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A Report on Production and Management System of Broiler at Shibpur Upazila, Narsingdi, Bangladesh

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Authors' contributions

This work was carried out in collaboration among all authors. Authors SA, MRM and MZ designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors TH, SI, NH, MF, MMK, SZ, AAH and MTI managed the analyses of the study. Authors SA, MZ also managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The study was carried out to identify the rearing and management systems of commercial broiler and production performance of broiler with their problem and the possible solution at Shibpur Upazila, Narsingdi, Bangladesh. Broiler farmers who reared at least 800 to 1200 birds in the rural

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areas of Shibpur Upazila were selected for the study. The necessary data on management and production systems of broiler were collected from the respondents through face to face interview with the structured questionnaire process applied to broiler farmers between August-2018 to December-2018. Five (5) broiler farms were visited in study area for study broiler farming from day old chick to end of the production cycle. This data about the management and production system of broilers were recorded in detail by visiting the farms directly or as provided by the respective poultry farms owner by himself. The farmer collected the chick from dealer. The price of day old broiler chicks (DOC) was 40-45/chick. From 1st week to 5th weeks farmer used rice husk or saw dust as a litter where depth was 2-4 inch. In the study farm, the farmer gave brooding temperature 95°F on 1st week, 90°F on 2nd week, 85°F on 3rd week, 80°F on 4th week and 75°F on 5th week. The farmer follow the ideal feeder and waterer space. The lighting was provide 24 hours in first week of age and from second week the 2-3 hours darkness were provide for adaption if electricity fall. Farmer gave crumble feed from first to second week and provides pellet feed until marketing. In the studied farms, broiler birds were given pellet and crumble feed throughout the production cycle. The Feed Conversion Ratio (FCR) of the broiler was recorded (1.53-1.58) on an average. Farmers also found that, 2-3% birds died up to marketing. Broilers are routinely vaccinated to provide protection from Infectious Diseases.

Keywords: Broiler; management; production; vaccination.

1. INTRODUCTION

The poultry sector has developed as a successful and promising commercial sector in Bangladesh during the recent years. It is one of the fastest growing sectors with positive future and plays a vital role in supplying nutritious food and generating income. As a developing country, unemployment, poor nutrition and poverty, scarcity of arable land are the major problems in Bangladesh. About 31% of the population in Bangladesh lives below the poverty line and the number of landless people has been increasing by 3.4% perannum [1]. Broiler production can be adopted under a wide range of climatic conditions and can usually be combined conveniently with other farm enterprises. An increase in per capital consumption by one egg and 50 grams of poultry meat can create employment for about 26,000 persons per year [2]. The per capita intake of poultry meat in Bangladesh is only 11.2 grams per day [3] equated to a standard requirement of 36 grams per day. Broiler farming plays a significant role in improving livelihood, food security and poverty alleviation in rural and semi-urban communities in developing countries including Bangladesh. Poultry plays a vital role in bridging the protein gap of animal origin in Bangladesh [4].Short lifecycle of the broiler and requirement of relatively less amount of capital attributed to its acceptance to the farmers.

Broiler is an excellent source of protein and nutrients which are essential for health and growth of the human body [5] Broiler is a tender meat young chicken of male or female that grows from a hatch weight of 40 grams to a weight over approximately around 1.5 kg to 2 kg in about 5 weeks' time period only. Broiler meat contains high quality protein and micro-nutrients which has had a tremendous impact on health and nutrition for the poor people in rural areas [6]. A study showed that commercial broiler farming creates employment opportunities for unemployed family members, improve socio-economic conditions and increase women empowerment among rural people of Bangladesh [7]. Millions of rural women are involved in poultry production under the poverty alleviation program of direct Non-Government Organizations NGOs) and Department of Livestock Service (DLS).

