

**STUDY ON COMMERCIAL BROILER FARMING SYSTEM AND ITS
PROBLEMS IN CHOUDDAGRAM UPAZILLA, CUMILLA**



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Session : 2014-15

**AS THE PARTIAL FULLFILLMENT FOR THE DEGREE
OF
DOCTOR OF VETERINARY MEDICINE (DVM)**

**FACULTY OF VETERINARY MEDICINE
CHATTOGRAM VETERINARY & ANIMAL SCIENCES UNIVERSITY
KHULSHI, CHATTOGRAM -4225**

September, 2020

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ABSTRACT

A study was conducted on a commercial broiler farming system and its problems in Chouddagram upazilla, cumilla. The study was carried out during my Upazilla veterinary hospital placement from 12/10/2019 to 12/11/2019. During this period I worked actively in Sunrise poultry farm & collected data on prospects and problems of broiler farming in the Chouddagram upazilla by using an interview schedule through face to face interview of the farm owner and the workers who work in the farm. There were 4 broiler sheds in sunrise poultry farm. The owner of the farm was interested in rearing broiler under modern farming system. The estimated net profit of the farm from one batch of 1000bird shed was found Tk.18250. The BCR (benefit cost ratio) is 1.09. But he felt always threaten to rear broiler due to various problems like high price of feed, lack of electricity, poor quality chicks, high mortality of chicks, lack of diagnostic lab etc. So, the possibility was found high but facility was found very low. If the problems can be recovered, he along with other farmers would be more encouraged to establish broiler farms on a large scale in all seasons.

Key Words: Commercial broiler, net profit.

CHAPTER I

INTRODUCTION

Broiler farming a very rapidly growing industry has already got commercial excellence and is also becoming an income generating enterprise in the all areas of Bangladesh. the common problem faced by the broiler growers are procurement of broiler chicks, quality feed, appropriate litter materials and limited technical knowledge on rearing. Generally, rice husk and sawdust are used as litter in both rural and urban areas for broiler farming. Besides rice husk and sawdust, chopped straw, sugarcane pulp paper, mill by products, wood savings sand, oat hulls cobs ground corn cobs, peat moss, extend are also been used as litter materials all over the world Olivier(1974)reported a negligible influence of litter on performance index v but found higher incidence of breast blister in broilers reared on sand in comparison with those on wood savings and rice husk the better growth performance of broiler bird might simply be a function of higher feed intake feed consumption followed similar trend to that of weight gain. These non-significant differences in growth performances support the finding of Haque and Chowdhury (1994), Anisuzzaman and Chowdhury (1996), who indicate that all broiler farms made good profit and the large farms,however,carried little higher profit. The growth performance of broiler bird might simply be a function of higher feed intake. Feed consumption followed similar trend to that of weight gain.

Bangladesh is a densely populated country. Most of the people suffer from malnutrition. Bangladesh is unable to provide proper nutrition for its' people. Protein is an important element of food which is found in meat, egg and fish. Price of beef, chevon, mutton etc. are too high cost for most of the people to buy. A number of studies have been conducted on the economics of poultry farming (Agarwal,1986; Soni 2003; Jadhov et al 1999).Thus to meet the nutritional requirement and in the context of income generation and employment for rural household poultry husbandry is one of the most important source. Poultry rearing is an important source of nutrition. Broiler meat may be the easy and cheap source of protein. Poultry meat contributes a good percentage of the total meat in Bangladesh. Contribution of poultry to GDP and foreign exchange is essential and increasing day by day. Now-a-days, Bangladesh Government gives more opportunity for developing broiler farms in urban and rural areas.

Objectives:

- To know the existing broiler rearing & management system.
- To estimate the cost and return for broiler farming.
- To know the problems faced by the farm owner both in production and marketing.

CHAPTER II

REVIEW OF LITERATURE

Mozumder et al.(2009) surveyed small scale broiler farmers in sadar upazilla, Mymensingh . The purpose of the study was to determine the improvement of rural livelihood by broiler farming. The Researchers found that annual employment opportunities for unemployed family members of broiler farmers were 302.96 man-days. The overall income and expenditure of the farmers were increased by 6100 and TK 3064.66 after involving in broiler farming. Cash on hand and savings raised by 142.71% and 201.63% respectively.

