COMPARATIVE ECONOMIC PERFORMANCE OF TWO JUTE VARIETIES IN FARIDPUR DISTRICT OF BANGLADESH

A Thesis

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SHER-E-BANGLA AGRICULTURAL UNIVERSITY

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CERTIFICATE

This is to certify that the thesis entitled "**Comparative economic performance of two jute varieties in Faridpur district of Bangladesh"** submitted to the faculty of Agribusiness Management, Sher-e-Bangla Agricultural University, Dhaka in the partial fulfillment of the requirements for the degree of Master of Science (MS) in **Agribusiness and Marketing,** embodies the result of a piece of bona fide research work carried out by **SHARMIN RASHID,** Registration Number: **15-06849** under my supervision and guidance. No part of the thesis has been submitted for any other degree or diploma.

I further certify that any help or source of information received during the course of this investigation has duly been acknowledged.

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DEDICATED TO

MY BELOVED

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ABSTRACT

The jute industry has played an important role in the national economy at different times despite facing several problems. Jute is one of the most versatile natural fibers that has been used in raw materials for packaging, textiles, non- textile, construction and agricultural sectors. This study will provide core information on the profitability of two jute varieties (Robi-1 & JRO 524) in Faridpur district. Someeconomic investigations have conducted on the two jute varieties to identify which variety is more profitable. In total, 100 jute farmers and 60 jute traders were selected purposively for the study. Two villages from bhangga Upazila were purposivelyselected for this study. Primary data were collected using a face-to-face interviewing method. A structured interview schedule with both closed and open form questions wasprepared. Primary data were collected during February to March 2022 through field survey. Descriptive statistics were usedto analyze the data. Major market actors of jute were farmers, Faria, Bepari, Aratdar, Kutcha baler and Pucca baler in the study area. The result of the study showed that, total cost of producing Robi-1 jute production was found Tk. 94791.78/ha and net revenue from Robi-1 was Tk.91373.84/ha. Total cost of producing JRO 524 jute production was found Tk. 96311.05/ha and net revenue from JRO 524was Tk. 207913.13/ha.The average total profit was found tk. 79.79, tk 10.38, tk 33.51, tk 50.26, and tk 63.47for Faria, Bepari , Aratdar, Kutcha baler and Pucca baler respectively. The study identified that producing JRO 524 jute variety is more profitable than Robi-1 jute variety for farmers in Faridpur district. The study found that the major problem of jute production was high interest rate and farmers need capital with low interest rate.

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The Author

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ACRONYMS AND ABBREVIATIONS

BBS	:	Bangladesh Bureau of Statistics
BER	:	Bangladesh Economic Review
BCR	:	Benefit Cost Ratio
BJMA	:	Bangladesh Jute Mills Association
BJMC	:	Bangladesh Jute Mills Corporation
BJRI	:	Bangladesh Jute Research institute
BJSA	:	Bangladesh Jute Spinners Association
EPB	:	Export promotion bureau
et al	:	et alia (and others)
etc.	:	Etcetra, (and others)
eg.	:	Exempli gratia; for example (in English)
FAO	:	Food and Agriculture Organization
Fig.	:	Figure
GDP	:	Gross Domestic Product
Ha	:	hectare
i.e.	:	That is
IOC	:	Interest on Operating Capital
JDPC	:	Jute Diversification Promotion Center
Kg	:	Kilogram
Km^2	:	Square Kilometer
Ln	:	Natural Log
MoP	:	Muriate of Potash
No.	:	Number
Tk.	:	Taka (Bangladeshi Currency)
TSP	:	Triple Super Phosphate
°C	:	Degree Celsius
%	:	Percentage

Chapter I

Introduction

1.1 Background of the study

Jute is a biodegradable, soil-friendly natural fiber and the oldest cash crop which is widely grown in Asia, particularly in Bangladesh, India, China, Indonesia and Thailand. It is known as the golden fiber of Bangladesh. Jute is the second important fiber crop of the world after cotton. The land and climate of Bangladesh is very conducive for jute cultivation. Bangladesh is an agricultural country which has a population of 169.11 million (BER 2022). Agriculture sector has a great importance in the economy of Bangladesh contributing 11.50% to the GDP (BER 2022) and agriculture is the source of employment for the majority of inhabitants of the country. Jute sector has immense contribution to the economy of Bangladesh. The contribution of jute in GDPis 1% and 3% of total export earnings come from jute export. Export promotion Bureau data show that jute and jute goods brought USD 1161 million in the financial year 2021-22 (EPB-2022).Jute sector has been generating employment to a large segment of total labor force directly or indirectly. Jute and jute manufacturing industry is substantially labor incentive. There are 4 million farmers who cultivate jute in Bangladesh. According to BEP (2022), average land area of jute production is 12.35 lac acre and annual average production is 1 Million Ton. Number of Jute mills are 94,165 and 32 under BJSA, BJMA and BJMC respectively. Total 1.56 lac labor force are involved in jute cultivation and jute processing activities such as storing, transportation, industrialization etc. According to BBS(2022), total land under jute production is 7,27,382 hectare and production rate is 11.593 per hectare. According to BBS(2022), total yield of jute is 84,32,359 bales. Accordingto DAE 87,475 hectares of land were brought under jute cultivation in Faridpur district and total production is 2,50,000 metric tonnes of fiber. At present, jute is not only produced for traditional uses(i.e. packaging materials). Besides, it has become the raw material for the production of othervalue-added products such as, paper, pulp, plastic molded products, home textiles, shoes, fancy bags, floor mat, curtains, lamp shade, wrapping papers, clothes etc. Jute sticks are used as fuel in rural areas. It has also industrial use to get modified products. Jute is an agricultural product as wellas industrial product at the same time. The finest jute fiber can be used for making artificial silk. Sonali bags are now being produced from jute which is one of the environment friendly products from jute. Sonali bag has created huge prospect for the country's jute sector. Jute is such a produce

