

## Chapter 1

### INTRODUCTION

EID-UL-AZHA, the second largest religious festival of the country, is the ultimate celebration of sacrifice and gratitude for Muslims. Eid-ul-azha brings for the Muslim world a divine blessing, a rare opportunity not only to enjoy an auspicious day of joy and happiness but also to receive Allah's mercy and reward through sacrifice, patience and constancy. For this festival, there have to need a huge number of cattle's and goats for sacrifice. But the animal welfares are neglected in the cattle market. Many people do not aware and realize the importance of the animal welfare. Animal welfare is not a new concept to us. It persists from the very beginning of civilization. The modern world is very much concern about this topic, but what our situation. The concern of this paper is to show the present status of animal welfare in our country. Bangladesh is a developing country; Rangpur is one of the biggest city of this country. Most of the people of our country are Muslim and we have to sacrifice animal on the Eid- ul- Azha. So, there is established a large business on the basis of this festival. Many rural people rear cattles and goats to target the Eid- ul-Azha. But they are not aware on animal welfare and sometimes not show any interest. Before Qurbani Eid, Bangladeshi cattle traders buy these animal and gathered in one place. Then, they load these animals into vehicles such as open-top truck, pick-up and send to Rangpur city. Normally 15-16 cattle are loaded in a truck and it is obvious from visual inspection of the vehicles that there is overcrowding in relation to the surface area available for each animal (Alam *et al.*, 2008). It takes normally 10-12 hour to reach Rangpur at Lalbag cattle market. But, in case of strike, traffic jam or any kind of problem during transportation this time getting prolonged. These transport vehicles are open-top, no cushion is applied around the side to protect the injury. The animals are tied to the vehicles sides to control their movement and ropes are secured at the neck, legs or nose. This condition leads to respiratory problems, discomfort, rope, rubbing injuries, and abrasion, laceration injuries from rubbing against the vehicle wall (Alam *et al.*, 2010). The tail injuries occurred due to tail twisting, which is one of the methods to control the

movement of animals such as cattle and water buffalo, the other method is nose piercing frequently used in countries of Asia (Alam *et al.*, 2010). During transportation they are exposed to heat, cold and rain. These conditions vary depends upon the season. Normally in this journey they don't get any kind of feed, water or rest. This prolonged fasting from feed and water cause dehydration, metabolic depletion in their body and results in reduction of carcass weight and change in meat quality (Alam *et al.*, 2010). If any necessary happened then they unload the animals and provide inadequate amount of feed, water and rest. Sometimes the animals have to be walked continuously through the road to the market. After reaching into the cattle market at Lalbag in Rangpur, at the unloading bays the trucks are backed onto a raised straw pad and the animals are walked off. Loading and unloading can be two of the most stressful stages during animal transport (Kober *et al.*, 2012). Inappropriate behavior by the animal handlers has often been observed, particularly at the time of unloading, involving the frequent use of sticks, which might explain some of the skin injuries. The behavior of personnel who are involved with loading and unloading, or who drive the vehicles, is one of the most important factors that affect the welfare of animals. The stay period of cattle and goats varies depend upon their sell to the buyer, usually the time varies 4 to 7 days. In the cattle market normally there is no shed to protect them from heat, cold and rain. They offered insufficient feed, water and rest. Moreover, they are taken to a water trough once or twice in a day, which may not be sufficient because of high ambient temperature of Bangladesh. Dark coat color animals suffer much more from the heat than others color. (Alam *et al.*, 2010). The animals don't get proper handling and care in the cattle market. Disease like heat stress is frequently found in the animals but they are not treated properly. Sometimes the sick animal has to be slaughter immediately before death in the market. They experienced much more rough behavior from the buyer than the seller. Before sacrifice they don't get proper rest and any kind of feed and water. The market ground is slippery and muddy to move. During the time of slaughter, animals are handled roughly and watch other animals being killed. Animals are kept lying down several times on the floor by tying their legs. Handling and approaching is very much cruel. The animals are frequently injured during the time of

slaughter in their skin, muscles and bone. All these conditions are against to animal rights. To my knowledge, however, very few literatures are available regarding animal welfare in Bangladesh. Therefore, the present study was undertaken for assessment of animal welfare in selected cattle market at Rangpur city during Eid-ul-Azha.