A study report on impact of smallholder livestock project (SLDP) in rural community at different rural areas of Bangladesh revealed that the overall socio-economic conditions of the beneficiaries, their egg and meat consumption capability and empowerment opportunities of farmers were considerably increased after the intervention made by SLDP (**Alam j.1997**)

Sultana et al.(2012) carried out a study from Santhia upazilla pabna district. In this study out of 50 60% were engaged in agriculture, 36% businessman and 4% were in services. About 48% respondents had small size farms (100-500 birds), 40% had medium (501-1000 birds) and remaining were large size (1001-2000 birds). Most of the respondents reared Cobb500 strain, those were purchased from Kazi Farms Ltd. Out of 50 respondents 30% took necessary suggestions from the experienced farmers, 90% farmers regularly vaccinated their broilers and 70% farmers taken short training on broiler farming. About 78% respondents considered market weight as 1.5 kg per bird, whereas the rest 22% sold broiler weighing about 1.8 kg per bird. Most of the respondents (64%) sold broiler at 30-33 d of age and about 80% respondents marketing their broiler at 110-115 taka per kg live bird. About 36% respondents had production cost approximately 90-95 taka per kg bird. In this study, about 36% respondents reported more marketing age of birds, 32% reported higher cost of production and 30% reported lack of training facilities.

S.K. Raha (2004) conducted a research study entitled as poultry Farming Under Participatory Livestock Project and examine the cost, benefits and profitability as well as marketing system of the products of different poultry rearer under some areas of PLDP. The study found that the BCR on full cost basis per chick was 1.09 for the chick rearer. The study also revealed that chick rearer sold about 87% of pullets and key rearer sold 825 each of eggs spent hens. Model Breeder sold 97% of eggs and 86% of hens while Mini hatchery marketed 100% of the DOC and also identified some problems associated with procurement of inputs, poultry rearing and distribution of outputs are identified and the suggestions as perceived by the concerned participants are also recorded.

M.S Ali and M.M.Hossain (2009) was conducted a study to determine the selected commercial broiler farm management practices and the problem faced by farmers involved with broiler production at Modhukhali upazilla under Faridpur district. Data were collected under the supervision of researchers. They found that majority (78%) of farmers reported low to medium performance in broiler production, and only 22% reported high performance. High broiler feed price, lack of education, Education, land possession, lack of training exposure, cost of chicks, high mortality, low feed quality, cold temperature (12-15°C) in winter, cost of medication and high rainfall in the rainy season were the main problem found by the researchers.

M H Kawsar, S D Chowdhury (2013) was conducted a study on performance and profitability of broiler farming. They calculated Benefit cost ratio (BCR) of different flock size farm. Their findings was BCR 0.82 in the flock size 100, BCR 0.90 in flock size 200, BCR 0.98 in flock size 300 which means that farming was a losing concern whereas intervention increased the profit as the size of the farm increased. **Begum et al. (2009)** reported that per broiler net return is more than 1.4 times higher in scientifically managed farm than that of private farm that reared broiler without proper management practices.

CHAPTER III

MATERIALS AND METHODS

3.1. Study area

The study was conducted at Sunrise poultry farm. The farm is located at Chouddagram upazilla. The farm is about 1km away from the Dhaka-Chattogram highway. The area was selected due to my internship placement.

3.2. Study Period

The study was carried out when I was staying at my upazilla veterinary hospital placement from 12/10/2019 to 12/11/2019

3.3. Collection of data

During the study period the data was collected regarding the prospects and problems of broiler farming at chouddagram by using an questionnaire (Appendix 1) through face to face interviewing of owner and workers.

CHAPTER IV

MANAGEMENT PRACTICES OF BROILER FARMING

4.1. Husbandry practice:

4.1.1. Collection of chick

Collection of broiler chicks is important for broiler farming. The farm owner collected the chicks from the nourish poultry hatchery. The price of day old broiler chick (DOC) was paid at 40 tk per chick.

4.1.2. Flock size:

During my internship period I worked in different size of broiler shed. The average flock sizes were found which is given bellow:

Table-1: Flock Size of broiler at the study area:

Number of Broiler shed	Flock Size
1	1150
2	1000
3	950
4	900
Total	4000

4.1.3. Housing:

A suitable house is very important for the rearing of poultry birds in the intensive method. In Sunrise Poultry farm there are two types of house were observed.

- i. Brooder house
- ii. Grower cum finisher house.

