaccines are marketed as mixtures to prevent more than one disease.

More vaccination methods have been developed in the United States. For example in-ovo vaccination has made the process more labor efficient. This method vaccinates the embryo in the egg at the hatchery; after that there isn't any need to vaccinate again on the farm (Williams, 2007).

### **2.5.3 Cleaning and Sanitizing**

After poultry are removed from the poultry house, it must be cleaned and sanitized. The sanitation process differs depending on the floor type and type of poultry house. Several disinfectants can be used to clean and sanitize the poultry house. However, the disinfectant must be chosen carefully to avoid problems with newly introduced flocks (Smith, 1999).

### **2.6 Photos of Broiler Farm**



**Figure: 1**





**Figure: 2**



**Figure: 3**



**Figure: 4**

## CHAPTER III

### METHODOLOGY

This study is based on field level primary data collected from selected farmers through field survey method. We have followed interview survey method using questionnaire to collect data from respondents to fulfill the objectives of the study. We have conducted a survey in Sadar Upazila, Dinajpur District in Bangladesh. In case of poultry farming there are many birds like chickens, ducks, turkey, swans, pigeons etc.

From which we have selected broiler chicken. The duration of broiler farming is 40 days. From all sample 30 respondents are selected as sample. The selected farmers were interviewed about cost and return that comes from their farm. In this study September of the year 2016 was considered as sample time duration.

To calculate net return we have used following formula-

$$\text{Net return} = \text{GR} - \text{GC}$$

Where, GR=Gross return, GC=Gross cost

$$\text{Here, GC} = \text{TFC} + \text{TVC}$$

Where, TFC=Total fixed cost, TVC=Total variable cost

To calculate benefit-cost ratio we use following formula-

$$\text{Benefit-Cost ratio} =$$

$$\frac{\text{Gross return (GR)}}{\text{Gross cost (GC)}}$$

$$\text{Gross cost (GC)}$$

Gross return includes the average return from main product and it's by product. Gross cost includes total fixed cost and variable cost and total variable cost. Where total fixed cost includes land use cost and cost for machines and tools. Benefit cost ratio is a relative measure which is used to compare benefit per cost. It helps to analyze the financial efficiency of the farms (Z. Monsura, H.A. Rokhsan, F. Tahmina, 2010).

We have also used secondary data collected from Bangladesh Bureau of Statistic, Bangladesh Economic Review, newspapers, relevant websites, important books, journals etc.

## **CHAPTER IV**

### **RESULT**

#### **4.1 Importance of Poultry Farming in Bangladesh**

Agriculture is the backbone of the economy of Bangladesh. Agriculture contributes 21.84% demand for balanced diet. Poultry is one of the important segments of agriculture in Bangladesh. The term poultry is used to designate those species of bird which render man an economic service and reproduce freely under his proper care. At present poultry is produced for commercial perspectives. It helps to generate employment and income and to build a poverty free and healthy society.

In Bangladesh poverty, unemployment and malnutrition is the major obstacle for development. Here major portion of population lives below the poverty line. In our country 2.2 million educated people are unemployment. Our children and mothers are victims of malnutrition. About 50% children are born underweight and 52% mothers suffer from nutrition deficiency (BBS, 2014). At this situation poultry rising is a good way of meeting the protein gap, employment generation and poverty alleviation in the shortage possible time. It also provides financial benefit. So, poultry is one of the most important emerging agro-based industries in the country.