nothing of which is wasted. Proper attention to this sector may result huge return without incurring any loss. “Jute Export Policy 2018-21” has already been declared by the government. (The Daily Star-2019). At the jute product fair 2022, National jute award was handed over by honorable Prime Minister among 11 individuals and organizations for their contribution to jute sector development.

1.2 Properties of jute

Jute is a natural fiber popularly known as the golden fiber. It is an annual herbaceous plant which belongs to the genus Corchorus and has been classified in the family Tiliaceae. A plain alluvial soil and standing water is required for jute cultivation. Jute is along, soft and shiny vegetable fiber which is one of the cheapest and strongest of all natural fibers. It is the cheapest vegetable fiber procured from the bast or skin of the plant's stem and the second most important vegetable fiber after cotton in terms of usage, availability and global consumption. It is a natural coarse fiber, made from the stems of a tropical plant. In terms of usage, it has high tensile strength, low extensibility, and ensures better breath ability of fabrics. Jute fiber is 100% recyclable and thereby it's usage are environment friendly. Jute fiber is composed of cellulose and lignin. That’s why it is a lingo-cellulosic fiber that is partially textile fiber and partially wood. Jute has the ability to be blended with wood and other fiber, both natural and synthetic. The appearance of jute can be improved by treating with caustic soda, crimp and pliability. Jute fibers are off white, brown or golden in color and have a length of 3-12 feet. Jute crop add sufficient amount of organic matter to the soil through leaf shedding and root decaying. Deep root system can break the hard pan of soil. Thus it improves the chemical, physical and biological condition of the soil. It is one of the most versatile natural fibers that has been used in raw materials for packaging, textiles, non-textile, construction, and agricultural sectors. Jute is a strong natural fiber. It's quality is determined by its luster. The more it shines, the better the quality.

1.3 Present status of jute production in Bangladesh

Global awareness about environment friendly jute fiber as a natural fiber is increasing to protect the environment. The government is enacted ‘Compulsory use of jute fiber packaging act 2010’ and ‘Rules for Compulsory use of jute fiber packaging act 2013’. According to this rule, jute fiber packaging is compulsory for 17 items. As a result demand of jute fiber is increasing in home and abroad. Bangladesh export 42% jute products worldwide. The market price of raw jute in the recent years might play key role in growing interest of farmers to increase area and production. Year wise area, production and yield of jute are given in table 1.1

Table 1.1 Year wise area, production and yield of jute in Bangladesh

Year	Area (in hectare)	Production (bales)	Yield/hectare (bales)
2015-16	6,77,678.0	75,58,934.0	11.154
2016-17	7,37,770.0	82,46,797.0	11.178
2017-18	7,58,218.0	88,94,683.0	11.731
2018-19	7,49,658.0	85,76,087.0	11.440
2019-20	6,79,493.0	80,45,197.0	11.840
2020-21	6,82,170.0	77,25,083.0	11.324
2021-22	7,27,382.0	84,32,395.0	11.593

Source**:** BBS 2022

1.4 Major jute growing areas in Bangladesh

In Bangladesh, raw jute yield is the highest in Dhaka division, which was 27,16,151 bale in 2021-22. The highest jute producing district in the year 2016-17 was Faridpur, yielding 9,26,849 bales

Table 1.2 Major jute growing areas of Bangladesh

Districts	Production (bale)					
	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Faridpur	7,66,035	9,26,849	8,31,866	8,91,938	7,38,580	7,89,018
Rajbari	5,05,770	5,64,294	5,14,174	4,92,411	4,84,135	5,07,690
Pabna	4,75,624	5,69,052	5,55,562	5,44,541	5,12,618	5,40,776
Jamalpur	4,70,781	4,69,047	4,41,486	2,25,439	2,38,677	2,43,150
Kushtia	4,68,412	5,16,236	5,63,754	5,27,190	4,94,033	5,57,820
Magura	4,09,077	4,80,201	3,86,609	3,79,634	3,51,873	5,13,337
Jashore	3,45,204	3,66,082	3,52,432	2,76,762	3,02,993	3,08,602
Madaripur	3,33,909	3,09,884	3,21,127	3,27,901	3,29,795	3,79,722
Meherpur	3,12,260	3,35,465	3,26,889	2,97,566	3,14,009	3,12,924
Chuadanga	3,09,166	2,91,882	2,98,772	2,62,073	2,46,872	2,84,133