## **OBJECTIVES:**

1. To assess the welfare of transported cattle in terms of providing different kinds of basic needs for the comfort and altitude of animal health at Lalbag Hat, Hajir Hat and Burir Hat cattle market in Rangpur city of Bangladesh.
2. Monitoring the overall management and animal welfare of kurbanir hats.
3. To treat the immediate affected animals.

## Chapter 2

### REVIEW OF LITERATURE

#### **Heat stress**

Alam *et al.* (2010) reported that in the cattle mean skin temperature exposed to the sun, skin temperature not exposed to the sun, rectal temperature and respiratory rate were 38.9°C, 36.9°C, 38.8°C and 42.7 bpm, and for goat they were 41.8°C, 39.1°C, 40.5°C and 95.8bpm, respectively. The differences for each measure between two species were significant. Rectal temperature and respiratory rate were positively correlated both in cattle and goat. Cattle had signed higher frequency of heat stress signs than goat. Higher percentages of open mouth panting, drooling of saliva, tongue protrusion and neck extensions (29, 56, 27 and 27%, respectively) were recorded in cattle than goat. During the hot season some cattle were not able to maintain normal rectal temperatures and respiratory rates and some animals showed heat stress signs such as panting, drooling and neck extension. This demonstrates that the high heat loads were noticeably uncomfortable for the cattle.

#### **Dehydration and metabolic depletion**

Rahman *et al.* (2005) reported that in Asia and the Far East, livestock undergoes major suffering due to malnutrition, overloading, and ill-treatment. Transport and handling methods are primitive and crude. Slaughter animals are made to walk long distances or transported in overcrowded trucks and trains. At the slaughter itself animals are handled roughly and animals awaiting their turn watch other animals being killed.

Manteca (1998) stated that concern for animal welfare is a major consideration in meat production and is based upon the belief that animals can suffer.

Grandin (1997) discussed to determine the amount of stress on farm animals during routine handling and transport often have highly variable results and are difficult to interpret from an animal welfare standpoint.

Minka and Ayo (2010) stated that the stress factors acting on animals during road transportation are numerous and the responses of the animal to them are complex, non-specific and often detrimental to their health and productivity.

Swanson and Morrow-Tesch (2001) stated that transport of cattle can result in immune suppression, which can lead to increased susceptibility to disease and might result in increased pathogen shedding.

Alam *et al.* (2010) reported that in all the cattle, total plasma protein concentration, serum NEFA concentration and serum CK activity were higher than the normal range and these values were higher than normal in over 84% of the goat. Seventy-two percent of all the animals were hypernatremia. About 65% of the goat and 86% of the cattle were hypoglycemic. There were no differences in total plasma protein and serum sodium between cattle and goat. It was evident that this long distance export trade was associated with dehydration, lipolysis and muscle injury or activation.

## Chapter III

### MATERIALS AND METHODS

#### Selection of the study site

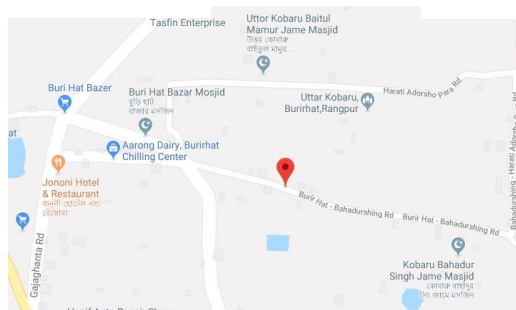
This study was undertaken firstly in the Lalbag cattle market which is managed by the DLS (District Livestock Service) of Rangpur Sadar, Rangpur. This is the second largest livestock market in Rangpur, where cattle and goat from different regions of Bangladesh and imports from India are presented by local traders for sale to sacrifice for qurbani in Rangpur. Secondly, I went to the Hajirhat cattle market and at last I went to the Burirhat cattle market. These two cattle market based on native cattle and goat rearing by rural people. In this study, these three places (Figure 1) were selected for reflection of animal welfare in the Rangpur city corporation.



