
Chapter I: Introduction

Bangladesh is a developing country with a population of 160 million and 70% of this population lives in rural area. Most of them are involved in agricultural work. The landless and marginal farmers largely depend on the livestock for their survival (Ahmed, 1992). Livestock rearing is an important business in our country. Our cattle population is 25.57 million which rank 12th in the world and 3rd in Asian countries (Alam *et al.*, 1994). Many poor farmers are involved in beef fattening 4-5 months before Eid-UI-Azha (Nani *et al.*, 2018). Locally-reared cattle have been increasing day by day for Eid-UI-Azha. Beef fattening helps to meet the rising demand of high protein foods in the country and plays a great role in enhancing food security, providing households with employment and income, providing drought power and manure for sustainable agriculture and meeting demand of animal during Eid festival. According to fisheries and livestock ministry, 1.16 crore sacrificial animals are available this year. Among these 44.57 lakh are cattle. People are interested to rear beef cattle for available feed source and easy rearing system. The information available in the literature on beef fattening by small farmers in rural areas are few and sporadic (Hossain, 1986; Hossain *et al.*, 1996; Haq *et al.*, 1997 and Hashem *et al.*, 1999). For beef fattening farmers mostly use traditional varieties of food such as rice polish, wheat bran, molasses, rice gruel, oil cake, straw, road side grass, Napier grass, vegetable by products etc. most of the farmers do not have any training about scientific methods of beef fattening. Many of them use urea molasses straw for beef fattening. Farmers can fulfill the demand of vitamin and mineral by using varieties of feed. For the production of healthy and good quality beef cattle, scientific feeding and disease control is very important. To prevent highly infectious disease like FMD, HS, BQ vaccination should be done properly. Some farmers use hormone, steroid drug and feed additives for beef fattening (Islam *et al.*, 2012). They bring those animals to different 'Kurbani hat' for selling. Sometimes animals become sick due to long journey and stress. Farmers use antibiotic which is prescribed by some untrained doctor. Also they do not follow the withdrawal period of antibiotic. These animals

containing drug residue are eaten by the people during Eid-UI-Azha. Another threatening fact is that, infectious disease like FMD spread from infected (unvaccinated) animal to healthy animal in 'Kurbani hat'. This causes a great economic loss health hazard to the consumers. This study has been conducted for the following objectives-

Objectives:

- a) To evaluate the management system of beef cattle before Eid-UI-Azha.
- b) To observe show the scenario of kurbani hat.
- c) To recommend the farmers to rear beef cattle in scientific way.

Chapter II: Materials and Methods

The study was undertaken to find out the management system of beef fattening program practiced by the rural farmers who bought their animals in different Kurbani hat.

2.1 Study Area:

I select Sagorika Kurbani hat, Pahartali, Chittagong for the collection of data. A lot of farmers from different district come to this hat for selling their cattle.

2.2 Study Period:

The data was collected for the period of 2 months from June 20 to August 20, 2018.

2.3 Collection of Data:

50 farmers were selected randomly for the collection of data. A structured questionnaire was made for the collection of data. Interview was taken face to face. Just before the interview the objectives was clearly explained to the respondents. The respondents were divided into 3 age groups, (a) young: up to 35, (b) middle age: 35-50, (c) old age: more than 50 years. The interview questionnaire contained the following information: general information of the owner, livestock population, housing system, feeding system, fattening technique, vaccination and medication and other information (Chander *et al.*, 2011).

2.4 Analysis of Data:

The collected data were compiled, calculated and analyzed. The qualitative data were transferred to quantitative data by scoring technique (Hossain *et al.*, 2016). The collected data were carefully analyzed with descriptive statistical method to fulfill the objective of the study. Tabular technique was applied for analysis of data using descriptive statistical tools like frequency, average and percentage through Microsoft Office Word 2007 and Microsoft Office Excel 2007 software.

Chapter III: Results and Discussion

3.1 Origin and Source of Beef Cattle:

Table 1 shows the origin and sources of beef cattle. I found that about 10% beef cattle are indigenous and 90% are cross breed in the study area. Hossain *et al.*, (2016) found 12% beef cattle are indigenous and 88% are cross breed in his study, which is almost similar to this study. This increased number of cross breed cattle may be due to available AI semen of high yielding variety and high demand of cross breed cattle in the kurbanı hat. Indigenous cattle are adapted to local condition and resistant to many diseases but in the study area farmers used cross breed beef cattle (90%) for fattening.