Source: BBS ,2022

of jute. Highest area coverage of jute cultivation was also by Faridpur district which was 86196 hectares of land. Dhaka division is at the 1st position in Bangladesh. The total production was about 84,32,395 bales. from an area of 7,27382 hectare in 2021-22 (BBS,2022). Ten major jute growing districts of Bangladesh are listed in the Table 1.2

1.5 Economic importance of jute in Bangladesh

Jute is called the golden fiber of Bangladesh. It was one of the top exported products of Bangladesh after independence. Bangladesh is the second largest jute producing country in the world. According to the agriculture information service there are about 40 lac farmers who cultivate jute. Every year this country produces 80 lac bales of jute from 7or 8 lac hectares of land. The contribution of jute in the GDP is 1% and 3% of total export earnings come from jute export. In 2020-21 the total target of earning by exporting jute products was $ 1.6 billion (BEP,2021). In the first three months, it earned 30 cores 75 lac and 50 thousand dollars, which was 39.26 percent higher than in previous years at that time. There are many organizations, agencies and associations which have been working for the promotion of jute and jute goods production and trade in the country and in abroad. They are: Department of Jute (DJ), Department of Agricultural Extension (DAE), Bangladesh Jute Mills Corporation (BJMC), Bangladesh Jute Mills Association (BJMA), Bangladesh Jute Spinners Association (BJSA), Bangladesh Agricultural Development Corporation (BADC), Bangladesh Jute Goods Association (BJGA), Bangladesh Jute Research Institute(BJRI), Jute Diversified Promotion Centre (JDPC), International Jute Study Group (IJSG) etc. Export earnings from jute sector for last few years is shown in the Table 1.3

Table: 1.3 Export of raw jute from Bangladesh

Period	Raw jute export earnings (Million US$)	Total export earnings (Million US$)
2017-18	155.68	36668.17
2018-19	112.48	40535.04
2019-20	129.89	33674.09
2020-21	138.15	38758.31
2021-22	216.18	52082.66

Source **:** BEP, 2022

Jute and jute goods is the 4th largest export item of Bangladesh. The export earning of the sector in the FY 2021-22 was 1127.63 million US$ which showed 2.91% decrease compared to the 1161.48 million US$ in the previous FY 2020-21. In the total export earning of FY 2021-22, jute & jute goods sector contributed 2.17%. The leading export market of jute & jute goods are Turkey, Iran, Belgium, Syria and Egypt (EPB, 2021).

1.6 World production of jute and allied fibers

Main fiber crop of Bangladesh is jute. Many countries produce jute ,kenaf and other allied fibers as their fiber crop. Status of jute, kenaf and allied fiber production of some major fiber producing countries of the world is showed in the Table 1.4

Table 1.4 Major jute and allied fiber producing countries in the world

Countries	Quantity (lakh bales)				
	2016-17	2017-18	2018-19	2019-20	2020-21
India	92.00	76.00	72.00	68.00	60.00
Bangladesh	86.06	91.99	85.76	80.45	78.22
China	2.94	2.78	2.66	3.01	3.30
Nepal	0.65	0.65	0.62	0.59	0.56

Source: FAO ,2021

1.7 Justification of the study

Jute is the essential cash crop of Bangladesh. The contribution of jute sector to the economy of Bangladesh is tremendous. Jute sector is imperative for the poor rural community of the country and create direct employment for huge number of people. Jute cultivation is generally low cost and low technology intensive. Therefore poor communities have access to jute cultivation which provides them a necessary source of food and cash security. Jute sector has an excellent potential to earn a lots of foreign currencies for Bangladesh. On march 6th, 2022 the country observed National Jute Day and celebrated this day with the slogan "Sonali Asher Sonar Desh, Poribesh Bandhab Bangladesh". Although this industry has lost much of its popularity off late, it is still the second export earning sector next to RMG. It has an average contribution of 3% in our export earnings and 1% in GDP. The demand for high quality jute goods across the world is huge and the world environmentalists are reverberant for environmental sustainability, jute can be a potential game- changer for our economy, if the jute industry can improve to its potential. The jute sector will get its glorious days back, if right

focus and government support is given to this industry. The aim of the study is to focus on profitability, input use efficiency and socio economic profile of the farmers. So, comprehensive plan is needed to make the crop popular and sustainable. No recent study of this type was conducted in the study area, for this a good number of researchers are needed in this area. This study may bring socio- economic benefit to policy makers, individual farmer, jute traders and jute manufacturers. Besides it may be used as a basis for further study on jute.

1.8 Objectives of the study

The overall objectives of this study are to analyze the profitability of two jute varieties (Robi-1 & JRO 524) in the selected areas. The specific objectives are as follows:

i) To know the socioeconomic characteristics of sample farmers.

ii)To compare the profitability of two jute varieties (Robi-1 & JRO 524) in the study area.

iii)To identify the problems faced by the farmers and traders and suggest some policy recommendations.

1.9 Outline of the study

The study is parted into 8 variant chapters. Chapter I discusses about the the introduction of the study. The introductory chapter gives justification, objectives and outline of the study. Following the introduction, a brief review of related research works has been presented in chapter II. Chapter III provides the methodology of the study that is how the study was conducted. Chapter IV contains some socio economic characteristics of the jute farmers. Cost and return analysis of jute production are illustrated in chapter V. Chapter VI deals with the margin of jute farmers. The major problems faced by the jute growers and traders are presented in chapter VII. This chapter also presented some suggestion mentioned by farmers and traders. Finally, the summary, conclusion and some recommendations are given in chapter VIII.

