

**AN OVERVIEW OF BACKYARD DUCK FARMING IN
RURAL AREAS AT CHILMARI UNDER KURIGRAM
DISTRICT**



A production report submitted by

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Khulshi, Chattagram-4225**

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ABSTRACT

This study was carried out to assess the status of backyard duck farming in selected area (Chilmari Upazilla under Kurigram district) of Bangladesh. The study was conducted on the farmers having at least more than 5 ducks. The data was collected between months of February to April of 2022 from the various Unions of Chilmari Upazilla. 28 farms were selected randomly. This study shows that most of the farmers used their own eggs to produce ducklings (48%) and maximum (64%) farmers are small scale (5-10 ducks) farmers. The number of ducks per farmer was 10.2. Most of farmer rear deshi breed (58%). In terms of housing most of farmers (42%) used bamboo & tin for duck house and (5%) farmers used nothing as bedding material. It was observed that (78%) farmers provided feed twice in a day. In case of adult weight, maximum (49%) farmers got medium (1.5-1.8 kg) adult weight. In case of sexual maturity 71% farmers got early (<180 days) sexual maturity at their farms. In aspect of egg production (57%) farmers got low (80-100) egg production per duck per year. In the parameters of hatchability it showed (52%) farmers got medium (82-86%) hatchability at their farms. In aspect of disease occurrence it was found that (55%) of farmers told that they got duck cholera at their farms which is higher. (11%) of farmers used vaccination to prevent disease, (46%) farmers provided only medication, (17%) farmers provided both medication & vaccination. But (26%) farmers provided nothing for their flock to prevent or control disease. The main problem in case of duck farming is lack of knowledge of farmers about rearing system and breeds of duck. As this study shows less number of farmers provided vaccination and got disease in their farms. So, the vaccination must be ensured to prevent the diseases. Extension work is necessary to improve farmer's knowledge about appropriate duck rearing system and highly productive duck breeds.

Keywords: Backyard duck farming, productivity, present status, Vaccination, rural area

CHAPTER I

INTRODUCTION

Bangladesh is a developing country where agriculture shares 13.47% of whole GDP (BBS 2020-21) and livestock sector shares 13.1% in agricultural GDP (DLS 2021). As Bangladesh is an agricultural country the most of the people of rural areas maintain their livelihood by doing either crop farming or livestock farming. Among livestock farming duck farming shares a significant value. The duck population of Bangladesh is 55.85, 57.75, 59.72, 61.75 million for the year of 2017-18, 2018-19, 2019-20 & 2020-21 respectively (DLS 2021). The environmental condition of Bangladesh is fit for duck farming. Bangladesh has a lot of geographical opportunities which help in duck farming such as several branches of river for swimming, natural feed resources and favourable climatic condition. Duck farming provide both egg and meat which is a good source of animal protein. In present there is a huge shortage of animal protein in Bangladesh. The current production is not enough to fulfill the demand of animal protein. In this situation duck farming can reduce the deficit. .Beside that the size and nutrient content of duck egg is more than the chicken egg. In aspect of duck egg & duck meat production Bangladesh holds fourth and eleventh position respectively among the Asian countries (Pingle 2011). This number is increasing day by day as duck rearing is a good source of self-employment and profitability. Ducks have more disease resistant capability and they can easily withstand to disease better than chicken. So farmers get less mortality in their farms and need less medication during rearing. Beside that ducks are natural scavenger and can consume enough feed from natural resources. So less labour and feed supplements are needed to rear. Ducks also have good adaptation capability to various environmental conditions (Adzitey and Adzitey 2011). Duck has more egg laying period than chickens (Kunnath & kumar 2018). Duck farming is a better way to overcome poverty in a low income country (Pym et al 2002). Farmers can get a good return by spending minimum management cost. But in aspect of Bangladesh duck farming in rural areas still is in primitive condition. Most of rural farmer rear duck by backyard farming system. So this study was conducted to evaluate the present condition of backyard duck farming and finding out the reason of low productivity at the rural areas of Chilmari upazilla under Kurigram District.

CHAPTER II

MATERIAL AND METHOD

2.1 Study Area:

The study was conducted at rural areas of Chilmari upazilla under kurigram district. The data was collected from the four unions including Raniganj, Ramna, Austomir Char and Thanahat.