Poultry is a part of agricultural farming system in Bangladesh and broiler is one of the main products of poultry farming. Even though raising poultry birds is mostly a subsistence practice in Bangladesh, broiler is mainly commercially produced in Bangladesh [8]. In addition, the poultry industry especially broiler farming has been successfully becoming a leading industry in Bangladesh [9]. This industry can provide various opportunities to increase GDP growth rate plus equitable distribution through arranging food security as well as ensuring self-employment, creating purchasing power and reducing poverty at a large scale. Poultry industry contributes 1% to the country's GDP while at least 6million people are involved in the sector) [10]. In Bangladesh, during the

last few years, poultry farming has taken a U-turn from a backyard venture into a fastest growing commercial sector. For achieving better profits from poultry in dustry, one should be aware and have good knowledge on its technicality such as; housing, breed, feeding management and overall maintenance [11].

The climate of Bangladesh is suitable for broiler farming, so the broiler birds can be raised easily to fulfill daily requirements of nutrient value. Observing the situation of high price and demand in home market, a tendency to establish a small scale commercial farm has grown among people both in rural and urban areas [12]. Studies revealed that most of the broiler farm owners suffered from sufficient amount of credit to run their farms and provision of credit for poultry farming is not yet very regular and well established practice among all the financial institutions-banks and NGOs in Bangladesh [13]. Broiler farm owners face various problems like shortage, high price and poor quality of Day-old chick; unavailability and poor quality of feeds; high cost and low quality of medicine, vaccine and veterinary services; shortage of capital; inadequate marketing facilities; and poor transportation and communication [14].

Poultry is playing an important role for human nutrition, employment, national income and income generation. Poultry is by far the largest livestock group and has been estimated to be about 14,000 million consisting of chickens, ducks and turkeys [15]. Poultry products constitute 30% of all animal protein and during the last 10 years this proportion has increased from 22 to 30 % of all animal protein and is thought to increase to 40% before 2020 [16].

The contribution of poultry has a significant role in the economy of Bangladesh. In Bangladesh more than 130 hatcheries are producing 3.4 million of Day old chicks per week, 30,000 commercial broilers and layer farms supplying 26 million metric tons of poultry meat and 5210 millions table eggs per year [17]. The external conditions such as weather and climate can affect broiler production. Poultry producers should control these factors, so that the bird can maintain normal physiological functions and produce meat or eggs at its maximum rate. But mortality of chicken due to various factors: infectious and non-infectious diseases are one of the major constrains for the profitable poultry rearing. Therefore the present follows the aim to the rearing and management systems of commercial broiler and production performance of broiler with their problem and the possible solution at Shibpur Upazila, Narsingdi, Bangladesh.

2. MATERIALS AND METHODS

2.1 Study Area

To study the requirements of successful broiler farm management the information was collected from Shibpur upazila, Narsingdi, Bangladesh.

2.2 Study Period

A study on a total of 5(five) broiler farm was conducted in Shibpur upazila, Narsingdi to ascertain the management practices of broiler farm during August 2018 to December 2018.

2.3 Methods of Data Collection

The data was collected by visiting broiler farm and discussing with the farm owner.

Oral questioning and discussion by a Questionnaire.

2.4 Study Design in Flow Chart

Visiting broiler farm.
▼
Observing the different points of farm.
▼
Collecting data by using structured questionnaire.
▼
Discussing with farm owner.
▼

Understand the management process.

3. RESULTS AND DISCUSSION

The study was conducted upon the farms where the highest number of birds were 1200 at Md. Golap broiler farm, and the lowest number of birds were 800 at Md. Monsur Pathan broiler farm.

The Table 4 shows that, the farmers are benefited by rearing broiler as a source of their livelihood. Though there is a lot of problems they face but, ultimately they are benefited.