Chapter II

Review of Literature

Review of literature generally provides the relevant works done previously. The main purpose of this chapter is to review the available past research works that are that are related to the present study. Literature reviewed in this study is obtained from different websites and libraries. In recent years a good number of studies have been conducted on economics of jute production in Bangladesh.Review of some research works relevant to the present study are briefly discussed below.

Sarkar (2017) conducted a study on ''Profitability analysis of jute production in some selected areas of Pabna District in Bangladesh." He conducted the study by dividing total population into three segments: Small, Medium and large farmers. In this study, he found that, per hectare total costof jute production was Tk. 146561.42 for small farmer, Tk. 151294.72 for medium farmer and Tk. 150664.26 for large farmer. Per hectare net return for jute production were calculated Tk. 23428 for small farmer, Tk. 20233.65 for medium farmer and Tk. 26628.22 for large farmer respectively. This study concluded that jute is a profitable crop in Pabna district but there is some variation inthe profitability among small, medium and large farmer.

Molla *et al.* (2014) conducted a study on "Financial and Economic Profitability of Jute in Bangladesh: A Comparative Assessment." The study was aimed to analyze the financial and economic profitability of jute and its main alternative crop Aus rice. The study estimated the comparative advantage by using policy analysis matrix. This study covered the time from July 2010 to June 2011. Five major jute producing districts namely, Faridpur, Kurigram, Kustia, Jashore and Jamalpur were selected. The study was conducted by dividing total sample into three categories, small, medium and large farmers.

It was revealed from the study that, Aus was a main alternative of jute that can be grown on land used for jute cultivation. Efficiency in production of jute and Aus paddy was measured in terms of gross return, net return, BCR etc. The study found that production cost was higher for jute than Aus. Gross return of jute and Aus per hectare were Tk. 114392 and Tk. 50577 respectively. The higher gross return for jute was mainly due to higher price of fiber during the study period compared to Aus. The BCR on full cost basis was also higher for jute (1.53) compared to Aus production (1.06). The study concluded that jute production was more profitable than Aus rice in the study area.

Khatun (2010) conducted a study on "A comparative economic analysis on White and Tossa jute production in selected area of Sirajgonj district." In this study she found that per hectare total cost for White and Tossa jute were Tk. 79871 and Tk. 81120 respectively. The gross return from White and Tossa jute were Tk. 988559 and Tk. 119953 respectively. Per hectare net return for White jute was Tk. 18988 and Tk. 38832 for Tossa. It appears from the above review that a good number of studies have been conducted on comparative economic analysis of aus rice and jute. But a little study have been carried out on jute seed production. Since jute seed is the prime impact in jute production and there has been a dearth of quality jute seed in Bangladesh, the present study. Therefore, be considered as a pioneering work in this field.

Yasmin (2009) studied a supply response growth of jute in Bangladesh. The study estimated the growth rate of area, yield. Production and real price of jute crop in Bangladesh. The time series data was used for this purpose. This study covered the time period of 1980/81 to 2005/06. Supply response was estimated for jute crop in terms of Nerlovian price expectations model. The long run price elasticity was 0.38. Growth rates of area. Production, yield and real price of jute crop were estimated by fitting exponential trend function. Growth rates of area and production of jute had declined significantly at the rate of 2.26 and 0.95 percent, respectively over the whole period.

Dev and Bairagi (2008) conducted a research on profitability and marketing of jute in Bangladesh. This study is based on field survey conducted during Nov'07-Jan'08 and related to the jute situation in 2007. Three hundred and sixty jute farmers from 12 villages of 12 jute producing districts were interviewed through structured questionnaire. They reported five villages of Faridpur, Jessore. Magura, Meherpur and Rajbari districts where 91.80 percent of total cultivated area where under intensive jute cultivation. Three villages of Munshiganj. Rajshahi and Sharitpur districts where 52.38 percent of total cultivated area where under Semi-intensive jute cultivation. Four villages of Satkhira, Manikganj. Dhaka and Tangail districts where 29.10 percent of total cultivated area were under "not intensive" jute cultivation. Among the sample farmers, jute covered about 90 percent of the area under fiber crops and Mesta covered about 10 percent area. Share of Deshi jute was about 10 percent of total area under fiber crops while fossa jute was cultivated in 80 percent of total area under fiber crops. Total cost for producing Tossa jute was Tk 42,708 and for Deshi it was about Tk 43,595. Per hectare yield of jute was 1,960 kg for Deshi and 2,340 kg for Tossa. Per hectare net return from Deshi jute was Tk 6,424 (net loss) and for Tossa it was Tk 723.0 (net profit).

2.1 Conclusion

The above review of literature discloses that some studies have already been conducted on jute production in Bangladesh. All the above studies reviewed and provided valuable information in accomplishment of the present study. The present study is desired to provide some basic information on jute production and aims to examine economic performance of two jute varieties in some selected areas of Faridpur district. There was not any related research conducted before in the selected locations. Policymakers will get information about the profitability level of raw jute production throughthis study. Thus, this study may bring benefits to policy makers and individual farmers.

