CHAPTER I

INTRODUCTION

Bangladesh is a low-lying densely populated country of more than 160 million people, 75% of who live in rural areas; rural poverty rate is 63%, of which 36% are extreme poor (Hodson R. et. al., 2006). Livestock are an integral component of agriculture in the study area and make multifaceted contributions to the growth and development in the agricultural sectors. Small scale cattle fattening is an important avenue for income generation for mainly subsistence farmers in Chittagong District. Cattle farming are an important subsidiary to agriculture and playing a significant role in rural economy in Bangladesh (Hashem et. al., 1999). The livestock resources of Bangladesh are mainly based on cattle, goat, sheep, buffalo, and poultry. Although cattle concentration per unit area is high, their productivity is low mainly due to inadequate feed supply and low genetic potentiality (Pandit et. al., 2005). As a result, their growth performance is very poor. During the holy Eid-UlAzha festival Muslims always go for Kurbani (sacrificing slaughtered livestock). Animals including cows, goats, camels and sheep are slaughtered each year to mark the festival. The meat is then distributed, with one-third meat by the immediate family and relatives, one-third given away to friends, and one-third donated to the poor. Bangladeshi Muslims celebrate the Eid in every year. About 1.8 million cattle are sacrificed at this time each year (Sujan et. al., 2011). Cattle fattening for beef production have become an important business of the small farmers in Bangladesh. In some areas of Bangladesh, a small scale commercial cattle fattening program has already been started.

The success or failure of an animal farm business is generally measured as profit that is one of the major objectives in any farm business. This fact makes the cattle farmers need to raise their production. A commercial business, of course, requires development in their way of thinking from production for family needs and local marketing to profit orientation for farmer's household (Sere et. al., 1998; MacLeod et. al., 2006; Sarma, 2011; Bart et. al., 2009). The orientation is already clear, the implementation of various

economic principles to gain big profit. It means that the farmers should direct the farm activities to business-oriented, the farm-based business, such as beef cattle farm business (Emery et. al., 1962; Obese et. al., 2008; Roessali et. al., 2011; Salemand Khemiri, 2008; Maina et. al., 2012). The problem is the farming group has not known the financially profitable number of cattle reared and what is the reasonable minimum number to rear. This information will be beneficial for the farmers, particularly of it the financial support owned to run their cattle farming business. In this regard, a cattle farmer needs to know one of the analytical tools called profit analysis. The investment plan is pursued from the "cash flow", the ratio of the total sales and the total cost. If the net benefit is positive, the investment plan could be continued, and if the net benefit is negative, the investment plan should be stopped. General profit analysis used "Benefit Cost Ratio (BCR)", (Gittinger, 1986). Profit analysis in this study aimed to know the feasibility of beef cattle farming business in relation with the cattle business, to know how many cattle was the minimum number reared by a farmer for beef cattle in the study site, and to avoid the investment continuity in unprofitable cattle business. The profit analysis could be used as a guide to financial management complemented with important information needed by other parties, such as banks or business partnership.

The main objective of current study was to obtain the market scenario of cattle marketing during Eid-Ul-Azha in comparison of the profits gained by the local cattle farmers to the beparies. This study is also crucial for the cattle farmers in the study site have not known yet how many cattle could be reared as a minimum number to reach the break-even point (BEP) and whether the cattle business they are running is financially feasible.

CHAPTER II

METARIALS AND METHODS

2.1. Study site

This study was conducted at SagorikaKurbanir Hat, Dabolmuring in Chittagong District, Bangladesh. Site determination was selected by "purposive sampling" under consideration that SagorikaKurbanir Hat is the largest cattle market for Eid-Ul-Azha in Chittagong District.

2.2. Respondents

Respondents were 5 beef cattle farmers of Chittagong region who regularly run their beef fattening program including Nahar Agro Limited and 5 beparies from different district of Bangladesh.The respondents selected were come to sell their cattle at the selected study location.

2.3. Data Collection

Data collected were primary data. The former was obtained using questionnaires by cross-questioning the beef cattle farmers and beparies that covered cattle ownership, address, own/bought/imported, place of bought/imported, body condition score (BCS), duration of rearing/bought, management history, general observation, disease occurrence, economic information including purchase cost, transport cost if bought, housing cost, feeding cost, labour cost, treatment cost, electricity cost, transport and other costs for marketing (tax, permit).