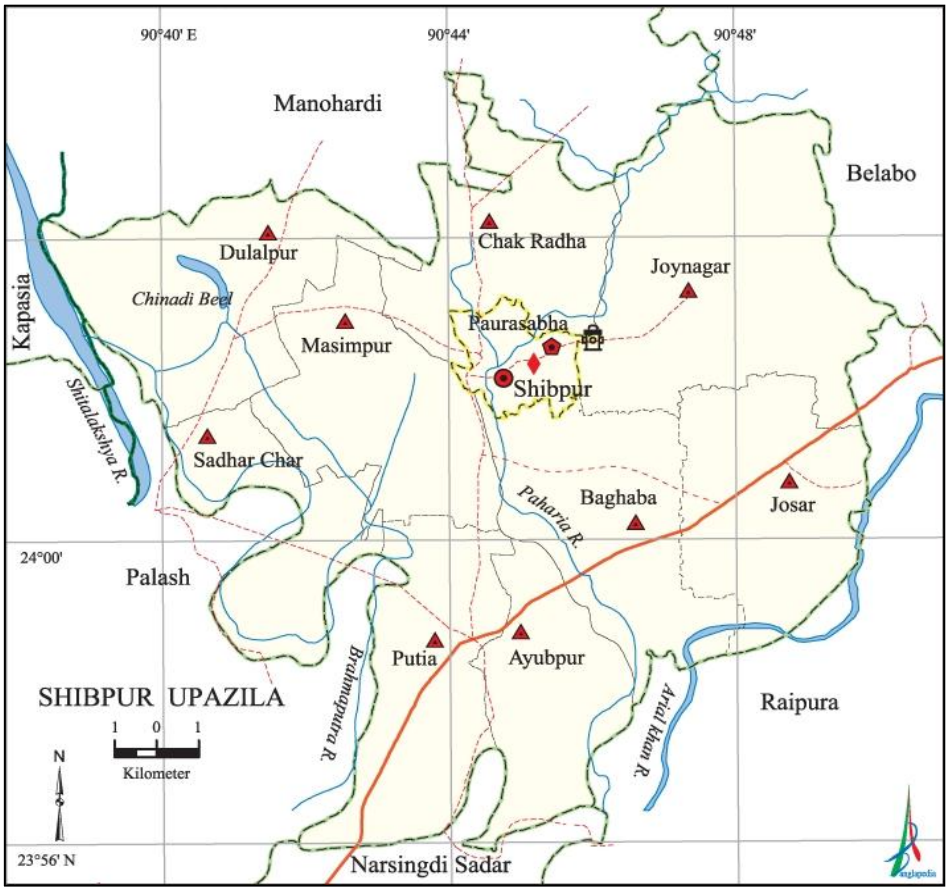

Fig. 1. Study area of Shibpur upazila, Narsingdi, Bangladesh

Table 1. Data of baby chicks and feeds at Shibpur Upazila, Narsingdi

Sl No	Name of farmer	Total bird	Chicks company	Feed company
01	Md. Golap Mia	1200	Nourish Poultry and Hatchery Ltd.	Nourish Poultry and Hatchery Ltd.
02	Md. Subhan miah	1000	C.P Bangladesh Company Ltd.	C.P Bangladesh Company Ltd.
03	Md. Rasel Ahmed	1000	Kazi Farms limited.	Kazi Farms limited.
04	Md. Monsur Pathan	800	Nourish Poultry and Hatchery Ltd.	Nourish Poultry and Hatchery Ltd.
05	Md. Raihan Khan	1000	Nahar Agro Complex Ltd.	Nahar Agro Complex Ltd.

Table 2. Managemental data of the study farms at Shibpur upazila

Sl No	Name of Farmer	Total Bird	Total Feeder	Total waterer	Litter materials	Vaccination history
01	Md. Golap Mia	1200	28	25	Rice husk	Yes
02	Md. Subhan miah	1000	25	25	Rice husk	Yes
03	Md. Rasel Ahmed	1000	25	25	Rice husk	Yes
04	Md. Monsur Pathan	800	20	20	Saw dust	Yes
05	Md. Raihan Khan	1000	25	25	Saw dust	Yes

Table 3. Production performance of broiler at the study farms at Shibpur upazilla

Sl No	Name of farmer	Total DOC	Mortality (avg. %)	Finally marketed bird (number)	Final marketed body wt. (avg. kg/bird)	Total body wt.(kg)	Feed consumption (avg. kg/bird)	FCR
01	Md. Golap Mia	1200	3	1164	1.6-1.7	1978	2.5-2.6	1.53
02	Md. Subhan miah	1000	2	980	1.6-1.7	1666	2.5-2.6	1.53
03	Md. Rasel Ahmed	1000	3	964	1.6-1.7	1638	2.6-2.7	1.58
04	Md. Monsur Pathan	800	2	780	1.6-1.7	1326	2.6-2.7	1.58
05	Md. Raihan Khan	1000	3	964	1.6-1.7	1638	2.5-2.6	1.53