Chapter III

Methodology of The Study

3.1 Introduction

This chapter provides a discussion on methodology applied in this study. Appropriate methodology is a prerequisite of a good research. The authenticity of a scientific research depends on a great extent on the appropriate methodology used in the research. Using an inappropriate methodology may lead to an erroneous result. A researcher has to give a diligent consideration in following a scientific and logical methodology for carrying out any scientific research.

3.2 Selection of the study area

The selection of the study area is an important step in a research. It hugely depends on the objectives of the study. It is necessary to select an area where a particular set of objectives can he fulfilled. Once Faridpur district is a major jute growing area of Bangladesh. Jute production was gradually decreasing here for the last decade. But recently, the farmers of Faridpur district are being interested to grow jute. Considering the objectives of the study two villages of bhangga Upazila of Faridpur district were selected purposively. The reasons behind the selection of these areas are:

i) The study area is approachable to the researcher, who is accustomed with the local dialects.
ii) The villages of the Upazila were found to be favorable jute growing areas.
iii) Expected better co-operation from the farmers.
iv) It was easier to communicate with expected respondents of these areas.
v) No recent study of this type was conducted in the study area before.

3.2.1 Location

Faridpur is a district in south-central Bangladesh. It is a part of the Dhaka division. It is bounded by the Padma River to its northeast. The district was named after Farid-ud-Din-Masud a 13^{th} century Sufi saint. A separate district was created by serving Dhaka district in 1786 and was called Dacca Jelalpur. A municipality was established in 1869. Historically, the town was known as Fatehabad. It was also called Haveli Mahal. It is located in 23^0 30’ 0” N to 89^0 49’ 48” E of Bangladesh. Bhanga is located at 23.3833^0 N to 89.9833^0 E. It has 41463 households and total area 216.34 km^2.

3.2.2 Topography and soil type

The soil texture of Faridpur district is calcareous dark gray floodplain soil and calcareous brown flood plain soil. It is deeply flooded phase in bhangga Upazila. The land of the study area is fertile and suitable for jute cultivation.