Methodology conducted during the study in flow-charts

1. Preparation of the questionaire
2. Visit to the cattle market
3. Cross-questioning the selected local cattle farmers and beparies
4. Data recording
5. Data anlysis

2.4. Data Analysis

Data were descriptively analyzed to address the characteristics of the beef cattle farmerand bepari respondents and the study site using graphic and percentage. The profit of the beef cattle business was analyzed as follows: Income Statement (Cost-Benefit): Basically, cost-benefit calculation reflects the cash inflow and out flow. Therefore, this component covers gains and costs. Forinstance, thecost-benefit calculation of the cattle farm (as an illustration) is as follows (Myer, 1979; Bowlinetal., 1980):

I. Cash Revenue of Cattle Business, covering the cattle and the dirt sales.

II. Cash Expenditure ("Variable Cost"), covering the purchase of cow, the cattle feed, the medicines, the transportation cost, and the laborwages.

III. Revenue (gross profit=I–II)

IV. Fixed Cost, covering the ownership tax, the cage and equipment depreciation, the loan interest, the insurance, and the salary of the company leader.

V. Net Income (III–IV)

VI. Benefit Cost Ratio (BCR) (III/IV)

PICTURES




Figure : Data collection from the study site

CHAPTER III

RESULTS

3.1.Economic characteristics of cattle fattening farmers in comparison with Beparies

Respondents were selected as 5 in numbers for both in case of beef cattle producers and beparies attended in the Sagorika cattle market, Chittagong. From the respondents the Cattle producers came to market 18 cattle and the beparies brought cattle 74 in numbers. Beparies brought the highest numbers of 25 marketing cattle individually and lowest was 8 in numbers whereby in case of the cattle producers including Nahar Agro Limited; Nahar Agro Limited brought with the highest numbers of 8 cattle and farmer with lowest within this group had brought 2 cattle for marketing. Cattle producers brought 83.33% local breeds and 72.22% cattle more than 2 years of age where Bepari had highest 54.05% of imported cattle from India (Hariana breed) having 100% cattle over 2 years of age. Beef cattle producers had cattle with 100% cattle with BCS >3, 55.56% reared for more than 2 years of age and highest 55.56% cattle were reared using semi-intensive method and in edition the beparies presented cattle 66.22% more than BCS >3, 89.19% reared 7-15 days of age and 100% cattle were raised in intensive method. Diarrhea showed highest 27.78% in case of cattle raised by producers and shipping fever occurred in 27.03% cattle fetched by the beparies.

Table 1: Comparison of features between Beef cattle producers and Beparies cattle marketing

Beef Cattle Producers				**Bepari**			
Numbers of respondents	5 persons			Numbers of respondents(**n)**	5 persons		
Total number of cattle marketed **(n)**	18 cattle			Total number of cattle marketed	74 cattle		
Numbers of cattle individually	2	1		Numbers of cattle	8	1	
	2-5	3			20-22	2	
	>5	1			25	2	
Traits	**Criterion**	**Numbers (n)**	**Percentage**	**Traits**	**Criterion**	**Numbers (n)**	**Percentage**
Breeds of cattle	Cross-breed	3	16.67%	Breeds of cattle	Cross-breed	9	12.16%
	Local	15	83.33%		Local	25	33.78%
	Imported	0			Imported (Hariana)	40	54.05%
Age	1-2 years	5	27.78%	Age	1-2 years	0	
	> 2 years	13	72.22%		> 2 years	74	100%
BCS	3	0		BCS	3	25	33.78%
	>3	18	100%		>3	49	66.22%
Duration of rearing	<(1-2 years)	8	44.44%	Duration of rearing	<(7-15days)	66	89.19%
	>2 Years	10	55.56%		8 months	8	10.81%
Rearing system	Intensive	8	44.44%	Rearing system	Intensive	74	100%
	Semi-intensive	10	55.56%		Semi-intensive	0	
Disease	In-appetite	10	55.56%	Disease	In-	46	62.16%

Occurrence				Occurrence	appetite		
	Diarrhea	5	27.78%		Diarrhoea	0	
	Bloat	2	11.11%		Bloat	8	10.81%
	Common cold	7	38.89%		Common cold	0	
	Shipping fever	0			Shipping fever	20	27.03%

3.2. Economic analysis for the fattening program by Local farm producers

The local cattle producers bought the calf and raised their calf up to fattening until bringing them for marketing, Nahar Agro Limited did not buy calf, and they raised the male calves produced in their dairy farming. The average selling price of the fattened cattle calculated 1, 20,000 tk. The average total variable cost (TVC) was 98,225tk and Total Cost (TC) calculated 98,845 tk. The profit calculated for per cattle was 21,155tk per animal and the BCR calculated 1.21, so the fattening process was profitable.