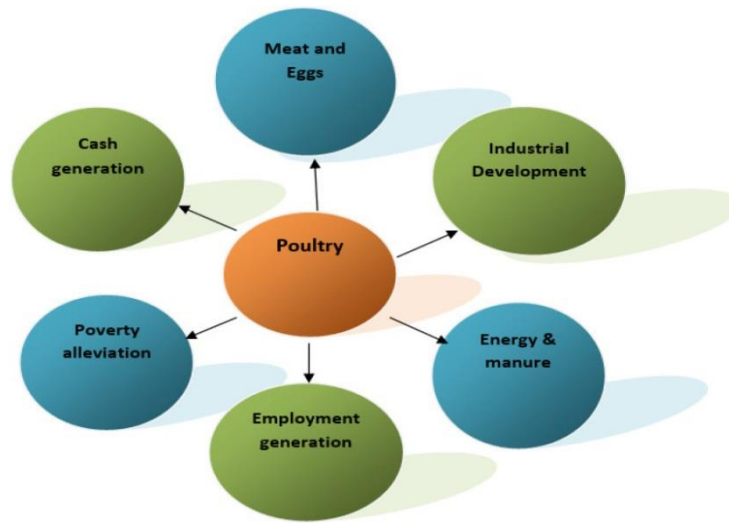
#### **4.2 Economic importance:**

Poultry production requires relatively less capital and land than crop, dairy production. It provides more cash income within short time and creates employment opportunity for small farmers, landless, labours, unemployed people and destitute women. Income earned from sale of egg and meat is used to meet farm and family expenses.

It also helps them to satisfy their various economic needs. Poultry industry creates various job opportunities through the establishment of hatchery, feed mill, pharmaceutical company and marketing of poultry birds.

Poultry excrement is used as fertilizer for growing crops. It is also used as fish feed. That is, additional income may be obtained from the sale of poultry excrement. By this way poultry farming leads poverty alleviation

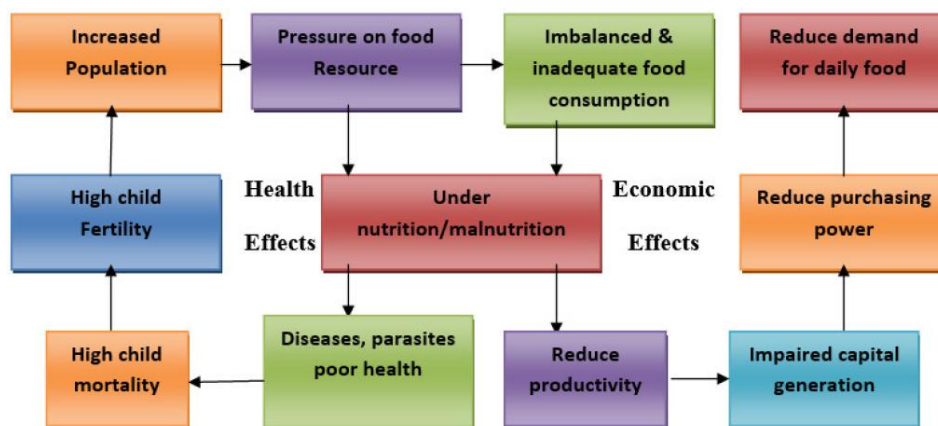
(Ahmed, M.F.U 2001). However, the economic contributions of poultry farming can be shown by following figure-



**Figure 5: Economic contributions of the poultry industry to the economy.**

### 4.3 Nutritional Importance:

Poultry eggs and meat are used as human food. Egg has more nutritional value than any other food. They are good sources of proteins, minerals and vitamins. To supply animal protein poultry plays significant role. In Bangladesh about 22 to 27% of total animal proteins are supplied by poultry industries (Haque, 1996). In spite of this, 60% families of Bangladesh cannot meet their protein need in their daily food consumption (BBS-2007). This malnutrition has an adverse affect on health. As a result, the livelihood is seriously affected. These effects are given in following figure-



**Figure 6: Flow chart of nutrition; some implications of under nutrition or malnutrition.**

Increased population creates pressure on food resources. It leads to inadequate food consumption. For that malnutrition is created. This malnutrition has two effects, such as health and economic effect. In case of health effect people suffer from various diseases. For that child mortality rises. In case of economic effect Developing Country Studies malnutrition reduces productivity. It leads to low capital generation. So, people's purchasing power reduces and it reduces demand for daily food. Anyway, poultry can solve these problems. It provides various nutrients, which very essential for building of our body. When body is fit everything is fit.