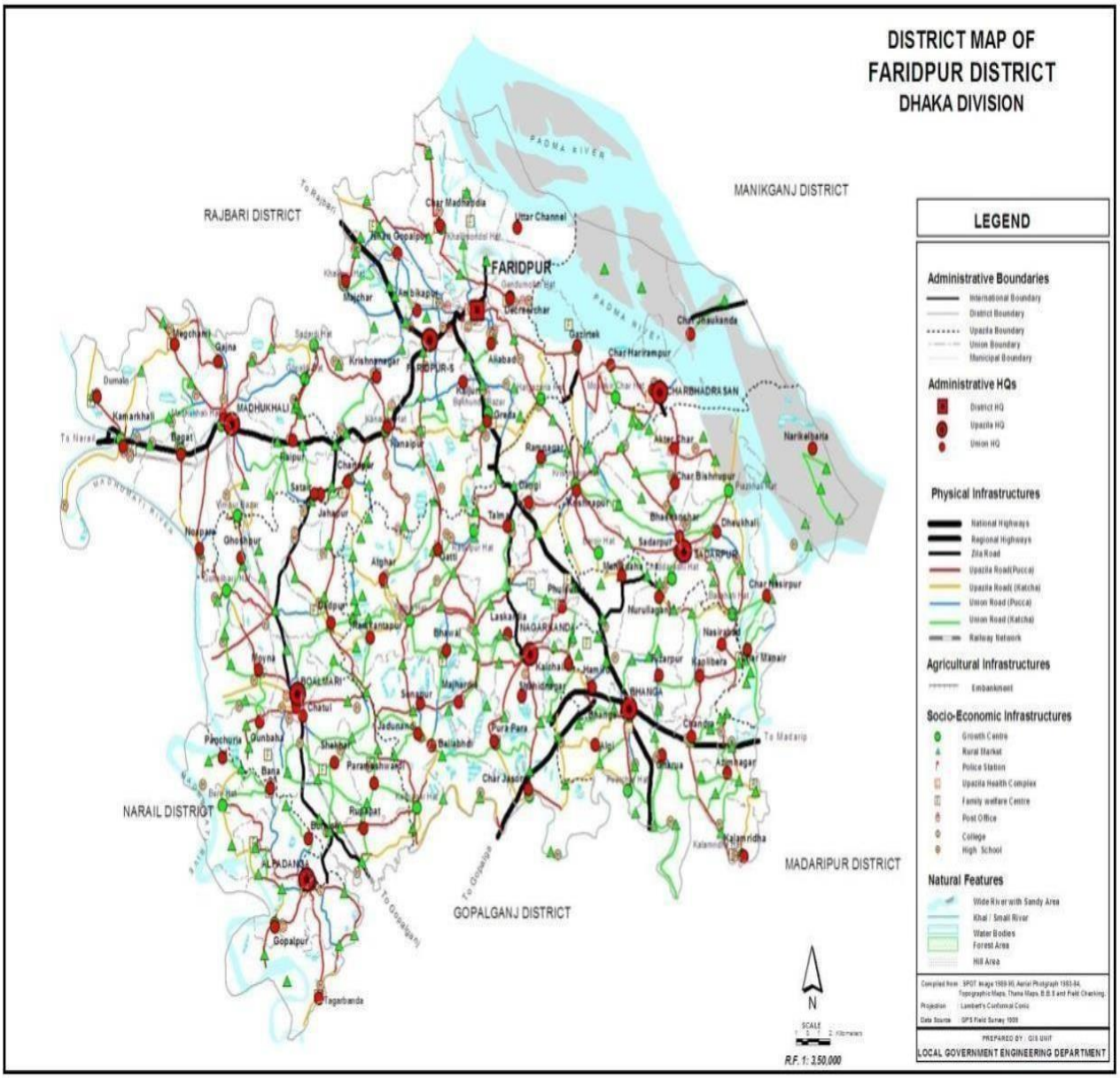

Fig: 3.1 A map of Faridpur District
Source: http://www.faridpur.gov.bd

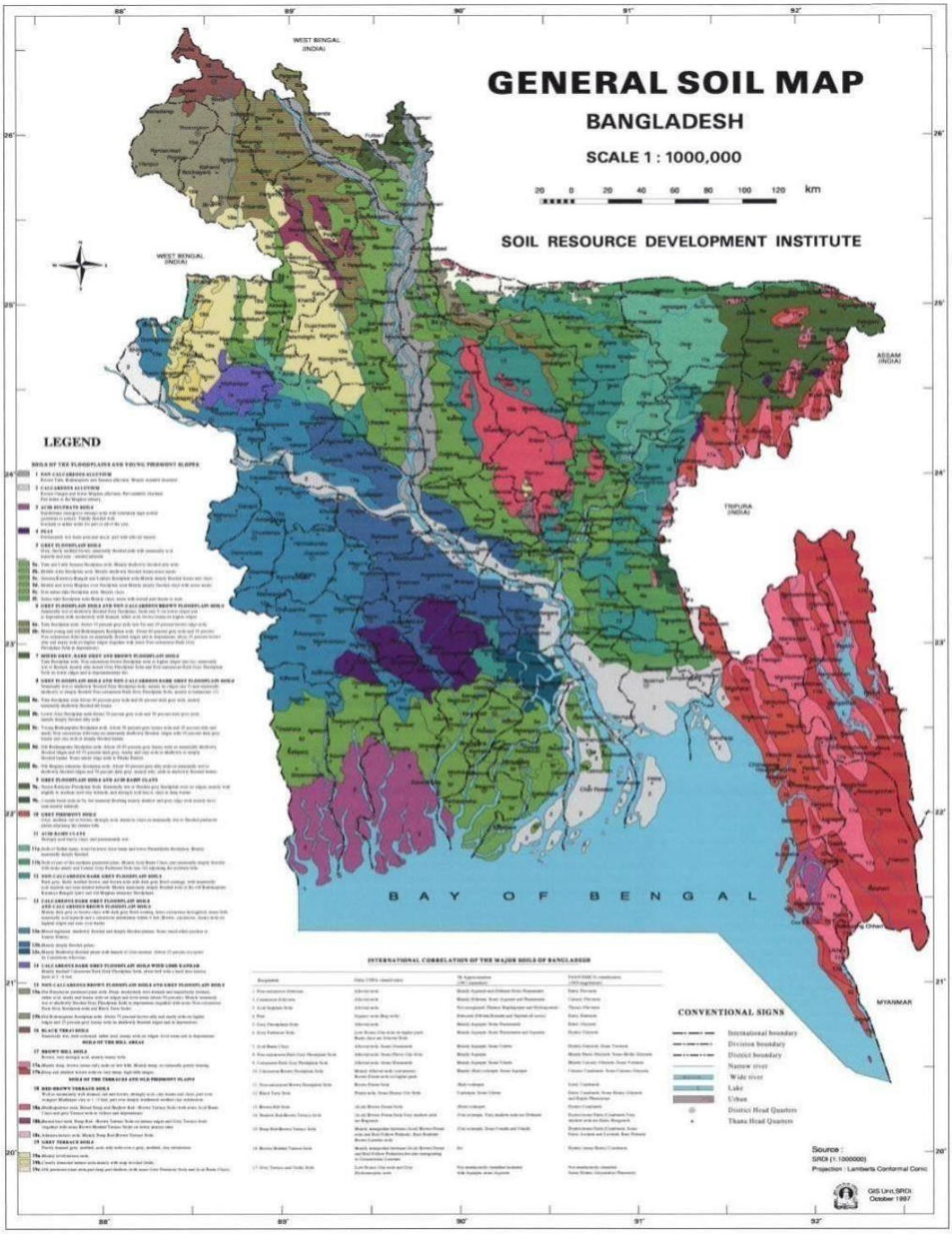

Fig 3.2: Soil map of Bangladesh
(Source: https://esdac.jrc.ec.europa.eu)