Table 2: Economic analysis for the fattening process by local farmers at per animal level

Returns			**Costs**		
Line items	**Amount (Tk)**	**Average Amount (Tk)**	**Line items**		**Average Amount (Tk)**
Selling price of fattened beef cattle**(n=18)**	=8×200000+2×30000+5×40000+3×100000	1,20,000	**Variable Costs (VC)**		
			Purchase of cattle before fattening	=3×30000+5×25000	26875
			Feed	=2×100×365×2+5×80×365+8×100×365×2	58400

			Drug/vaccine/Veterinary cost	=150×24+100×12+120×7+100×24	2010
			Labour charges	=1×7000×12	10500
			Transportation during purchase	=2000+1000	600
			Transportation during marketing with comission	=1500+200	340
			Total variable cost (TVC)		**98,725**
			Fixed Cost (Depreciation cost)	=20000×0.02+40000×0.02	120
			Total Fixed Cost (TFC)		**120**
Total returns (TR)		**=1,20,000**	**Total Cost (TC) =TVC+TFC**		**=98,845**
Net Margin, NM = TR-TC = 21,155					
Benefit Cost Ratio, BCR = TR/TC = 1.21					

Note:

*Selling price of fattened beef cattle: Number of cattle *Selling price (TK)

*Purchase of cattle before fattening: Numbers of cattle *Purchase price (TK)

*Feed: Numbers of cattle*Feed Price (Tk)*Total days fed

*Drug/vaccine/Veterinary cost: Total drug cost (Tk)*Total days reared

*Labour charges: Only Nahar Agro managed the fattening process using labours.

*Transportation during purchase: Only for beparies, Nahar Agro fattened their own calf.

*Fattening by Nahar Agro Limited was included in the Local Farmers group as they fattened their own cattle.

Fixed Cost (Depreciation cost): Housing cost.02. Its supposed that 2% cost of housing cost is depreciation cost.

3.2. Economic analysis for the fattening program by Beparies

The beparies purchased the adult cattle and raised their cattle until bringing them for marketing for 7-15 days. The average selling price of the cattle calculated 95,270.27 tk. The average total variable cost (TVC) was 76266.22 tk and Total Cost (TC) calculated 76716.22 tk. The profit calculated for per cattle was 18,554.05 tk per cattle and the BCR calculated 1.24, so the cattle marketing was profitable.

Table 3: Economic analysis for the fattening process by Beparies at per animal level

Returns			**Costs**		
Line items	**Amount (Tk)**	**Average Amount (Tk)**	**Line items**		**Average Amount (Tk)**
Selling price of fattened beef cattle (n=74)	=10×100000+15×90000+8×200000+20×50000+21×100000	95,270.27	**Variable Costs (VC)**		
			Purchase of cattle before fattening	=20×30000+21×70000+8×110000+10×87000+15×80000	67,837.84
			Feed	=25×120×10+20×110×15+21×150×10+7×60×240	2639.19
			Drug/vaccine/Veterinary cost	=1000+6400+500	106.76
			Labour charges	=6000+24000+40000+50000	1621.62
			Transportation during purchase	=50000+50000+35000+63000	2675.68
			Transportation during marketing	=30000+30000+7500+35000	1385.14

			with comission		
			Total variable cost (TVC)		**76,266.22**
			Fixed Cost (Depreciation cost)	=180000×0.02	450
			Total Fixed Cost (TFC)		**450**
Total returns (TR)		**95,270.27**	**Total Cost (TC) =TVC+TFC**		**76,716.22**
Net Margin, NM = TR-TC = 18554.05					
Benefit Cost Ratio, BCR = TR/TC = 1.24					

Note:

*Selling price of fattened beef cattle: Number of cattle *Selling price (TK)

*Purchase of cattle before fattening: Numbers of cattle *Purchase price (TK)

*Feed: Numbers of cattle*Feed Price (Tk)*Total days fed

*Drug/vaccine/Veterinary cost: Total drug cost (Tk)*Total days reared

Fixed Cost (Depreciation cost): Housing cost.02. It's supposed that 2% cost of housing cost is depreciation cost.