(a) Lalbag Hat cattle market



(b) Hajir Hat cattle market



(c) Burir Hat cattle market

Figure 1: The selected cattle markets of Rangpur city

**Duration of the study**

This study was continued from 16 August to 21 August, 2018.

**Study animals**

The animal which were imported from different regions of Bangladesh for Eid-ul-Azha in cattle markets was considered in this study. A total number of 60 cattle and 30 goats were selected randomly for the study.

**Data collection**

A structured questionnaire (APPENDIX-1 and APPENDIX-2) was designed and used for the study of the transport by vehicle, water supply after transport, roofing for protecting from sun light, injured during and after transport, consulting with doctor for monitoring the animal welfare.

**Method of data collection**

The data were collected through direct interviewing method of animal owners and workers.

**Physical examination**

A complete physical examination was performed. Taking rectal temperature by thermometer, heart rate and respiration rate by auscultation, Pulse rate from coccygeal artery, dehydration level check from optic mucus membrane, the posture and gait and also taking the feeding history.

## Chapter IV

### RESULT and DISCUSSION

#### Animal transport by vehicle

From the table-1 it is clearly indicated that the percentage of livestock transport by vehicle were always higher in goat than cattle at different cattle markets. The percentage of livestock transport by vehicle were 65.33%, 61.76%, 63.25% for cattle and 72.43%, 77.37%, 75.83% for goats at Lalbag Hat, Hajir Hat and Burir Hat cattle market, respectively (Table-1)

Table 1: Percentage of livestock transport by vehicle at different cattle markets.

Types of Animal	Number of animal	Lalbag Hat cattle market	Hajir Hat cattle market	Burir Hat cattle market
Cattle	60	65.33%	61.76%	63.25%
Goat	30	72.43%	77.37%	75.83%

In the selected markets from the result it is cleared that majority of animal transported by vehicle (Figure-2) and that was not proper way for the animal welfare. The seller did not know the importance of comfort transport facility for the animals.

Before every Eid-ul-Azha, millions of cattle are transported from all corners of Bangladesh. Around ten thousand cattle were brought to Rangpur to be sold for sacrifice. The only mode of transportation to carry this huge number of cattle is cargo trucks. Originally designed for carrying goods, these trucks are not at all suitable for transporting livestock. In the open carriage of the truck, all the cattle are placed in such a congested manner that the poor creatures hardly find any space to breathe. When they try to move around, the transport workers whip them brutally to keep them in line and to keep the vehicle stable.



In developed countries, livestock carriers are specially designed with fans and fitted with fodder cases. We don't have those vehicles in Bangladesh. The livestock authority advise the farmers to maintain 28 square feet of space for each of their full-grown cows. In Bangladesh's reality, it is not possible to maintain this space in a cattle truck. So the sufferings of these cattle seem to be inevitable at present. A full-grown cow can remain standing for a maximum 3-4 hours. If it takes longer, it will certainly affect its health. Another transport way was walking through the road (Figure-3 and Figure-4)

### **Water and feed supply after transport:**

From the table-2 it is clearly indicated that the percentage of water and feed supply after transport were always higher in cattle than goats at different cattle markets. The percentage of water and feed supply after transport were 33.33%, 32.47%, 34.56% for cattle and 30.43%, 28.20%, 27.55% for goat at Lalbag Hat, Hajir Hat and Burir Hat cattle market, respectively (Table-2)

Table 2: Percentage of water and feed supply after transport

Types of Animal	Number of animal	Lalbag Hat cattle market	Hajir Hat cattle market	Burir Hat cattle market
Cattle	60	33.33%	32.47%	34.56%
Goat	30	30.43%	28.20%	27.55%

From the table it is clearly noted that providing water and feed supply was unsatisfactory both cattle and goats. Many times the owner did not find any water for their animal and the market authority did not understand the necessity of drinking water for the animals. Water is the main constituent of the animal's body, constituting 50 to 80 percent of the live weight, depending on age and degree of fatness. An animal can lose almost all of its fat and about 50 per cent of its body protein and survive. However, the loss of 10 per cent of its body water can be fatal. Therefore, a successful livestock enterprise requires a good

water supply. After reaching the cattle market, these animals do not get any better management. The environment is dirty and unhygienic, and food and water are scarce. The cattle market is full of thick mud and the pens are so dirty that people have to buy separate dishes to feed their animals. Water supply is not at all adequate. However, many cattle dealers are feeding their cattle in those dirty pens increasing the risk of infection. Sometimes cattle owner do not aware the importance of their animal feeding. After transportation many farmers do not provide water to their animal. So they suffer from trusty. There change a dramatic metabolic depletion at the cause of off feeding.