4.1.4. Floor space, feeder and waterer space followed by the farmers are given below:

a. Floor space

Table-2: Average available floor space of broiler farm

Age of the bird	Floor space / bird
1st week	0.5 sq. ft.
2 nd week	0.5 sq. ft.
3 rd week	1 sq. ft.
4 th week	1 sq. ft.
5 th week to finishing	1 sq. ft.

b. Feeder space

Table-3: Average feeder space of broiler farming

Age of the bird	Feeder space/bird
1 st Week	1 inch
2 nd week	1.5 inch
3 rd week	1.5 inch
4 th week	2 inch
5 th week to finishing	2 inch

c. Water space

Table -4: Average water space of broiler farming

Age of the bird (week)	Waterer space/bird
1 st	0.5 inch
2 nd	0.75 inch
3 rd	0.75 inch
4 th	1 inch
5 th week to finishing	1 inch

4.1.5. Temperature Schedule

Table -5: Temperature schedule of broiler farming

Age of bird (week)	Temperature
1 st	95° F
2 nd	90° F
3 rd	85° F
4 th	80° F
5 th	75° F

4.1.6. Litter management:

Table -6: Litter of broiler farming management

Litter material	Depth	
	Winter	Summer
Rice husk	1.5-2 inch	1 inch

4.1.7. Feeding

Feeding is the main function to rear broiler chicks. The chicks should be given small quantity of feed frequently for the first week. The owner mainly follows the literature of the Quality feed company feed for their feeding management. The company supplies three types feed that is broiler starter, broiler grower and broiler finisher and nutrient content are presented in Table 8. The ingredient that used in ration was maize, wheat bran, rice polish, vegetable oil, soybean meal, DCP, vitamin mineral premix.

Table -7: Feeding practices of Sunrise poultry farm

Age (week)	Nature of feed
1	Crumble
2	Crumble
3	Pellet
4	Pellet
5 th up to finishing	Pellet



Fig-1: Feeding of broiler.

Table -8: Feeding practices of Sunrise poultry farm

Nutrients	Quality feed		
	Broiler starter	Broiler grower	Broiler finisher
Moisture %	11	11	11
CP%	22	21	20
CF%	3.5	3.5	3.5
Fat%	5.6	5.5	5.5
P%	0.5	0.5	0.5
Ca%	1	1	1
ME kcal/ kg	3000	3050	3100

4.1.8. Vaccination schedule

Table -9: Vaccination schedule of broiler farming system.

Age	Vaccine	Disease	Dose & route
Days 1-3	BCRDV	Ranikhat	1 drop in 1 eye
Days 12-14	Gumboro (D78/228E)	Gumboro	1 drop in 1 eye
Days 21-22	BCRDV	Ranikhat	1 drop in 1 eye
Day 23-24	Gumboro (D78/228E)	Gumboro	1 drop in 1 eye

CHAPTER V

RESULT AND DISCUSSION

5.1 Weight gain

After proper feeding weight gain which is recorded by the farm owner are presented in Table 10. From the table it is observed that the body weight gain increased gradually and highest body weight was 1700gm at 5th week.

Table 10: Weight gain of broiler

Age	Weight gain
1 st week	120gm
2 nd week	420gm
3 rd week	750gm
4 th week	1250gm
5 th week	1700gm

5.2. Cost and return of farm

The calculation of profit, cost and return are shown in Table 11 and 12. It observed that, profit from per batch of broiler is 18250 tk in flock size 1000. Benefit cost ratio: if BCR >1 the farming will be benefited. The BCR in shown in table 10 is 1.09. So it can be said that the farm was benefited. So it can be concluded that, commercial broiler farming in this region is profitable.

Table 11: Benefit, cost and return calculation (1000 bird farm)

	Items	Gross cost(Tk)	Depreciation cost	Total cost
	Day old chick	4000		4000
Variable cost	Feed cost	126000		126000
	Labour cost	8000		8000
	Electricity	2000		2000
	Medication	7000		7000
	Vaccine	2000		2000
	Litter cost	3000		3000
Total variable cost		188000		188000
Fixed cost	Housing cost	130000	3250	3250
	Equipment	18000	450	450
Total fixed cost			3700	
Total cost		Total variable cost + total fixed cost		191700

Table 12: Return calculation

Items	Return
Selling of birds	950birds*130tk*1.7kg=209950tk
Total return	209950tk
Net return(total return – total cost)	18250tk
BCR(total return-total cost)	1.09

5.3. PROBLEMS OF BROILER FARMING IN CHOUDDAGRAM,CUMILLA

5.3.1. High price of feed:

High price of feed is one of the major problems in broiler farming. For this high price farmers had faced lots of problem.

5.3.2. Lack of electricity

Electricity is the prerequisite to make broiler farm. Without electricity it is almost impossible to manage a broiler farm from first to last. But in this area there is a huge deficiency of electricity. So, broiler farms cannot be established though there is a large demand of broiler meat.

5.3.3. Lack of knowledge

The farm owners are not well educated and have lack of knowledge about farm management. As a result, the broilers do not grow rapidly.