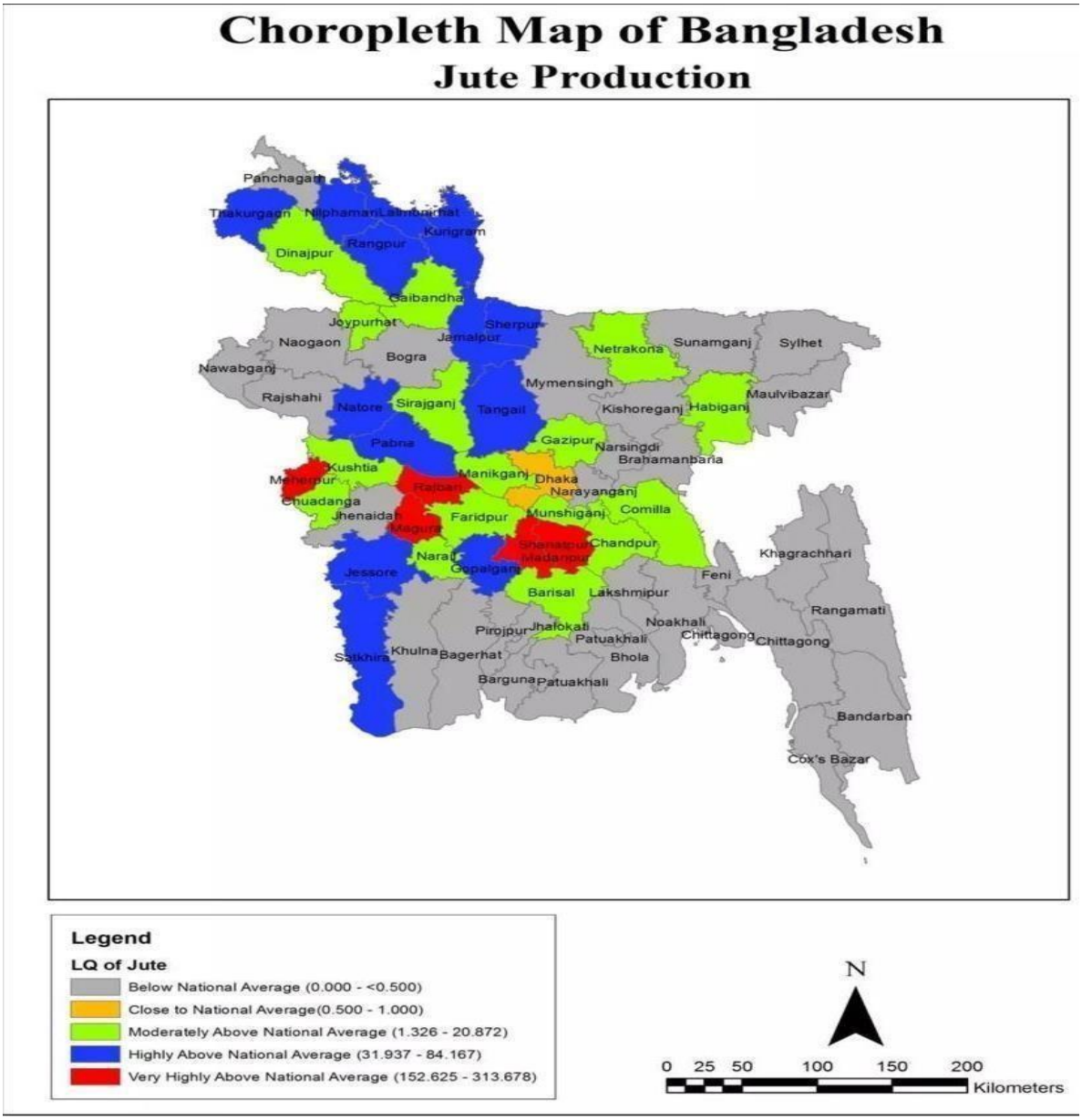

Fig 3.3: Jute production area of Bangladesh

Source: www.slideshare.net

3.3 Sampling technique and selection of sample

Two factors need to be taken into consideration in selecting samples. The sample size should be large enough to allow for adequate degrees of freedom in statistical analysis. On the other hand, administration of field research, processing and analysis of data should be manageable within the limitations imposed by physical, human and financial resources (Mannan 2001). Due to

limitations of time and resources it was not possible to interview all the jute growing farmers of time and resources it was not possible to interview all the jute growers in the study area. For this reason a reasonable size of sample was taken. Total 100 farmers and 60 tradersfrom Bhangga Upazila were selected for the study. A purposive sampling technique was followed to select the sample farmers.

3.4 Preparation of interview schedule

A draft questionnaire was prepared in order to collect relevant information from the selected farmers. The interview schedule was formulated in such a way that it covered all the information needed in the analysis and all prospects associated with the objectives could be included. The questions were prepared logically and in precise order to assure that they could easily be convinced by the informants and their answer could be quicker. The questionnaire was pre tested by interviewing some jute farmers and then fundamental modification and additions were made and then the draft questionnaire was finalized. The final questionnaire contained three types of information about the sample farmers, their socio-economic status , cost and return from jute cultivation and the problems faced by them. Two sets of interview schedule were prepared, one is for farmers and another is for traders. Traders questionnaire contained three types of information such as traders marketing cost, margin and marketing problems.

3.5 Period of the study

Jute is grown in this country only in kharif 1 season (Mid March to mid July). The data were collected during February to March of 2022 through field visit and direct interview with the jute farmers. Data relating to inputs and outputs were collected by making time to time visits in the study area during this period. Traders data were collected from Bhangga bazar.