### **Roofing for protecting from sun light**

From the table-3 it is clearly indicated that the percentage of roofing for protecting from sun light were always higher in cattle than goat at different cattle markets. The percentage of roofing for protecting from sun light were 40%, 38.86%, 43.68% for cattle and 40%, 38.86% ,43.68% for goats at Lalbag Hat, Hajir Hat and Burir Hat cattle market, respectively (Table-3)

Table 3: Percentage of Roofing for protecting from sun light at different cattle markets.

Types of Animal	Number of animal	Lalbag Hat cattle market	Hajir Hat cattle market	Burir Hat cattle market
Cattle	60	40%	38.86%	43.68%
Goat	30	40%	38.86%	43.68%

In the selected market study result prove that the facility of roofing for protecting sunlight was below 50%. A huge number of animal was exhibited under the open sky (Figure-5). The selected markets was temporary market basically for Eid-UI-Azha. So it was very difficult to provide roofing facilities so ultimately the animals had to be suffered.

As the cattle markets are so much crowded place, the animal stay there with huge stress. There is a narrow space for standing the animal. Basically the qurbany cattle market is a

temporary market which is situated in an open field. The market owner do not provide enough facilities for the welfare of animal. Very few animal get the opportunities to stand under roof shade. Sometimes the cattle owner have to manage the roof facilities for protecting their animal from sunlight (Figure-6). But these were not enough for the animal. So animals have to stand for long time under the sunlight. Sometimes few animal get heat stress.

### **Injured during or after transport**

From the table-4 it is clearly indicated that the percentage of injured during or after transport were always higher in cattle than goat at different cattle markets. The percentage of injured during or after transport were 23.33%, 22.63%, 20% for cattle and 10.20%, 09%, 08.95% for goats at Lalbag Hat, Hajir Hat and Burir Hat cattle market, respectively (Table-4)

Table 4: Percentage of injured during /after transport at different cattle markets.

Types of Animal	Number of animal	Lalbag Hat cattle market	Hajir Hat cattle market	Burir Hat cattle market
Cattle	60	23.33%	22.63%	20%
Goat	30	10.20%	09%	08.95%

In the study area, the animal got huge stress during and after transportation. Many animal suffer respiratory and metabolic disorder. From this study it is proved that about one-fourth of the animals got injured during transport and loading and unloading the animals from the vehicals.

Among the selected animals different type of injuries in body area are observed carefully such as abrasion, laceration, bleeding, swelling, penetration and scarification. And in tail area kinked tail and detailed condition are observed. The possible cause of an injury was

recorded either as the stock handler, yoke rubbing, vehicle friction, sharp objects, goad use, and rope rubbing or indeterminable. This list of possible causes was developed and evaluated by observing the animals, asking questions and discussing animals with the traders and the animal handlers, reviewing the literature and taking into account the experience of the researchers in observing the shape and depth of the injuries. The overcrowded people also create problems to the animal's normal posture and gait and sometimes the animal might be afraid to see this crowd (Figure-7)

### Consulting with doctor

From the table-5 it is clearly indicated that the percentage of consulting with doctors were always higher in goat than cattle at different cattle markets. The percentage of consulting with doctor were 26%, 25%, 24% for cattle and 32%, 33%, 31% for goat at Lalbag Hat, Hajir Hat and Burir Hat cattle market, respectively (Table-5)

Table 5: Percentage of consulting with doctor at different cattle markets.

