

Chapter 1. Introduction

Backyard poultry farming is widespread in rural areas of low-income countries. It is a valuable resource for rural life. Not only it is important for food production, it also contributes to the income of subsistence farmers, especially women. In Bangladesh and many other developing countries, the meat and eggs of indigenous chicken are highly preferred for their taste, palatability and suitability for special dishes resulting in even higher market prices for these chickens than their exotic counterpart (*Islam & Nishibori, 2009*). In addition, poultry meat is in great demand compared to other meats due to socio-economic restrictions and religious taboos of pork and beef (*Jabbar & Green, 1983*). The Madhabpur upazilla occupies a great place in Bangladesh in backyard poultry rearing, the reason is sufficiency of natural feed during the time of harvesting season. Having a lot of free range area and gets insects easily that meets the protein requirement. The people of Madhabpur upazilla traditionally practice Cattle, Buffalo and Goat rearing and additionally keep chicken for extra income. Moreover the farmer gets broken rice and rice polish as byproduct after harvesting paddy. Despite having the large number of families rear backyard chicken but only a few studies have been done in Socio-economic condition and common management practices of scavenging chicken in Madhabpur upazila. So, the current study was performed to evaluate the present backyard farming system with the goals to pave the way for improvement of backyard chicken farming into sustainable wage for the rural families. The current study was performed setting the aim of measuring socio-economic impact as well as management practices including housing patterns, feeding system, waste management, biosecurity etc. of backyard chicken in the village regions. The specific goals of the study were:

- To know the socio-economic condition of the backyard chicken farmer
- To know about the different management practices in backyard farming
- To collect information for policy makers to take necessary action for improvement of this sector.

Chapter 2. Materials and methods

2.1 Selection of the Study area

The present study was conducted amid the period of February to May 2021. Due to accessibility of expansive number of chicken, great communication advantages, the study zone was chosen in Madhabpur upazila of Habiganj district of Bangladesh. Madhabpur is situated in between 23°58' and 24°16' north latitudes and in between 91°16' and 91°25' east longitudes.

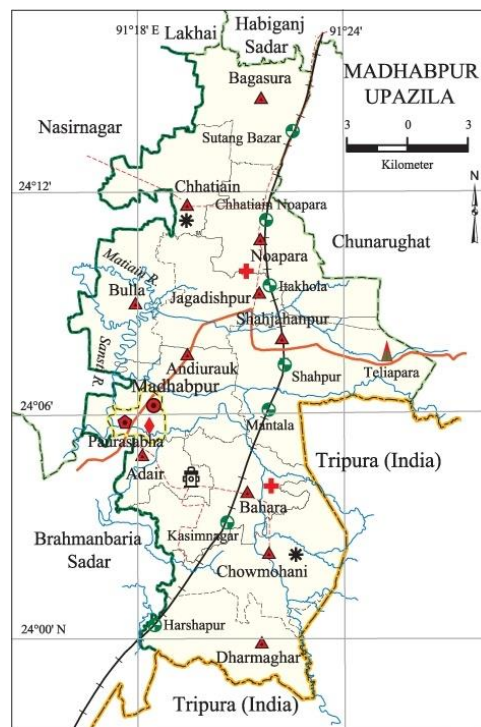


Fig 1: Study area in map

2.2 Selection of sample and sampling technique

A sum of 40 families were chosen randomly from the whole upazila of Madhabpur of Habiganj district.

2.3. Data collection methods

After clearly clarified the goals of the study by using local language as far as possible, the information were collected by direct interview and observation and noted in a questionnaire on farmers knowledge with respect to backyard chicken raising. Collected information were tested in accordance with the objectives of the study.

2.4. Analytical Techniques

The collected data were analyzed in accordance with the objectives of the study. Collected information were arranged and analyzed by simple statistical formulas (e.g., percentage, arithmetic mean etc.)