#### **4.4 Poultry Farming Condition of Sadar Upazila, Dinajpur District According to Field Survey:**

##### **i) Size of Farm and Employment Generation:**

In Sadar Upazila, Dinajpur District we have selected 30 broiler farms as sample. Every farmer has license. Among them 13, 10 and 7 farms are small, medium and large firms respectively. Among these farms total 32 labors are employed without finally labor and entrepreneurship. So, poultry farming is a large source of employment generation.

##### **ii) Education Level of Respondents:**

Education grows skill among people. Educated person can manage his farm properly. In our field survey education level of poultry farmers are shown as follows-

**Table-1: Educational status of the respondents.**

Number of Respondents	Illiterate	Below SSC	SSC	HSC	Graduation
30	5	10	7	5	3
Percentage	16.66%	33.33%	23.33%	16.66%	10%

**Source: Field survey (September, 2016)**

Among the total respondents 23.33% people have education level of SSC and 33.33% people also have received education that is helpful for their farm management. Again, 10% higher educated person also related to poultry farming. Though 16.66% people are

illiterate they take suggestion from skilled persons. As maximum entrepreneurs are educated they can manage farm properly and it helps them to earn more profit.

**iii) Sources of Food and Power for Light and Heat:**

From 30 respondents' remaining farms purchase food for birds from market at market price. On the other hand, for light and heat every farm uses electricity. And in the absence of electricity maximum uses generator. Here, one or two farm uses solar power. Again from 30 farms remaining farms purchase little bird (day old chicks) from the market.

**iv) Uses of Bird's Excrement:**

One can use the excrement of bird by three ways. Such as, one can sale it, or can throw away or someone uses it as fertilizer in their land for vegetable cultivation. In our field survey, the uses of bird's excrement are given below-

**Table-2: Uses of bird's excrement.**

Number of households	Thrown away	Soled	Used as fertilizer
30	5	20	5
Percentage	16.66%	66.66%	16.66%

**Source: Field survey (September, 2016)**

From our field survey we can see that 16.66%, 66.66% and 16.66% respondents throw away the excrement, sale or used as fertilizer respectively. Thus most of the farmer are rational and earn extra income by selling the bird's excrement. And some farmer uses the bird's excrement as productive purpose by using it as fertilizer. Moreover, the farmer who throws their excrement in the environment it creates pollution and bad smell.

**4.5 Profitability Analysis:**

Profit maximization is the main goal of a producer. To earn profit producer wants to maximize profit through minimizing cost. The focus of our study is to estimate the costs returns and finally the profitability of the farm.

The relevant cost and returns of the present study are discussed below-

#### **A. Total cost:**

The cost items are classified into two broad categories, i.e. (i) Fixed cost and (ii) variable costs. Poultry production includes different types of costs under the following heads

#### **Fixed Cost:**

##### **i) Housing Cost:**

Housing cost is the most important cost for poultry production. In the present study, some poultry house found within the living house and some were outside of living house. The housing cost is calculated by the summation of total making cost. House is a fixed asset. In our study area average housing cost is 1881 Tk. per month

##### **iii) Electricity and Equipment Cost:**

Electricity is considered as fixed cost. If electricity is connected for once its bill is paid by month. For a farm with 1000 birds has average electricity bill of 700 tk. It raises as the number of birds rises. Again for equipment farmer bear a cost. The farmers use different tools and equipment, such as- coop, water jar, feeder, bowl, case etc. So, we have also considered depreciation in case of calculating cost of these equipment. In our study area, average equipment cost is 2261 Tk. per month

##### **b) Variable Cost:**

##### **i) Labour Cost:**

There are broadly two kinds of labour for poultry farm. Such as-hired labour and family labour. Here we have considered hired labour only. In this study, we have found that, each labour is paid 6000tk per month and in study area average labour cost is 10016 Tk. per month So, it is a major cost item for poultry farm.