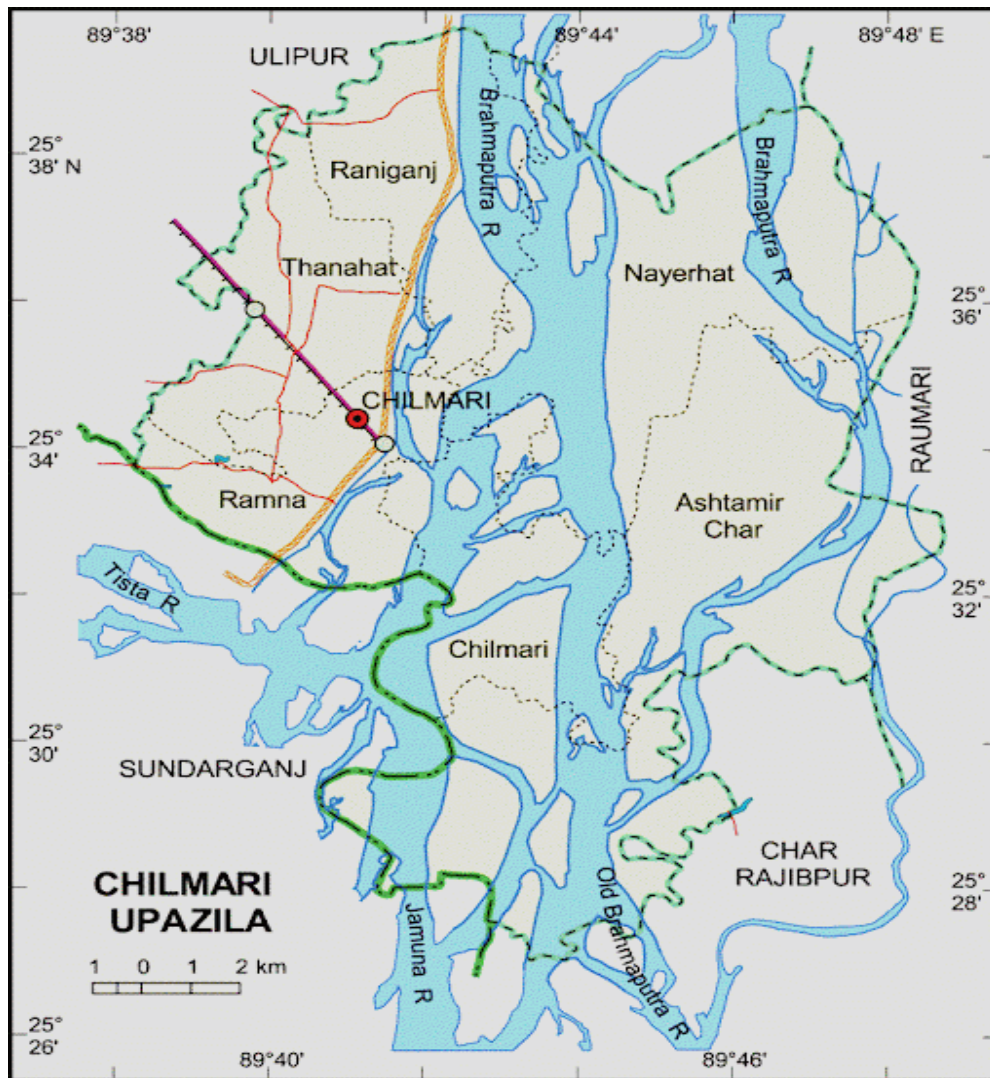


Figure 1: Map of the study area (Chilmari, Kurigram)

2.2 Study Period:

The study period was three month long. The study was conducted between the months of February to April in year of 2022.

2.3 Data Collection:

The data was collected from 28 farmers having at least 5 ducks in their flock. Farmers were selected randomly. The data was collected through questionnaire. There were several multiple choice questions and fill in the blank in the questionnaire.

2.4 Statistical Analysis:

The data input, analysis and arrangement was done using MS EXCEL 2010 software. Descriptive statistics like percentage and mean value was used to analyze the data.

CHAPTER III

RESULT & DISCUSSION

3.1 Source of Duckling

Basically most of the farmers used their own eggs to produce ducklings (48%). They incubated eggs by broody hen. Some farmers purchased duckling from their neighbour's house (28%). Rest of farmers bought duckling from either local market (21%) or duck farms (3%).

Table 1: Percentage of duckling's collection from different sources

Source	No. of farmers	(%) of farmers
Own	13	48
Neighbour	8	28
Local market	6	21
Duck Farms	1	3

3.2 Number of Ducks

The farmers were categorized into three categories on the basis of flock size. Categories are small scale farmers having 5-10 ducks, medium scale farmers having 11-20 ducks and large scale farmers having more than 20 ducks. The results are shown in Table 2.

Table 2: Category of farmers according to flock size.

Category	No. of farmers	% of Farmers	Mean
Small scale (5-10 ducks)	18	64%	10.2
Medium scale (11-20 ducks)	8	28%	
Large scale (>20 ducks)	2	8%	

Here it showed that most of the farmers were small scale farmers (64%) and the number of ducks per farmer was 10.2.