3. Results and discussion

3.1 Socio-economic status:

Different factors associated with socio-economic condition of the backyard chicken farmers of Madhabpur Upazilla are listed in **Table 1** and specific findings of the study also described below:

Parameter	Category	Number	Percentage (%)
Flock Size	Small (up to 10 birds)	19	47.5
	Medium (11-25 birds)	13	32.5
	Large (>25 birds)	8	20
Sex of the farmer	Male	4	10
	Female	36	90
Family size	Small (up to 4 members)	7	17.5
	Medium (5-7 members)	24	60
	Large (>7 members)	9	22.5

Table 1 Factors associated with the socio-economic condition of the farmers of Madhabpur upazilla (N=40)

The socio-economic condition of the farmers affected on the raising of backyard farming enormously. There were 40 families under observation. *Sonkar et al.,(2020)* mentioned that in backyard poultry farming, 5-50 birds are raised under a traditional extensive backyard scavenging system. **Table 1** reveals that the flock size of the backyard chicken farming were grouped into three categories *i.e.*, small (up to 10 birds), medium (11-25 birds) and large (>25 birds) where 47.5% had small flock size than medium (32.5%) and large (20%). **Table 1** showed that the rearing percentage of the female and male farmer were 90% and 10% respectively. The present result agree with the findings of (*Sultana et al., 2012*) where reported that the larger part of the owners were female. The family size of the participants of the study were organized into four groups *i.e.*, the Small (up to 4 family members), medium (5-7 family members), large (>7 family members) categories. The percentage of the small, medium and large family were 17.5%, 60% and 22.5% respectively.

3.2 Literacy level

The education level of the participants were classified into five educational group. There were found 32.5% illiterate, 27.5% primary school education, 25% junior school education, 10% high school education and 5% got college and above education. Table shows percentage of Illiterate people (32.5%) is higher than other category.

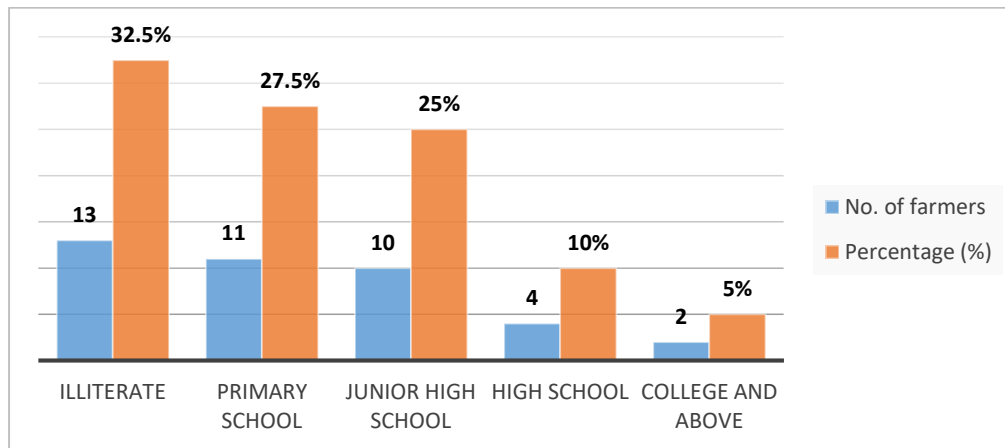


Fig-2: Literacy level of the farmers

3.3 Purpose of chicken rearing

Table 3.3 showed that 42.5% farmers rear chicken for selling, 22.5% rear for consumption and rest 35% rear for both purposes. The present result doesn't agree with *Shanta et al., (2017)* where families raised poultry only for selling, consumption and both purposes were 12%, 12% and 76% respectively.

Parameters	Number of farmers	Percentage (%)
Selling	17	42.5
Consumption	9	22.5
Both	14	35

Table 2: Purpose of chicken rearing

3.4 Feeds supply:

Backyard poultry farmers utilized a wide variety of supplementary feed for their poultry species. Study showed that approximately 40% of the participants used boiled rice, paddy 5%, broken rice 25% and other ingredients as mixed feed 30%