Table 4. Cost benefit analysis of the study farms

Sl No	Name of farmer	Total bird	Total Doc Cost taka (DOC price X total bird)	Finally marketed bird	Feed cost(taka)	Medicinal cost	Others cost	Total cost	Final Income= (total wt X avg price 112tk/kgwt.)	Final profit (taka)
01	Md. Golap Mia	1200	(1200x 43)= 51,600	1164	(2250x60) = 135,000	6000	2500	195,100	221,536	26,436
02	Md. Subhan miah	1000	(1000x 43)= 43,000	980	(2250x50) = 112,500	5000	2200	162,700	186,592	23,892
03	Md. Rasel Ahmed	1000	(1000x 45)= 45,000	964	(2250x50) = 112,500	5000	2000	162,500	183,456	20,956
04	Md. Monsur Pathan	800	(800x42)= 33,600	780	(2250x40) = 90,000	4500	1800	129,900	148,512	18,612
05	Md. Raihan Khan	1000	(1000x 42)= 42,000	964	(2250x50) = 112,500	5000	2000	161,500	183,456	21,956

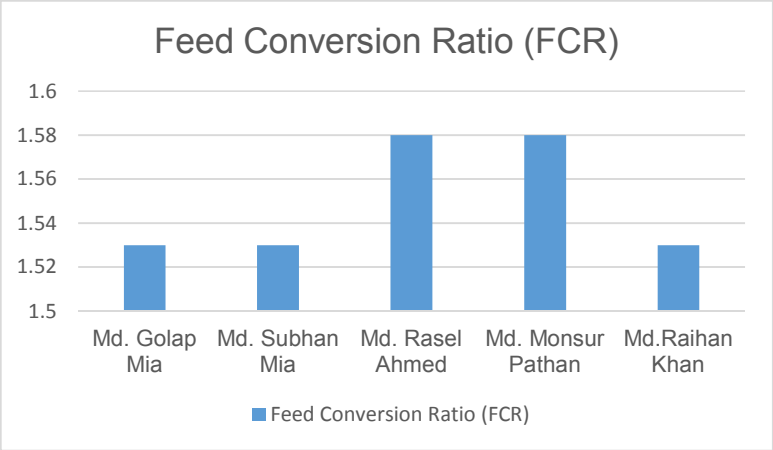

Fig. 2. FCR in the study farm

3.1 Collection of Baby Chicks

The owner collects Day Old chicks (DOC) from the dealer or marketing officers.
Common DOC Supplier Company in my study area:

1. Kazi Farms limited.
2. Aftab Bahumukhi Farm Ltd.
3. Nahar Agro Complex Ltd.
4. Nourish Poultry and Hatchery Ltd.
5. C.P Bangladesh Company Ltd.

3.2 Price of Baby Chick

The price of baby chick purchase by the farmer was 40-45 takaper chicks.

3.3 Chick Quality

- A good quality chick should be cleaned after hatch.
- It should stand firmly and walk well, and be alert and active.
- It should be free from any deformities with the yolk sac fully retracted and have
- a healed navel.
- It should vocalize contentedly.

Preparation of house followed by the farmers before arrival of chicks:

- Remove the previously used litters and wash the house equipment's properly.
- Apply spray sanitizers on litter and entire poultry house.
- Apply selected disinfectants.

Sometimes follow fumigation on poultry house with suitable agents.

Table 5. Brooder house temperature schedule in the study farm

Age of chicks (wks.)	Brooding temperature	
	°C	°F
0-1	35	95
1-2	32	90
2-3	30	85
3-4	28	80
4-5	26	75

3.4 Brooding

Brooding is the caring of the chicks from day old to 02-03 weeks of age. It is done in order to prevent chick mortality and achieve maximum growth by providing warmth to the chicks.

3.5 Objectives of Brooding

- For immunity develop and stress resistant.
- Good early growth- most of the early growth is in skeleton and internal organs.
- For getting uniformity in weight of chicks, good feather growth, livability.
- For protection from environmental disaster.