##### **ii) Feed Cost:**

Feed cost is the major cost item for poultry farms. In our study area only one firm produces their feed inside his farm. But, remaining farm purchase feed from market at an average 43 Tk. per kg. So, in every day a part of capital is invested for feeding the bird. In the study area average feed cost for 186199 Tk. per month

### **iii) Veterinary Cost:**

Veterinary expense is another important cost item of poultry production. Veterinary services included cost of vaccine, medicine, and fees of doctors. Total medicines costs were calculated by taking current market prices. Here average veterinary cost is 940 Tk. per month

### **iv) Bird Purchasing Cost:**

This cost is primary cost for the poultry grower. This cost varies from one farm to another according to the size and numbers. In our study area we have found that, price of little bird varies from 25-45 Tk. So, the farm that purchases bird for 45tk their cost goes high than the farm that purchase for 25tk. Here average bird purchasing cost is 62341 Tk. per month

### **v) Transportation Cost:**

Transportation cost includes two types of cost. Such as- cost for bringing feed from market and cost for bringing feed from market. Here, we found that, for a bag feed transportation cost is 10-30 Tk. based on distance from market. Here, average total cost is 20tk per bag. And average total cost is 1709 Tk. per month

### **vi) Other Cost:**

Other cost incurred due to sudden occurrences, such as- need for extra bird purchase, repairing of poultry house, extra medicine and other managerial cost. Here, average other cost is 3546 Tk. per month. Now the cost items for poultry production is shown by following table:



**Table-3: Total cost of poultry production per farm per season.**

Cost items	Unit	Average unit price	Average total cost	Percentage
A) Variable cost	Tk.		264751	
Labour cost Per	months	6000	10016	3.72%
Feed cost	Per kg	43	186199	69.24%
Veterinary cost	Per months		940	0.34%
Bird purchasing cost	Per bird	35	62341	23.18%
Transportation cost	Per bag	20	1709	0.63%
Other cost			3546	1.31%
B) Fixed cost			4142	
Housing cost	Per months		1881	0.70%
Electricity Bill	Per months		961	0.36%
Equipment cost	Per months		1300	0.48%
C) Total cost (A+B)			268893	

**Source: field survey (September, 2016)**

**B. Gross Return:**

The return item includes sale of bird (chicken meat) 278638 Tk. per month

**C. Net Return:**

Net return is the amount obtained by deducting all the costs from the gross return. The average value of net return is 9745 Tk. per month which is shown by following table  
Developing Country Studies

**Table-4: Gross cost, Gross return and benefit cost ratio of the farm.**

Items	Average total cost and return
A) Gross cost	268893 Tk.
B) Gross return	278638 Tk.
C) Net return (B-A)	9745 Tk.
D) Benefit-Cost ratio	0.96

**Source: Field survey (September, 2016)**

#### **D. Benefit-Cost Ratio:**

Benefit cost ratio indicates return per Tk invested. Benefit cost ratio represent financial feasibility of any farm. In our study, the value of BCR is 0.96. This positive cost benefit ratio indicates the poultry farming is profit able and financially efficient.

#### **8. Problems Faced by the Poultry Growers:**

The major problems of poultry farming is given below-

##### **A. Economic Problems:**

##### **i) Lack of capital:**

Cash capital is an important input for establishing and operating a poultry farm. But in our study area 40% people face capital problems. They don't get financial support from various institutions. Because institutional credit is hardly available and interest rate is very high.

##### **ii) High Price of Feed:**

Major part of expenses of farmers is needed in purchasing feed. Recently feed price has gone up which reduce poultry production in the area. Table-5 shows that 66.66% farmers face these problems. Farmers collect feed from local agents, but local agent provides feed against high price.

##### **iii) Lack of Credit Institution:**

There is a lack of credit institution in the study area. Here 43.3% farmers face problems of not having credit institution. Thus economic problem is an obstacle for poultry production.