Table 1. Origin and Source of Beef Cattle

Parameters	Categories	Percentage
Origin	Indigenous	10% (5)
	Crossbreed	90% (45)
Source	Own source	66% (33)
	Purchase	34% (17)

About 66% farmers have own source and 34% farmers have purchased beef cattle for fattening. Farmers usually purchase beef cattle few months before the Eid-ul-Azha for fattening.

3.2 Breeding of Beef Cattle:

Breeding method of beef cattle showed Chart 1. Farmers used tree types of breeding method. In the study area about 68% farmers used artificial insemination technique, 12% farmers used natural breeding and rest 20% used both methods for breeding

(Hossain *et al.*, 2002). Farmers hire bull for breeding, but some farmer use own bull for breeding.

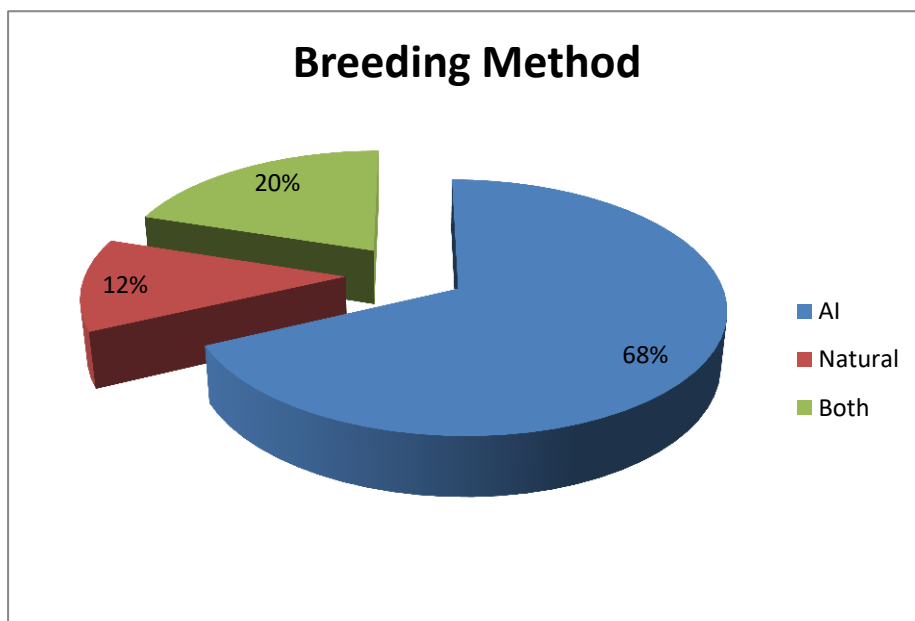


Figure 1: Percentage of different breeding method followed by the farmers

3.3 Housing and Feeding of Beef Cattle:

Table 2 shows that most of the farmers used traditional semi-intensive (62%) housing system. About 26% used intensive and 12% used extensive housing system. The result of the study is almost similar to the study of Ahmed *et al.*, 2010 where they found 31.6% farmers kept their beef cattle in traditional house.

Table 2. Housing and Feeding system of Beef Cattle

Parameters	Categories	Percentage
Housing	Intensive	62%
	Semi-intensive	26%
	Extensive	12%
Roughage	Road side grass/ veg. wastage	16%
	Cultivated fodder	68%
	Both	16%
Concentrate	Compound/pellet feed	0%
	Home mixed feed	100%
Vitamin, mineral supplement	Yes	68%
	No	32%
UMS	Yes	46%
	No	54%

Farmers used locally available fodder and concentrate feed for fattening. Indigenous knowledge on beef cattle feeding like chopping of straw, mixing of green grass with straw, feeding tree leaves, vegetable wastage etc (Rahman *et al.*, 1998) practiced by the rural farmers. Cultivated fodder (68%) like napier, para, german etc. is the main fodder used for fattening. Farmers also use roadside grass and vegetable wastage (16%) for feeding. Concentrate feed is very important for beef fattening. All of the farmers use mixed feed, which is prepared by mixing different ingredient. They usually use rice polish, wheat bran, ksheshari, oil cake, molasses, salt etc. UMS is very important for beef fattening. But in this study the use of UMS by the rural

farmers is not satisfactory. In table 2 we saw that about 46% farmers used UMS and 54% did not use it for beef fattening. Rahman *et al.*, (2012) found 57.3% farmers used UMS technology for beef fattening in his study area. Many farmers used vitamin and mineral supplement for beef fattening. It is scientific to give enough vitamin and mineral supplement for proper growth of beef cattle. In the study area about 68% farmers used commercial vitamin and mineral supplement for beef fattening.