The farmer make brooding with artificial heat during first 2 to 3 weeks as chicks need external heat to maintain their body temperature. Chick guards are commonly 1.5 feet high at summer and 2 feet high at winter. For 500 chicks four 100W light are used at hover in summer season and at winter season four 200W light are used.

For 30-40 birds 1 feeder and 1 waterer are supplied. Brooding start 1 day prior to arrival of chicks to the farm. They adjust the hover temperature to 95°F at first week and reduce by 5°F every week until 70° F and chick guard are used for brooding.

3.6 Brooder House Schedule up to 4 Weeks of Age

1. Make sure that one day old chicks have been vaccinated against Ranikhet (New Castle).
2. Scrub, clean and refill the waterers every day with fresh, clean water. When the chicks have learned to drink, place waterers on wire platforms to avoid wet liner.
3. Many times it is desirable to use antibiotics at preventive levels during 1st week of chick's life. If the surroundings are clean and free from disease, the use of antibiotics may be avoided.
4. For first two days, feed may be spread on paper or in flat plates etc. When all chicks have learned cuttings, feed may be provided in shallow feeding through filled up to the brim unit the end of first week. Thereafter feeders should never be filled more than two-third of the capacity.
5. During first week the most comfortable temperature is between 32.5 to 35'C. The brooder temperature should be reduced by 2.5 at the end of every week till room temperature or 21'C is reached.
6. Brooder guard may be moved few centimeters apart every day so that growing birds may get more space. The guards may completely be removed by the 4th or 5th day of brooding.
7. Keep brooder house well ventilated. Strong ammonia odor in brooder house is indicative of poor ventilation.
8. Light should be used for attraction of the chicks for first few days till they learn the place of heat, feed and water.

Table 6. Floor space used (perbird perweek) in the study farm

Age of bird	Floor space (sq. ft./bird)
1-2 days	0.30
4-6 days	0.40
2nd week	0.60
3rd week	0.80
4th week	1.20
5th week	1.25

Table 7. Feeder space used (per bird) in the study farm

Age of bird	Feeder space/ Bird
1st week	1 inch
2nd week	1.75 inch
3rd week	1.75 inch
4th week	2.0 inch
5th week	2.0 inch

Table 8. Waterer space used/bird in the study farm

Age of bird	Waterer space/ Bird
1st week	0.50 inch
2nd week	0.60 inch
3rd week	0.60 inch
4th week	0.85 inch
5th week	1 inch

3.7 Management of Brooder House

3.7.1 Heat source

One heater (electric/gas/coal) for 500 - 600 chicks, hung at suitable height.

3.7.2 Litter

Spread the litter on the floor of entire brooding room. Keep the litter in good dry condition, removing wet litter whenever noticed.

3.7.3 Brooder guard with papers on floor

Provide circular brooder guard 8ft diameter for 600chicks. Corrugated paper or tin sheets 1 foot width may be used for this purpose. Put 2-3layers of papers on the floor. Remove one layer of paper every day.

3.7.4 Provide boiled and cooled water on day 1 and 2

Add Electrolytes 1g/lit water and Sugar 50 g/lit water to provide instant energy.

3.7.5 Feed

Once the chicks have taken water, provide a well-balanced easily digestible and fresh starter feed on the flat chick feeder trays or plates for first 3 days and later in linear or tubular feeders. For the first two days, provide maize powder 5g/chick along with feed. This reduces Pasty vent problem.

3.7.6 Ventilation

Do not make the house air tight. Provide 1 ft opening on top of the curtains on both sides. Cross Ventilation provides fresh air and regulates house temperature. It takes away unwanted CO_2, ammonia, moisture, dust and odor.

3.7.7 Light

Chicks are more active and grow better under bright light. Provide one 60 watt bulb for 200 sft area. After 2 weeks, it can be replaced by 40 watt bulb.

3.8 Litter Management

Local economic sand raw material availability will be the choice of litter material used. Litter should provide:

- Good moisture absorption.
- Low dust level.
- Freedom from contaminants.
- To avoid caking of litter due to high moisture level in the shed, stirring litter should be carried out on regular basis and humidity of the shed should be maintained.
- Soft wood shaving particles should be evenly distributed to a depth of4-5inch. The litter depth can be reduced when litter disposal is an issue. Concrete floors are preferable to soil floors since they are washable and allow more effective litter management.