5.3.4. Low quality chick:

The hatchery owner supply low quality chicks. As a result the farm owners are deprived from having good and healthy chicks. Many chicks die in their early stage of life. It is very harmful for a farm and farmers lose interest to do farm.

5.3.5. Lack of well-established diagnostic lab.

There are no any opportunities for diagnosis of diseases in this level because of lack of well-established diagnostic laboratory in this area.

5.3.6. Lack of post mortem facilities

There is lack of post mortem facilities of dead birds for the diagnosis of diseases. As a result they cannot know the accurate causes of the diseases and cannot take proper preventive measures.

5.3.7. Lack of proper vaccination

Proper vaccination is also barrier for the establishment of broiler farm in this area. The farm owner does not vaccinate the birds in due time for the lacking of proper knowledge about vaccination.

5.3.8. Lack of bio-security knowledge

The farm owner does not maintain bio-security strictly. Local people, cattle, goat, dog, cat, other birds are always a threat for the farm. Farm owner does not use foot bath at the entrance of the farm.

5.3.9. Influence of Drugs Company

Representatives of drug companies communicate with the farm owners and influence them for using their low quality drugs. As a result, the birds do not get sufficient active ingredients used in drug and die of disease unexpectedly. It acts as a barrier.

5.3.10. Influence by feed supplying company

Many feed companies communicate with farm owners and influence them for using their low quality feed. It also acts as a barrier for development of broiler farm.

CHAPTER VI

CONCLUSION

From the above discussion it may be ensured that the broiler farming in Chouddagram upazilla will be very profitable for the farmers and it may be good source of income and reduce the unemployment problem. But it is crying need to solve the constraints. Then it would be possible to establish broiler farms to meet the protein demand of the people and to recover the poverty of people by creating employment opportunities for the unemployment people.

Limitations of the study

The required information of the study were collected by staying only 12/10/2019 to 12/11/2019 ending of one batch of broiler marketing due to shortage of time.

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ACKNOWLEDGEMENT

The author wishes to acknowledge the immeasurable grace and profound kindness of Almighty “ALLAH” the supreme authority and supreme ruler of universe, who empowers the author to complete the work successfully. It is deemed as a proud privilege and extra-terrestrial pleasure to express author ever indebtedness, deepest sense of gratitude, sincere appreciations, profound regards to reverend and beloved teacher and supervisor Dr.Mrs. Jannatara khatun, professor, Department of animal science and nutrition , Chattogram Veterinary and Animal Sciences University for his ingenuous and scholastic guidance, judicious recommendations, constant inspiration, continuous encouragement and valuable suggestions to report writing have guided the author from the beginning of inception of intern studies until to the completion of this report. The author would like to express his gratefulness to Professor Dr. Abdul Ahad, Dean, FVM, CVASU and Professor Dr. A.K.M. Saifuddin, Director of external affairs. I also wish to express my gratitude to Mr. Riyad islam, owner of Sunrise poultry farm and all attendants of the farm for their co-operation.

The author is ever indebted to his parents for their sacrifices, blessing and encouragement to get him in this position. It's also to be ungrateful, if not express deep sense of grateful to all of his friends, roommates, and well-wishers for their help, encouragement and inspiration during the study period.

The author

August, 2020

APPENDIX 1

Questionnaire for data collection

1.

- a. Name of the farm.....
- b. Name of the owner.....
- c. Father's name.....
- d. Address:

2. Husbandry practice:

A. Housing:

- a. Brooder house b. Grower cum finisher house

B. Feeding:

- Collection of feed.....
- Storage of feed
- Types of feed.....
- How many times feed supplied daily.....

C. Watering:

- Source of water
 - a. Deep tube well b. Pond
- System of water storage
 - a. Water tank b. Water house
- Frequency of water supply
 - a. Adlibitum b. Insufficient

D. Litter materials.....

E. Litter change.....

F. Ventilation

- a. Sufficient .b. Insufficient

G. Natural light.....

H. Artificial light.....

I. Bio-security.....

J. Foot bath:

- a. Yes b. No

K. System:

a. all in all out b. Not

3. Number of sheds.....

4. Drainage facility:

a. Sufficient b. Insufficient.

5. Have electric fan?

a. Yes b .No

6. Most common diseases prevalence in the farm.....

7. Management of disease condition:

a. Self management

b. Quack

c. Veterinary doctor

8. Feature of Veterinary doctor calling:

a. Actively b. occasional c. In critical situation d. Not at all.

9. The farm is profitable or not.....

Name of the interviewee.....

Name of the interviewer.....

Date.....

Date:

Signature.....

Signature