## **B. Social and Natural Problems:**

In our study area 21 out of 30 farmers face various social and natural problems. This area

### **Outbreak of Diseases:**

The affects of various types of diseases reduce poultry production. Because for purchasing vaccine and medicine their production cost rises. In our study area 56.6% farms are affected by various diseases like ND, IDV, Foul Pox, Plasmasia, Salmonia, Gamboro, Foul kolera, Ranikhat etc.

### **ii) Environmental Pollution:**

In our study area 16.6% people face problem of environment pollution. They have no proper system for the management of bird's excrement. They throw away their excrement in environment and it is responsible for various diseases in human body. For that they have to bear cost, which hampers production.

### **iii) Lack of Communication Facilities:**

In our study area there is lack of communication facilities. Their road is not well. For that 60% farm bear a large transportation cost. As transportation cost rises their return from the farm reduces.

## **C. Marketing Problems:**

In our study area 11 farms face various marketing problems. Such as:

### **ii) Lack of competitive market:**

In our study area market is not so competitive. For that price of meat reduces more 13.33% farmers suffer from low price of meat.

## **D. Technical problems:**

In our study area 09 farms face various technical problems. Such as- lack of training facilities and housing problems.

In our study area poultry farmers face a number of problems in their farming. We can see this by the following table:

**Table-5: Problems faced by poultry grower.**

Problems	No of responding farmers (n=30)	Percentage (%)
Economic problem	23	76%
Lack of capital	12	40%
High price of feed	20	66.6%
Lack of credit institution	13	43.3%
Social and nutritional problem	21	70%
Outbreak of diseases	17	56.6%
Environment pollution	05	16.6%
Lack of communication facilities	18	60%
Marketing problems	11	36.66%
Lack of competitive market	04	13.33%
Technical problems	10	33.33%
Lack of training facilities	09	30%
Housing problems	06	20%

**Source: Field survey (September, 2016)**

Anyway though there are many problems in managing poultry farm it gives maximum returns with minimum expenses to the other meat producing animals. So in recent years poultry farming in Bangladesh has emerged as a commercial basis.

**Table 6: Daily record of poultry farm operations for a poultry farm in Sadar, Dinajpur, 2016**

Total in 1000		Date in 25/08/2016	
Age (days)	Deaths	Vaccine	Feed
1.	4		Starter
2.	2		Starter
3.	2		Starter
4.	2		Starter
5.	0	ND + IB	Starter
6.	1		Starter
7.	1		Starter
8.	0		Starter
9.	0		Starter
10.	1	Gambro	Starter
11.	3		Starter
12.	1		Starter
13.	1		Grower
14.	2		Grower
15.	3		Grower
16.	2		Grower
17.	1		Grower
18.	1		Grower
19.	1	Gambro	Grower
20.	2		Grower
21.	3	New Castel	Grower
22.	1		Grower
23.	1		Grower
24.	2		Grower
25.	1		Grower
26.	2		Grower
27.	1		Finisher
28.	2		Finisher
29.	2		Finisher
30.	1		Finisher
31.	1		Finisher
32.	2		Finisher
Total Death: 49			
Total Out: 951			
Date Out: 26/09/2016			

## CHAPTER V

### RECOMMENDATIONS AND CONCLUSION

Poultry farming is important segments of agriculture. At present, a large number of educated unemployed persons are related to poultry farm. These sectors play important role to solve poverty, unemployment and malnutrition problem. Though, poultry sectors are important for poverty alleviation but it is not so profitable than other sector. Farmers of these sectors face various problems.

To overcome the difficulties of poultry farming and to make this production more profitable in the economy, the following recommendation are put forward)

Quality of poultry feed should be increased.

ii) Government should formulate national poultry development policy to sustain present growth of poultry production.

iii) Necessary steps should be taken by government to provide adequate financial support to establish large scale farm.

iv) Government should offer price support to make sure the minimum level of profit.

v) More research should be taken place to improve the quality of feed, vaccine, etc.

vi) Social security should be provided and awareness about poultry should be developed.

vii) Government should take steps to provide training among farmers about poultry rearing.

viii) Government and mass media should take initiatives to reduce information gap to reduce diseases.