3.9 Floor Space

Floor space is given by the farmer in the study farm 0.60 sq.ft. at first weeks of age. In second weeks it increases 0.75 sq.ft. then 0.80 sq.ft. at 3rd week of age. At 4^{th} week it increases to 0.95 sq.ft. and for fifth week 1 sq.ft. per bird floor space is used by the farmer

3.10 Feeder Space

Feeder space in the study farm given by the farmer was 1 inch per bird in first week of age. Then increased 1.75 inch at 2^{nd} and 3^{rd} weeks and 2 inch at the 4^{th} and 5^{th} weeks.

3.11 Waterer Space

Waterer space in the study farm was 0.5 inch for the 1^{st}, 2^{nd} and 3^{rd} weeks. Then at 4^{th} weeks waterer space was 0.85 and in fifth week it increases to 1 inch per birds.

3.12 Broiler Feed Management

Poultry farming is the major cost of poultry production which seriously affects the production output of the birds. So the feed and feeding management is the major consideration for efficient commercial poultry farming. Improper feeding causes several deficiency disease which result in poor production performance.

Also, make sure the feed have all the required nutrients (water, protein, carbohydrate, fat, vitamin, mineral and trace elements) in right proportion for better growth of the birds. In addition to regular nutrients, some additives are required to facilitate digestion and growth and is usually added in reputed commercial feed.

Table 10. Nutrient composition of different feed types

Age	Protein (%)	ME (Kcal/kg)
Starter ration	22-24	2800
Grower ration	20-22	3000
Finisher ration	18-20	3200

Table 11. Types offeed used in the farm first to fifth week

Age of bird (wks)	Type of feed
01	Crumble
02	Crumble
03	Pellet
04	Pellet
05	Pellet

Table 12. Price of different types of feed

Type of feed	Price/ 50 kg bag
Broiler starter feed	2250
Broiler grower feed	2250
Broiler finisher feed	2250

Table 13. Daily water requirement for 1000 broiler birds are as follows

Age of bird (day)	Water intake (litter/day)
1– 7	30
7– 14	60
14– 21	120
21– 28	175
28– 35	220
35 –above	255

Table 14. Waterer required per thousand chicks in study farm

Age of bird	Waterer / 1000 Bird
1^{st}week	16 (small)
2^{nd}week	18 (small)
3^{rd}week	24 (large)
4^{th}week	26 (large)
5^{th}week	26 (large)

3.13 Common Feed Company in Study Area

- Nahar Agro Complex Ltd.
- Nourish Poultry and Hatchery Ltd.(for baby chicks)
- Kazi feeds Ltd.
- RRP agro feeds.

3.14 Types of Feed

There are two types of feed used by the farmer throughout the brooding and growing period.

- Crumble feed.
- Pellet feed.

Farmer collected feed from local market. Crumble feed is given for 1^{st} and 2^{nd} weeks. Then pellet feed is used for 3^{rd}, 4^{th} and 5^{th} week.

3.15 Price of Feed

Farmer used 50 kg bag and the price of Crumble feed was 2250-2300 Tk/ bag and the price of pellet 2200-2250 Tk / bag from different dealer.

3.16 Water Management

Birds should be provided fresh, clean, cool and potable drinking water all the time. As a thumb rule bird drinks 2.5 to 3 times of water of feed consumed depending on season and size of birds.

3.18 Waterer Requirements

For the 1st and 2nd week 16 and 18 small size waterer were given by the farmer. Then at the 3rd weeks waterer (large size) number were 24. At 4th week the number was increased to 26 (large size). Same number of waterer was used in the last week.

3.19 Vaccination

Some points consider at the time of vaccination:

- Vaccine provide only healthy chicks.
- Use hygienic instrument for vaccination.
- Vaccine transportation and preservation done carefully.
- More hot and cold environment are not suitable for vaccination.
- Dose of vaccine and time of vaccine must be followed.

3.20 Lighting for Broilers

Light is an important part of management technique in broiler production. Important aspects;

- Wavelength (color).
- Intensity.
- Photoperiod Length and Photoperiod Distribution.