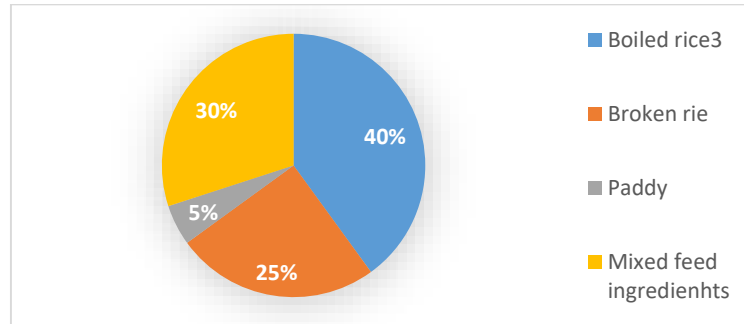


Fig-3: Types of feed supplied

3.5 Housing patterns:

The housing system of the chickens in the backyard was quite distinct from the literature. There were great similarities in the production of poultry houses in Madhabpur region. In this region, 30% of the people built their houses in veranda very near to their own houses, 42% of the participants kept them in bedroom, 10% participants made fully detached chicken houses in yard by keeping a minimum gap and remaining 18% use both bedroom and veranda or yard for housing. The observation acceding with the findings of (Alam et al., 2014) who cited that approximately 55% participants kept chicken in their resident.

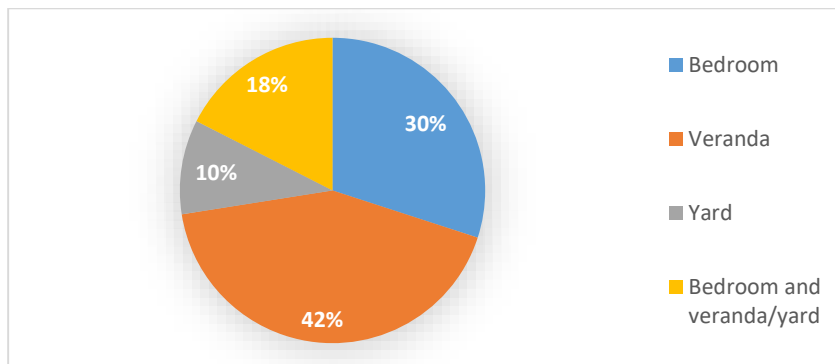


Fig-4: Housing patterns

3.6 Waste Management

In terms of waste management there were found 25% farmers dispose droppings to open air, 15% to drain, 20% dispose to a pit, 40% use as fish feed and crop production.

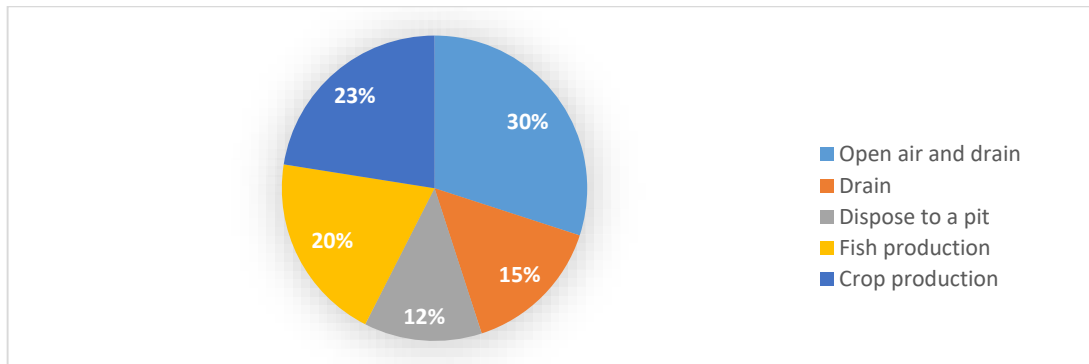


Fig-5: Waste disposal system

3.7 Biosecurity

Sonaiya, (2009) stated that numerous specialized variables including low bio- security influenced smallholder family poultry. Biosecurity attributed by the household poultry raisers applying of chemical agents is very uncommon in the rural areas. Ninety percent of the village people did not follow commercial biosecurity protocols and the remaining ten percent backyard chicken farmers maintained to some extent. This observation agrees with previous report of (*Sumy et al., 1970*) who cited that around 95% backyard chicken farmers didn't maintain commercial biosecurity and remaining 5% maintained some extent. But approximately hundred percent of the chicken raisers followed conventional measures and biosecurity. In those cases women used ash to disinfect and control external parasites and for floor disinfection. Lime is also used to maintain biosecurity by some of them.