3.3. Comparison of economic analysis between Cattle marketing of local beef cattle producers and beparies

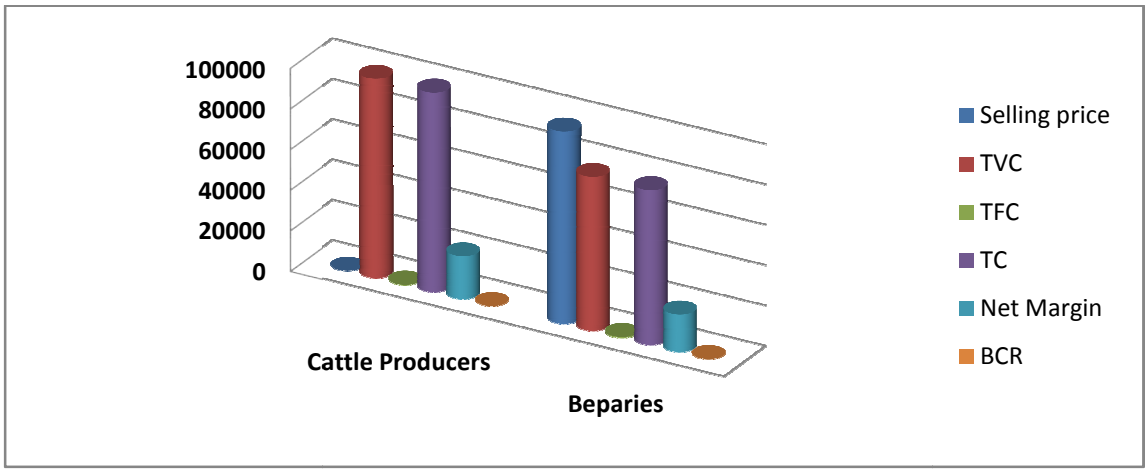

Figure: 1: Graph of economic analysis comparison

Traits	Selling price	TVC	TFC	TC	Net Margin	BCR
Cattle Producers	1,20,000	98,725	120	98,845	21,155	1.21
Beparies	95,270.27	76,266.22	450	76,716.22	18554.05	1.24

CHAPTER IV

DISCUSSION

Results from the present study shows a marked difference in general features during marketing of cattle between cattle producers and beparies in respect of breeds of cattle reared, age of purchased cattle before fattening, duration of rearing and disease occurrences. In addition, the economic analysis showed differences in selling price of cattle, total variable costs (TVC), Total cost (TC), Net margin (NM) and Benefit cost ratio (BCR).

A cattle purchasing cost was 26,875 tkin cattle reared by the cattle producers and that was higher in case of cattle purchased by the beparies on an average 67,837.84 tk. According to the study of P. K. Sarma and J. U. Ahmed (2011) reveals that the average cost of cattle purchasing was about BDT 19,138.76 was much lower than the present study.

The local producers carried average total variable cost (TVC) 98,225tk for their cattle marketing and the beparies credited 76266.22 tk for per cattle differs with the average variable cost of 25,500.10tk studied by P. K. Sarma*et al.,* (2011). Results showed that cattle producers carried a total fixed cost (TFC) of 120 tk and cost for cattle beparies was 450 tk has some similarity with the study of P. K. Sarma and J. U. Ahmed (2011) where total fixed cost was showed BDT 396.67. Total Cost (TC) calculated 98,845 tk in case of local producers that is higher than the total cost calculated by the beparies 76716.22 tk. Total cost was higher in cattle producers as they reared cattle from an earlier age and fed them up to marketing age. Studies by P. K. Sarma and J. U. Ahmed (2011) suggested that the total average cost was 16,316 tk that shows a larger difference in monetary value. These large variations were happened due to the present increase in purchase costs, increased feed costs, transport and accommodation costs and overall increased demand of cattle for fattening program.