3.21 Bio-security Measures in Broiler Farming

3.21.1 Purchase of healthy and high potential chicks

Broiler farmer should select a breed which is suitable to his area depending on prevalent climatic condition and nature of operation.

3.21.2 Cleaning, disinfection and rest to house

In between the batches of birds poultry sheds should be thoroughly cleaned and properly disinfected, pressure washing along with scrubbing and disinfectant (phenyl, Lysol etc.) water wash can lean shed effectively. To break up the tile cycle of germs naturally, sufficient rest on (17-30) days must be given to houses after cleaning and disinfection of birds.

3.21.3 Water quality and sanitation

An often neglected nutrient is water. If not cared well it can be a deadly source of infection for poultry. Clean, cool and potable water should always be supplied for birds. Water should be filtered and treated with suitable compounds. Ultra violet rays or ionization can be efficiently used for water purification.

3.21.4 Vaccination and medication

The vaccination schedule varies from area to area depending on disease prevalence. Therefore an appropriate vaccination schedule should be maintained for proper prevention of highly detrimental diseases. Only essential medicines especially antibiotics should be administered.

3.21.5 Supply of quality feed

Quality control of feed has become a factor of major importance now a days for optimum production in poultry. The feed should be balanced and free from bacterial contamination.

3.21.6 Day to day hygiene and sanitation on farm

Not only the cleaning and disinfection of sheds in between the batches is helpful but day to day hygiene and sanitation is equally important for it.

3.21.7 Control of parasite and rodents

Birds should be protected from their predators like Rats, Bandicoots, Mongoose, Snakes, Cats, Dogs and wild birds to avoid panic death and spread of infectious and parasitic infestation through them.

3.21.8 Disposal of dead birds and waste

This is one of the vital points of the bio-security but often neglected due to ignorance. The dead birds are the source of infection that spread through air and by vultures, wild birds, dog etc. Therefore, the dead birds must be either deeply buried or hilly burnt in incinator. Similarly, dressing waste on farm should be burnt

to the possible extent and remaining may be carried to manure pit to minimize the infection on pollution of ground water.

3.21.9 Stress management

Any type of stress due to change in climate, housing, shifting, vaccination, debeaking, over feed etc. should be carefully tackled to minimize its adverse effects.

3.21.10 Overall management

Providing adequate feed, water and door space, correct artificial lighting schedule, timely vaccination, medication, deworming, debeaking, litter management etc. also aids in biosecurity to birds.

3.21.11 Educating farmers and farm manager on bio-security

Educate farmers and farm managers about the importance of bio-security and suitable training
to depot it as an important aspect of efficient poultry farming.

3.22 Marketing System

Marketing systems includes all activities involved in the flow of goods from the point of initial producers to the ultimate consumers. It is the process by which a product reaches from farmer to producers hand through a channel.

3.23 Marketing Channel

Marketing channel is known as the chain of intermediaries or middlemen through which the transaction of goods takes place between producer and consumer.

There is a great market for commercial poultry farming in Bangladesh cause have already an established business opportunity. The broiler farmers are sold maximum their product by direct contact with dealer. In Bangladesh most of the small scale broiler farmers sell their product in the local market and some are in large dealer shops. Consumers purchase their product from farm as well as from the local market. Different in the price of broiler is varies in market daily.