3.4 Health Care of Beef Cattle:

Beef cattle health care shows in Chart 2. About 74% farmers practiced regular vaccination schedule against infectious diseases like FMD, HS, BQ and Rabies. 72% farmers practiced regular deworming and many farmers used hormone, antibiotic and growth promoter for higher meat production. The results of this study are similar with Begum *et al.*, (2007) where they reported that 83.3% farmers used vaccination, 80% farmers practiced deworming.

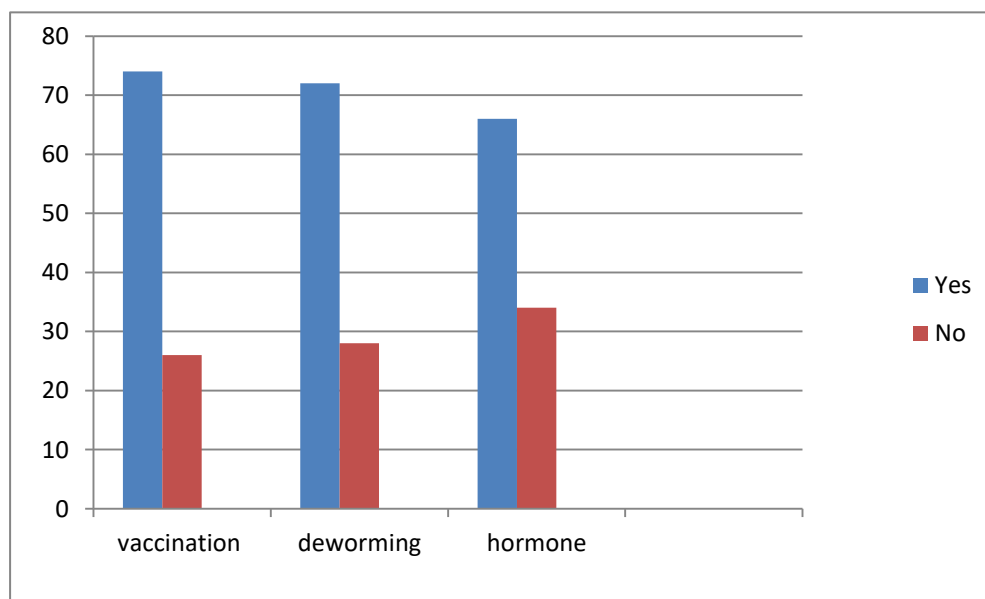


Figure 2: Percentage of farmers practicing Vaccination, Deworming and Hormone/Antibiotic

Use of hormones for higher growth rate is not ethical. Growth hormones have harmful effect on both animal and human body. The animals bought in the

kurbanihat will be sacrificed in Eid-ul-Azha and will be consumed by the people. Animals which did not vaccinate properly against infectious diseases will be affected by many infectious diseases. Two FMD patients were found in Sagorica kurbanihat during my study. This disease may spread to all the healthy animal and death may occur. It will cause great economic loss to the farmers. Farmers use antibiotic indiscriminately in animal body after slaughter during Eid-ul-Azha.

3.5 Associated Factors of Beef Fattening:

Table 3. Associated Factors of Beef Fattening

Parameters	Categories	Number	Percentage
Age	Young (< 35years)	12	18%
	Middle age (35-50 years)	16	38%
	Old age (>50 years)	22	44%
House hold size	Small (<6 members)	26	52%
	Medium (6-8 members)	16	32%
	Large (>8 members)	8	16%
Training	Yes	19	38%
	No	31	62%
Duration of fattening	≤5 months	22	44%
	5-12 months	15	30%
	>12 months	13	26%

Table 3. Shows the associated factors related to beef cattle fattening. The results of this study were similar with Rahman *et al.*, (2012) where they reported that 45.3%,

16% and 38.7% farmers were in middle, young and old aged category respectively. They also reported that 52% farmers had small sized, 31% medium and 17% farmers' large family. Almost similar findings were found by Begum *et al.*, (2007), Ahamed *et al.*, (2010). Table 3 shows most of the farmers (44%) fattened cattle for 5 months and rest of them fattened a prolonged period. While working with the farmers in rural areas of Bangladesh, Hossain (1986) and Hossain *et al.*, (1996a) reported cattle fattening periods of 4 to 5 months and 5 to 7 months, respectively. About 38% farmers have taken training from different NGO and veterinary hospital. Most of the farmers did not have any training about scientific method of beef fattening. Government should come forward to give more training to the rural farmers.