The economy of Bangladesh depends on agriculture to a great extent. In respect of nutrition poultry meat and egg are excellent source of protein and vitamin. These sectors are really helpful for income generation, women empowerment and nutritional improvement for the family. Though, poultry farms are profitable. Again, in our study area 85% farmers opined that either poultry farming helped them to improve their life style. Thus, there is potentiality for further improvement of these sectors.

## REFERENCES

- [1] Dr. Md. Haidar Ali, Assistant Professor, Department of Physiology and Pharmacology, Hajee Mohammad Danesh Science and Technology University and Dr. Abdus Salam, Veterinary Surgeon, Biral Upazila Livestock Office, Biral, Dinajpur, personal communication, 2016.
- [2] Ahmed, M.F.U. (2001). “A comparative Economic analysis of broiler production under PROSHIKA supervision and private management in some selected area Tangial district”. *M.S. Ag. Econ. Thesis, Dept. Of Agricultural Economics, Bangladesh Agricultural University, Mymensingh.*
- [3] Alam. S.m. (2004), “A Study in Backward and Forward Linkage of Poultry Farming in Some Selected Areas of Savar Upizalla Under Dhaka District”. *M.S. Ag. Econ.Thesis, Dept. Of Agricultural Economics, Bangladesh Agricultural University, Mymensingh.*
- [4] BBS (2014), Statistical Year Book of Bangladesh, Bangladesh Bureau of Statistics. Government of the People’s Republic of Bangladesh, Dhaka.
- [5] Bangladesh Economic review (2014).
- [6] Beutler, A. 2007. Introduction to Poultry Production in Saskatchewan, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 5A8.
- [7] Smith, T.W. 1999. Sanitation, Cleaning and Disinfectants, Mississippi State University.
- [8] Williams C. 2007. In ovo vaccination for disease prevention, Pfizer Animal Health, International Poultry Production, 15:8, p. 7-8.
- [9] Wood, J., F. Wieser, C. Fisher, R. Worthington, M. Penhall, H. Treloar, S. Lipson, J. Blakemore, H. Campbell, M. Sexton, D. McGuire, J. Fazzaro, P. Rymer, C. Purton, R. Harvey, R. Ellis, K. Critchley, J. Blumson, G. Butler, P. Brunning. 1998. Guidelines for the establishment and operation of poultry farms in south australia, Published by: Environment Protection Authority, Inghams Enterprises Pty Limited, Joe’s Poultry Processors, Primary Industries and Resources SA, South Australian Farmers Federation, Steggles Limited.

[10] Jacob J.P., G.D. Butcher, and F.B. Mather. 1998. Vaccination of Small Poultry Flocks, University of Florida, Gainesville, 32611.

[11] Begum, S. (2000), "An Economic Analysis Broiler and Layer Production in selected areas of Mymensingh District". M.S. Ag. Econ. Department of Agricultural Economics, Bangladesh Agricultural University, Mymensingh.



# APPENDIX

## Questionnaire

### Sample Questionnaire

Personal Information (Please tick/write it's Necessary)

1. Name.....
2. Qualification: (a) Illiterate (b) Below SSC (c) SSc (d) HSC (e) Graduation
3. Gender: (a) Male (Female)
4. Farm: (a) Broiler (b) Female
5. No. of Birds:.....
6. No. of Labor:.....
7. Labor Cost:.....
8. Feed Cost:.....
9. Electricity and Equipment Cost:.....
10. Housing Cost:.....
11. Veterinary Cost:.....
12. Bird Purchasing Cost:.....
13. Transportation Cost:.....
14. Other Cost:.....
15. Medicine and Vaccine Cost:.....
16. Death:.....
17. Sale of Chicken Meat:.....
18. Uses of Birds Excrement: a) Thrown away      b) Soled      c) Used of Fertilizer

.....  
Thank you, very much for your cordiale cooperation.

---

Respondents Signature