3.3 Breeds of Duck

Most of farmer rears deshi breed (58%). Few farmers rear only khaki Campbell (29%). Some rear both deshi and khaki Campbell (10%). Only (3%) farmers rear Jinding breed.

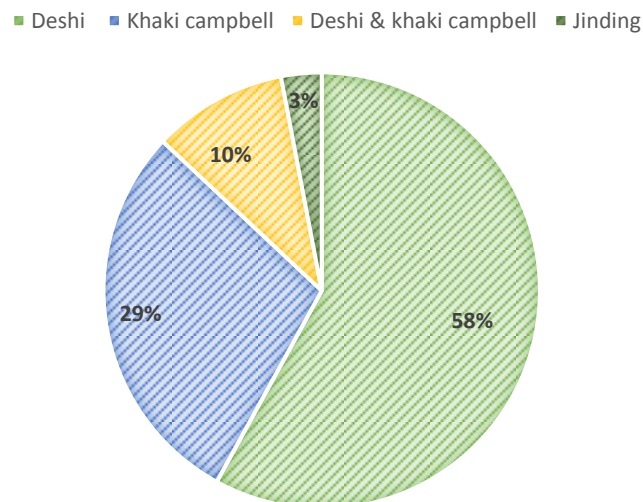


Figure 2: Percentage of rearing different breeds

3.4 Housing management

There are different materials are used to build a house for duck farming. (34%) farmers used only bamboo, (42%) used bamboo & tin, (24%) used wood & tin.

Table 3: Percentage of materials used to build duck house

Materials	No. of farmers	% of Farmer
Only bamboo	10	34
Bamboo & Tin	12	42
Wood & tin	6	24

In case of bedding materials sand, ash, sand & ash, nothing was used by (56%), (18%), (21%), (5%) of farmers respectively.

Table 4: Percentage of materials used as bedding at duck house

Materials	No. Farmers	% of Farmers
Only sand	16	56%
Ash	5	18%
Sand & ash	6	21%
Nothing	1	5%

3.5 Feed ingredients

Different combination of feed supplement was provided by farmers. (37%) farmers provided only rice, (30%) provided rice & rice polish, (19%) provided rice polish & broken rice, (14%) provided rice, rice polish & wheat bran to their ducks.

Table 5: Percentage of different feed ingredient provided by farmers

Ingredient	No. of farmers	% of farmers
Only rice	10	37
Rice & rice polish	8	30
Rice polish, broken rice	6	19
Rice, rice polish ,wheat bran	4	14

3.6 Frequency of feeding in a day

Frequency of feeding was categorized into three categories. These are once a day, twice a day and thrice a day. It was observed that (78%) farmers provided feed twice in a day which was higher than rest of categories where (15%) farmers provided once and (7%) farmers provided thrice in a day to their ducks.

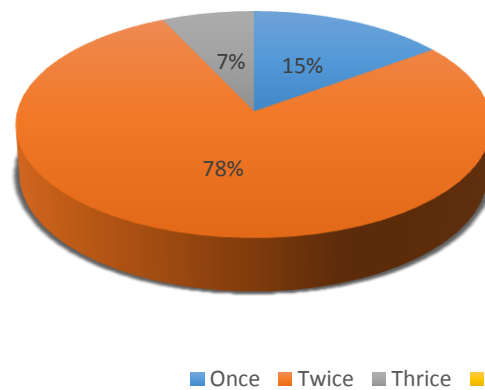


Figure 3: Percentage of feeding frequency in a day

Here the farmers who give feed thrice a day got more productivity than the other farmers. As more nutrient is provided the got more production. So that 7% farmers got more production of egg than the other farmers.

3.7 Production performance of duck

To evaluate the production performance some parameters like adult weight, egg production, sexual maturity and hatchability were estimated. Each parameter are subdivided into three categories as low, medium and high. In case of adult weight (45%) farmers got low (<1.5 kg), (49%) farmers got medium (1.5-1.8 kg), (6%) farmers got high (>1.8Kg) adult weight at their farms. In case of sexual maturity (71%), (26%), (3%) farmers got early (<180 days), Moderate (180-200 days), late (>200 days) sexual maturity respectively at their farms. Egg production is an important parameter to evaluate the productivity. Here only laying birds are counted. In aspect of egg production (57%) farmers got low (80-100) egg production per duck per year. (40%) and (3%) farmers got medium (101-150) and high (>151) egg production respectively. In the parameters of hatchability it showed (38%) of farmers got low (<82%) hatchability and (52%), (10%) farmers got medium (82-86%) and high (>86%) respectively at their farms.