Types of Animal	Number of animal	Lalbag Hat cattle market	Hajir Hat cattle market	Burir Hat cattle market
Cattle	60	26%	25%	24%
Goat	30	32%	33%	31%

Animal owners are not willing to consult with doctor for the good health of their animal. Sometimes they contact with quack. When the animal was about to die, then they called the doctor. But it was too late and the doctor could not do anything for the patient. For example heat stress is common in the market (Figure-8). The primary treatment for the patient was to provide cold water. About thirty minutes later the patient stood up and seemed to be normal. Even they did not notice the veterinary medical team which gave service in the market area (Figure-9)



Figure 2: Cattle transport on Vehicle



Figure 3: Cattle Transport on Foot



Figure 4: Goat transport on foot



Figure 5: Cattle standing without any roof



Figure 6: Provide a roof for protecting the sunlight



Figure 7: Over crowded people at the market



Figure 8: Heat Stress affected Cattle



Figure 9: Monitoring the market with medical team as a doctor

## CONCLUSION

It is suggested that vehicles which used for transportation should be fitted during construction with standard or appropriate stocking density. Although enforcement of law is very difficult in Bangladesh, so that animal must be provided minimum stress during loading, unloading at slaughter house. By providing proper training and raising awareness among people and develop an acceptable moral attitude, who directly or indirectly related this business. The following suggestions could be provided welfare of this animal and reduce their suffering.

- Governments should take initiatives to establish Animal Welfare Boards and enact laws for the prevention of cruelty to animals.
- Legislation to safeguard the welfare of animals should be introduced and old legislation amended.
- Transport vehicles should be well designed and enlarged.
- Appropriate loading, unloading and handling facilities should be introduced to reduce damage and sufferings.
- Feeding and watering arrangements during transport should be made compulsory, and surveillance arranged to ensure compliance.
- Transporting animals for long distances on foot to abattoirs should be banned by law.
- Proper planning and supervision need to reduce the injuries and sufferings.

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# Biography

Growing in a middle class family I found my childhood as a most delectable part of my life. I was lucky enough that this congenial family environment helped me a lot to broad my mind and to be a social, naive and rational human being. I want to create this world a better place where the human and animal can live happily without any strife. This thought helps me to be more affectionate to the animal. I am fortunate to make my journey of life through CVASU as I am going to be a veterinarian in the future. Having had the opportunity to work in different veterinary institutions in Bangladesh and India I have become more ambitious and confident about my profession. I will be very glad if I can create some impacts in the development of livestock and poultry industry of Bangladesh. I have interests in infectious disease, dairy science and poultry science. I like to read autobiography and listen to music in my leisure time. The only thing I care in this world that is my family. The stem of my dream and aim spreads out around it. I want my journey as a veterinarian will be more eventful.

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### Education

**DVM:** CVASU (course running)  
**HSC:** Rangpur Govt. College, Rangpur.  
(2011)  
**SSC:** Collectorate School & College,  
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### Achievements

**Primary Scholarship:** Rangpur region  
(Talent Pool)  
**Clinical Training:** TANUVAS & Military Farm  
Jessore (2018)

### Memberships

BADHAN, CVASU Unit (a voluntary blood donor organization).  
Association of Avian Veterinarian in Bangladesh.

**APPENDIX-1****Questionnaire**

Name of the Market:

Date:

Cattle No.	Transport by vehicle	Transport by Walking	Water supply after Transport	Roofing for protecting from sun light	Injured during or after transport	Consulting with doctor
Cattle 1						
Cattle 2						
Cattle 3						
Cattle 4						
Cattle 5						
Cattle 6						
Cattle 7						
Cattle 8						
Cattle 9						
Cattle 10						
Cattle 11						
Cattle 12						
Cattle 13						
Cattle 14						
Cattle 15						
Cattle 16						
Cattle 17						
Cattle 18						
Cattle 19						
Cattle 20						

**APPENDIX-2**

## Questionnaire

Name of the Market:

Date:

Goat No.	Transport by vehicle	Transport by Walking	Water supply after Transport	Roofing for protecting from sun light	Injured during or after transport	Consulting with doctor
Goat 1						
Goat 2						
Goat 3						
Goat 4						
Goat 5						
Goat 6						
Goat 7						
Goat 8						
Goat 9						
Goat 10						