3.24 Marketing Channels of Broiler

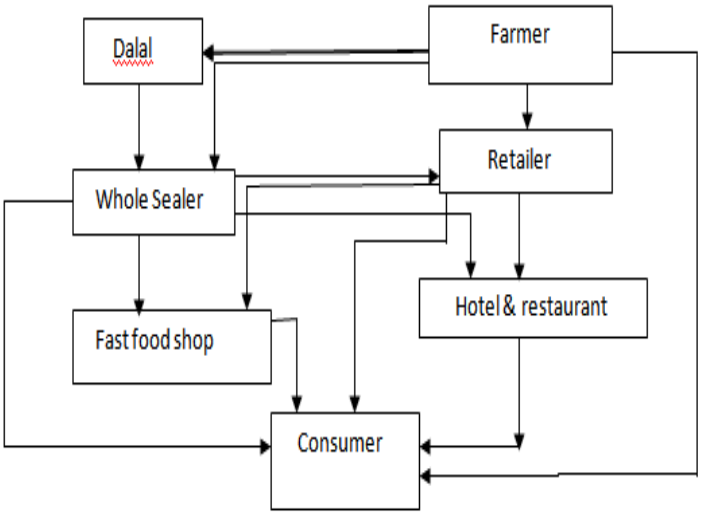

Fig 3. Marketing Channels of Broiler

Table 15. Vaccination schedule for broiler birds in my study farm

Age (days)	Disease	Vaccine	Nature	Route
03-06	ND	BCRDV	Live	Eye drop
07-10	IBD	ND+IB	Live	Eye drop
14	IBD	Bursine-Plus	Live	Eye drop / drinking water
21-28	ND	ND-Lassota	Live	Drinking water

Table 16. Basic light intensity and photoperiod recommendation for broiler

Days	Lights (hours)	Darks (hours)	Intensity (lux)
0	23	1	20
1-2	20	4	20
3-4	18	6*	20
5-14	6	18*	5
15-21	10	14*	5
22-28	14	10	5
29-35	18	6	5
36-42	24	0	5

3.25 Problems Faced by the Broiler Farmers

There were several problems faced by the broiler farmers. An attempt was taken to determine the most pertinent problems in this regard. The first and foremost problem faced by the farmers was too much fluctuation of DOC (Day Old Chick) and feed price. The second and third important problems were high cost of medication and vaccination and their low quality and high fluctuation of broiler price respectively

3.25.1 Production problems

a) High price of day-old chick.
b) Higher price of feed.
c) Lack of quality chick and growth problem.
d) Lack of credit.
e) Electricity problem.
f) Lack of capital.
g) Non-availability of day-old chicks.
h) Unavailability of poultry vaccine.
i) Lack of training facilities.
j) Uncertainty of profit.

3.25.2 Marketing problems

a) Unstable market of live broiler in the local market.
b) Late payment.

3.25.3 Social and natural problems

a) Outbreak of diseases.
b) Pollution of environment.
c) Lack of proper bio-security management (predator problems).

3.26 Suggestions for Improving Broiler Farming

1. Good quality day old chicks (DOC) should be supplied all the year round at fair price.
2. Adequate supply of high quality feed at all times at reasonable price.
3. Proper veterinary services should be ensured.
4. Government intervention for capital supply.
5. Market monitoring by the government authority can stable the market.
6. Price of poultry feed should be reduced.
7. Ensuring stable market price of broiler meat around the year.
8. Effective and skilled training facilities for the broiler farmers.
9. Management personnel should be trained up well.
10. Poultry vaccines should be available.
11. Regularity in electricity supply.
12. Bank loan should be available for the farmer.
13. Proper bio-security should be maintained.

4. CONCLUSION

Broiler farming in Bangladesh is absolutely a great business. Especially very suitable for educated unemployed young's, employment opportunities are decreasing day by day due to rapid population growth. So broiler farming is a great income and employment source along with being self-dependent. Socio-economic position on subsidiary occupation, monthly household income and expenditure, cash in hand, savings with bank, household assets, number of school going children, monthly consumption of meat, eggs, vegetables, milk and fish, health status of broiler farmers were improved whereas occurrence of diseases annual cost for treatment were reduced after adopting broiler farming. Broiler farmers faced some problems such as, high rate of day old chick and feed prices, high cost of medication & vaccination and its low quality and high fluctuation of broiler price etc. For removing these problems the respective authorities should have to take necessary steps which were already mentioned in

suggestions. To improve the poultry sector especially broiler it is important to develop production and management system in different farms. The government should come forth to establish a stable institutional and methodological infrastructure of management and production system in our country. In this circumstance, the quality judgment of feed of various companies should be established in every possible place of the country and assisted by the government cause profitability in l broiler production depends not only successful marketing of the product but also production and management system of broiler farming. The growers management skills, which impact the broiler growth rate and death losses. From a management standpoint, an operator can increase profits by watching for feed waste and making the necessary adjustments to reduce it, observing for leaking drinker, keeping the litter dry and clean, and paying attention to signs of stress.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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