In the present study calculated values for BCR was 1.21 in case of cattle marketed by cattle producers where BCR value was somewhat higher in case of beparies was 1.24.

The little rise in BCR values in case of beparies is possibly due to the higher investment and large numbers of cattle were brought for marketing. The calculated values of present studies also show similarity with the studies of Selvie D. Anis*et al.,* 2015. That study presents the BCR of cattle marketing is 1.26 which is close to the present study.

The average selling price of the fattened cattle calculated 1, 20,000 tk in case of local beef cattle producers and that varies to 95,270.27 tk in case of marketing by the beparies. This data differs with the studies byP. K. Sarma and J. U. Ahmed (2011) which recorded the average cattle selling price was 19,928 tk which shows a great difference with the present study. The profit was 21,155tk per animal gained by local producers whereas the profit calculated for per cattle for beparies was 18,554.05 tk which is somewhat lower than the local producers. From the findings of this study by P. K. Sarma*et al.,* net profit is BDT 13,350.84 per fattened cattle for the average duration of four months.

The major constraint for the participating households is to continue the cattle fattening borrowing loanwith high interest rate from Banks, NGOs and MFTs, due to shortage of investment fund, farmercannot utilize their opportunities. Govt. and other donor agencies can take initiative to develop beefcattle fattening enterprise in study areas. Suggestions for the fattening program is to develop farmer association in the study areas forparticipatory beef cattle agribusiness through better utilization their land, labor, feed, cattle breeds,calves, technology and disease controlling technique also need to linkage with meat processingindustries. Provide training on beef fattening, seasonal credit support, information on fattening technology andsuitable breed to char dweller for improving beef cattle productivity.

CHAPTER-V

CONCLUSION

This study concluded that rearing beef cattle for fattening program was highly profitable so that it was feasible to do. The net margin and benefit cost ratio is acceptable for running profitable business and somewhat much higher in case of beparies than the local farmers. Therefore, based on the financial analysis, it was indicating that the beef cattle farmer should raise for shorter period in order to gain maximum profit out of this kind of farming.

CHAPTER-VI

LIMITATION

Main constrains faced during conduction of the study was the complete information gathering from a large number of farmers and beparies. If the study can be run for a longer period of time with accumulation complete information of the cattle during purchase to marketing age, then the concluded theme will reflect the actual market scenario.

CHAPTER-VII

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APPENDIX

Questionnaire for A Production Report on Beef Cattle Market Scenario of Sagorika Cattle Market, Chittagong During Eid-Ul-Azha

Serial no.: …… **Date:** …….

1. Name of the owner: …… Contact No.: …….

Occupation: ……..

Address:

Upazilla: …….. **District:** ……

2. Recording of animal: (Market name)……...

3. Animal Data:

Number of animal brought for sale:

Species: Goat/ Cattle/ Sheep/Other (..……) **Breed:** Local/ Cross/others.....

Animal: Own/ Bought/ Imported **Place of import/Bought:** .....

Breeding history: Natural/ Artificial insemination. **Age**: …….. **Sex:** F / M

Body Condition Score (BCS): 1(Cachectic)/ 2(Poor)/ 3(Fair)/ 4(Good)/ 5 (Over weight/Fat)

4. Animal History:

Duration of rearing/ Duration of bought: ……Years Weakness: Yes/No.

5. Production History:

Feeding History:

Managemental:

Housing type: Intensive/ Semi-intensive/ Free-range **Floor:** Concrete/ Mud-floor

6. General Observations:

Hair Coat: Shiny/ Rough & Stray lesions/ other **Skin:** Normal/ Wound/ Ecto-parasitic / Alopecic/ Dermatitic/ Wrinkled.

General attitude: Alert/ Dull/ Depressed. Posture: Normal/ Defective

Gait: Normal/ Lameness.

7. Disease occurrence during fattening:

a)…….. c) ……..
b)…….. d) …….

8. Economic information:

Parameters	Amount
Purchase cost	
Transport cost	
Housing cost	
Feeding cost(.....per day/animal)	
Labour Cost (If)(.....per month/ man)	
Treatment Cost (.....per month)	
Electricity cost	
Transport and other cost for marketing:	
Total cost:	
Selling price	
Net Profit/Loss:	

…….

Signature

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