Chapter IV: Limitation

There are few limitations in this study. Some of the limitations are-

- a) Small sample size
- b) Some information given by the farmer might be incomplete
- c) Direct observation of management was not done

Chapter V: Conclusion

The present study shows the management system of beef cattle before Eid-ul-Azha and shows the real picture of kurbanı hat. The management system of the beef cattle is not upto point, as farmers are not aware about the effects of using hormones and antibiotics. Government should come forward to buildup awareness among the rural farmers who bought their beef cattle in different kurbanı hat. This study will help the farmers to know about the scientific method of beef fattening.

References

- Hossain S(2002). Socio-economic upliftment of rural poor through cattle fattening. M. S. Thesis, Department of Animal Science, BAU, Mymensingh, Bangladesh
- Alam J, Akleruzzaman M, Rahaman A and Ahmed Z (1994). Comparative performance of local and crossbred cows in Bangladesh. *Indian Journal of Dairy Science* 47:112-117.
- Ahmed N (1992). Problems and prospects of Livestock in Bangladesh. In proceedings work of Livesock Development in Bangladesh. 16-18 July, BLRI. 8-14.
- Hossain, K M, Nahar T N, Talukder A I and Kibria S S(1996a). Beef fattening by rural women. In the proceeding of a national workshop on case studies "Success stories of women in Agriculture". 27-28 August, 1995, BARC, Dhaka, Bangladesh.
- Hossain, MM. (1986). Study of cattle fattening program by landless and youth. *Bangladesh Journal of Animal Science*. 15 (1-2): 85-88.
- Hashem, M A, Moniruzzaman M, Akhter S and Hossain M M(1999). Cattle fattening by rural farmers in different districts of Bangladesh. *Bangladesh Journal of Animal Science*. 28(1-2): 81-88.
- Huq MA, Mondal MMH, Collard RY and Haq MA (1997). Integrated Farming Development Project in Bangladesh. First Annual Report (1995-96). pp. 18-19.
- Islam MH, Hashem MA, Hossain MM, Islam MS, Rana MS and Habibullah M (2012). Present status on the use of anabolic steroids and feed additives in small scale fattening in Bangladesh. *Progressive Agriculture*. 23 (1-2): 1-13.

- Chander M, Subrahmanyeswari B, Mukherjee R and Kumar S (2011). Organic livestock production: an emerging opportunity with new challenges for producers in tropical countries. *Revue Scientifique et Technique (International Office of Epizootics)*. 30 (3): 969-983.
- Ahamed T, Hashem MA, Khan M, Rahman MF and Hossain MM (2010). Factors related to small scale cattle fattening in rural areas of Bangladesh. *Bangladesh Journal of Animal Science*. 39 (1-2): 116-124.
- Rahman, M M, Akhter S and Hossain M M (1998). The availability of livestock feeds and feeding practices followed by the farmers of some area of Mymensingh district. *Bangladesh Journal of Animal Science*. 27: 119-126.
- Rahman Z, Hossain M M, Hashem M A, Azad M A K and Khatun H (2012). Factors Related to Small Scale Beef Fattening Programs in Dinajpur District of Bangladesh. *Progressive Agriculture*. 23(1 & 2): 33 – 38.
- Begum MAA, Hossain MM, Khan M, Rahman MM and Rahman SME (2007). Cattle fattening practices of selected farmers in Panchagarh district. *Bangladesh Journal of Animal Science*. 36 (1-2): 62-72.

Acknowledgements

All thanks go to the Almighty God, the creator and utmost sovereign of the earth, who gave me the opportunity to complete the work fruitfully. The author is so much thankful to the honorable internship supervisor **Dr. Arup Ratan Sen**, Lecturar, Department of Dairy and Poultry Science, Chittagong Veterinary and Animal Sciences University, Chittagong; for his pedagogic supervision, kind cooperation, sincere assist, valuable suggestions, inspiration, constructive criticism, who was involved with this study from its initiation.

The author is also grateful to **Prof. Dr. A. K. M. Saifuddin**, Department of Physiology, Biochemistry and Pharmacology and Director of External Affairs, Chittagong Veterinary and Animal Sciences University, Chittagong. The author would like to express his deep sense of gratitude and thanks to the people for helping me to collect data of beef cattle. The author expresses his thankfulness to the other teachers, elder brothers of Masters, well-wishers for their co-operation and instructive suggestions. Last but not least, the author is profoundly grateful to the Father and mother for their endless sympathies, kind co-operation, sacrifices and prayers.

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