Table 6: Production performance parameters analysis

Parameters	Category	No. of farmers	Farmer (%)
Adult weight	Low (<1.5 kg)	12	45
	Medium (1.5-1.8 kg)	14	49
	High (>1.8 kg)	2	6
Sexual Maturity	Early (<180 days)	20	71
	Moderate(180-200 days)	7	26
	Late (>200 days)	1	3
Egg production (laying birds)	Low (80-100)	16	57
	Medium (101-150)	11	40
	High (>150)	1	3
Hatchability	Low (<82%)	11	38
	Medium (82-86%)	14	52
	High (>86%)	3	10

3.8 Diseases of Duck

In aspect of disease occurrence it was found that (55%) of farmers told that they got duck cholera in their flock. (23%), (14%) farmers stated they found duck plague and limberneck poisoning respectively at their duck farms. But (8%) farmers told that they got no disease in their farms.

Table 7: Percentage of diseases found on duck farms

Disease	No. of farmers	% of farmers
Duck cholera	16	55
Duck Plague	6	23
Limberneck poisoning	4	14
No disease	2	8

3.9 Mortality rate

Table 8: Percentage of mortality rate according to age & vaccination status

According to Age	Duckling	11.3 %
	Grower	7%
	Finisher	4.4%
According to vaccination	Vaccinated	2 %
	Non-vaccinated	8.6 %

Mortality rate according to age we found more mortality rate is seen in case of duckling (11.3 %). In case of grower and finisher we found 7 % and 4.4% respectively. Mortality rate according to status of vaccination we found more mortality in non-vaccinated ducks (8.6%) and in case of vaccinated duck we found 2 % mortality. It shows that vaccination reduces mortality rate and duckling are more sensitive to mortality.

3.10 Disease control action

It is observed that (11%) of farmers used vaccination to prevent disease, (46%) farmers provided only medication, (17%) farmers provided both medication & vaccination. But (26%) farmers provided nothing for their flock to prevent or control disease.

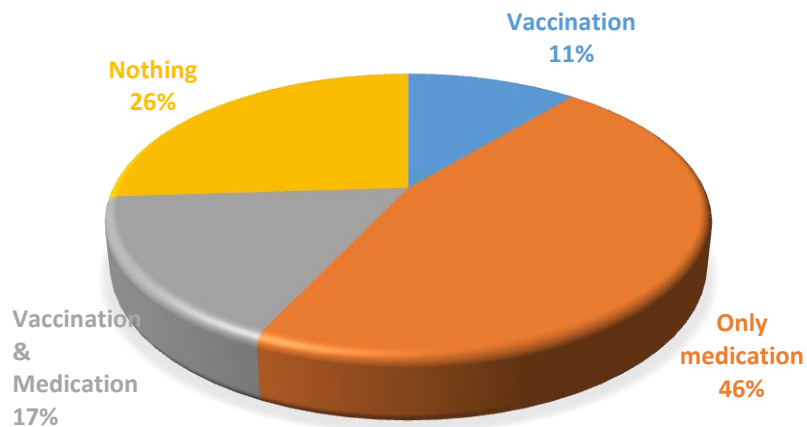


Figure 4: Percentage of vaccination, medication provided by farmers

3.11 Problems related to backyard duck farming

The main problem in case of duck farming is lack of knowledge of farmers about appropriate rearing system. For this reason many of farmers got disease in their farms and thus they face economic loss. There is also lack of knowledge about breeds of duck. So they are not getting the optimum productivity as most of farmer rear deshi breed.

3.12 Recommendation

1. As this study shows less number of farmers provide vaccination and got disease in their farms. So, the vaccination must be ensured to prevent the diseases.
2. Extension work is necessary on improving farmer's knowledge about appropriate duck rearing system and highly productive duck breeds.

CHAPTER IV

CONCLUSION

In aspect of Bangladesh duck farming can be a good source of profitability and self-employment. Bangladesh has a lot of geographical advantages like branches of river and other climatic condition. But in rural areas, duck farming is still in primitive condition. Farmers are not conscious about vaccination, Medication and appropriate rearing system. The have limited knowledge about high productive breeds. Most of farmer rear deshi breed and get less productivity and profitability. So initiatives should be taken by government and NGO to arrange training on increasing knowledge about appropriate husbandry of duck, importance of vaccination-medication and giving them low interest loan to initiate duck farming. In this way it will be an effective way to maintain their livelihood.

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The Author

BIOGRAPHY

I am **Md. Riyadul hasan**, son of **Md. Rafiqul Alam** and **Mst. Rokhana Alam**. I completed my secondary school certificate (SSC) in 2013 and Higher Secondary School Certificate (HSC) in 2015. Now I am doing my graduation at Chattogram Veterinary & Animal Sciences University. As an upcoming veterinarian I would like to dedicate my rest of life for the welfare of animals and I am trying my best to be an expert veterinarian.