3.8 Vaccination:

Approximately 70% of the farmers didn't use any vaccine to immunize their birds and the rest 30% followed the vaccination guideline. The finding is similar to the observation of (Popy et al., 2018) where they stated that 69.23% farmers didn't immunized their birds.

3.9 Methods of treatment

People are not very much aware about treatment of sick fowls, around 67.5% of farmers of backyard farming was taken after the conventional strategy of treatment procedure in backyard chicken farming. Rest 32.5% was followed the treatment convention of the veterinary surgeon.

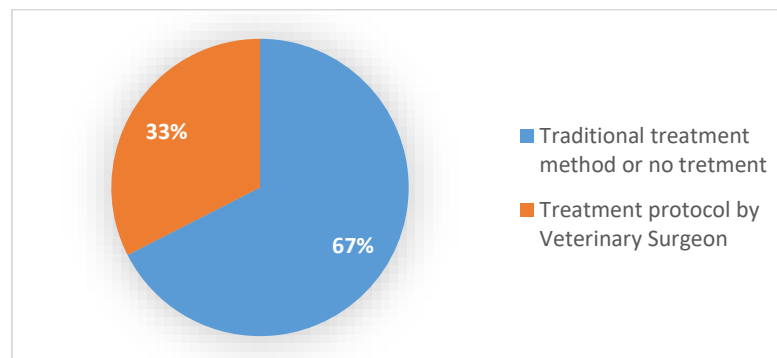


Fig-6: Methods of treatment

3.10 Selling price:

The selling price of an egg was 13-15 taka and value of an adult chicken was ranged from 350-500 taka according to their body weight. All sources detailed that the wage from poultry was valuable to meet regular family needs. *Sultana et al., (2012)* reported that they utilized this cash for buying medication, paying doctors' expenses, and buying cooking ingredient, kitchen stuffs, necessary utensils, gifts and dress for family individuals and repaying credits, small-scale savings.

5. Limitation of the study

There were a few confinements in this study. The study period was constrained and study area limited to a specific upazilla. An ongoing pandemic too restricted appropriate information collection from the chosen range. A few of the farmers were not cooperative to allow authentic data. For this reason the findings may not reflect the condition of entire country.

6. Conclusion

Backyard chicken raising could be a supplementary wage source of rural individuals as it takes a little care and cost to raise. They are resistant to a few infections so pharmaceutical cost is less. They take natural feed so feed cost become least. The study demonstrates that there are incredible chances for an advancement of chicken production in village areas of Bangladesh.

7. References

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Appendix

Questionnaire for Data Collection

Name of the Farmer.....

Address: Village..... Union.....Ward.....

Contact No:.....Sex.....

Educational status.....

Occupation.....

Source of Income.....

Taken any Loan or Not.....

Number of family members.....

Species.....

Total number Of Birds.....

Birds kept in: (Bedroom/Veranda/Yard).....

Types of feed supplied.....

Isolation of diseased birds.....

Method of treatment of sick birds.....

Vaccination.....

Types of biosecurity maintain.....

Waste disposal.....

Purpose of rearing.....

Do what with the earnings (If sells).....

Price of egg.....Price of chicken.....

Biography

Pallab Deb Nath, son of **Jagadish Chandra Deb Nath** and **Jharna Rani Bhowmik** is an intern student for the degree of Doctor of Veterinary Medicine (DVM), Faculty of Veterinary Medicine, CVASU. He passed the Secondary School Certificate Examination (SSC) in 2013 from Gobindapur Govt. High School, Madhabpur, Habiganj and got GPA 5.00 and then Higher Secondary Certificate Examination (HSC) in 2015 from Dhaka City College, Dhaka and earned GPA 5.00 Then he admitted to the degree of Doctor of Veterinary Medicine (DVM), Faculty of Veterinary Medicine, CVASU in 2015-2016 session.