3.6 Farm size

Farm size refers to the entire land operated by the farmers during study period, whether it is their own land or obtained from others by rented in. The farm size was measured by using following formula:

Farm Size = Homestead Area + Owned cultivable land + Rented in - Rented out

Table 3.6 presents the farm size and jute cultivation area of the selected sample farmers. Table 3.6represents that the average jute cultivable land of the sample farmers is 92.3 decimal and their average total land holding is 115.3 decimal.

Table 3.6 Average farm size of the sample farmers

Categories of land	**Average farm size (in decimal)**
Farm size	115.3
Jute cultivation area	92.3

Source: Farmer's household survey ,2022

3.7 Data collection methods

For the current study, data were collected from primary sources through field survey and its collection was performed by direct interviews with the farmers. Researcher herself collected the pertinent data from the selected jute farmers and traders. At the time of interview, the researcher asked questions methodically and a concise introduction about the aims and objectives of the study was given to each respondent. The questions were asked in a very simple manner and information was recorded on the interview schedule. It was stated to the farmers and traders that the study was purely academic. Each time, when interview was over, the interview schedule was checked again to assure that these were correct and properly recorded.

3.8 Processing, editing and tabulation of data

The collected data were manually coded and edited. Then all the recorded data were scrutinized and summarized carefully. Data were processed and transfer to Excel sheets to simplify in order to accomplish the objectives of the study. Moreover, data entry was made in computer and analyses were conducted using the relevant software Microsoft Excel.

3.9 Analytical technique

Data were analyzed in order to arrive at a meaningful result and accomplish the objectives of the study. Descriptive statistics and the net economic returns of jute were estimated using the set of financial prices. The financial prices were market prices actually received by farmers for outputs and paid for purchased inputs during the period under consideration in this study.

3.9.1 Descriptive statistics

The descriptive statistic is a technique commonly used for the sum, average, and percentage of costs, gross returns, net returns and profitability of jute growing farmers and traders. It is also used for analyzing socioeconomic conditions like, age, income, literacy, occupation etc and problems faced by the jute growers.

3.9.2 Profitability analysis

The cost items identified for the study were land preparation, labour, seed, urea, TSP, MOP, pesticide, irrigation, interest on operating capital and land use cost.

3.9.2.1 Cost of Land Preparation

Land preparation considered one of the most important components in the production process. Land preparation for jute production included ploughing, and other activities needed to make the soil suitable for planting seedling. It was revealed that the number of ploughing varied from farm to farmland location to location.

3.9.2.2 Cost of Labor

Labour cost was considered one of the major cost components in the production process. It is generally required for different operations such as land preparation, sowing and transplanting, weeding, fertilizer and pesticides application, irrigation, harvesting and carrying, threshing, cleaning ,drying, storing etc. In order to calculate labor cost, the recorded man-days per hectare were multiplied by the wage per man-day for a particular operation.

3.9.2.3 Cost of Seed

Cost of seed varied widely depending on its quality and availability. Market prices of seed of respected jute were used to compute cost of seed. The total quantity of seed needed per hectare was multiplied by the market price of seed/seedlings to calculate the cost of seeds for the study areas.

3.9.2.4 Cost of Urea

Urea was one of the important fertilizers in jute production. The cost of urea was computed on the basis of market price. In order to calculate cost of urea the recorded unit of urea per hectare

were multiplied by the market price of urea.

3.9.2.5 Cost of TSP

The cost of TSP was also computed on the basis of market price. In order to calculate cost of TSP the recorded unit of TSP per hectare were multiplied by the market price of TSP.

3.9.2.6 Cost of MoP

Among the three main fertilizers used in jute production, MoP was one of them. To calculate the cost of MoP per hectare, the market price of MoP was multiplied by per unit of that input per hectare for a particular operation.

3.9.2.7 Cost of Insecticides

Farmers used different kinds of insecticides for 5-7 times to keep their crop free from pests. Cost of insecticides was calculated based on the market price of the pesticides which was used in the study areas per hectare after management helps to increase jute production. Cost of irrigation varies from farmers to farmers. It was calculated based on how many times irrigation needed per hectare and how was its cost.

3.9.2.8 Interest on Operating Capital

Interest on operating capital was determined on the basis of opportunity cost principle. The operating capital actually represented the average operating cost over the period because all costs were not incurred at the beginning or at any single point of time. The cost was incurred throughout the whole production period; hence, at the rate of 9 % per annum interest on operating capital for four months was computed for Jute. Interest on operating capital was calculated by using the following formula:

$$IOC = AIit$$

Where,
IOC= Interest on operating capital
i = Rate of interest

$$AI = \frac{\text{Total variable cost} \times 0.09 \times 4}{12 \times 2}$$

t = Total time period of a cycle (four).

3.9.2.9 Land Use Cost

Land use cost was calculated on the basis of opportunity cost of the use of land per hectare for the cropping period of four months. So, cash rental value of land has been used for cost of land use.

3.9.2.10 Calculation of Revenue

Gross Revenue

Per hectare gross revenue was calculated by multiplying the total amount of product and by product by their respective per unit prices.

Gross Revenue = Quantity of the main product x Average price of the main product + Quantity of by product x Average price of by product.

3.9.2.11 Gross Margin

Gross margin is defined as the difference between gross revenue and total variable costs. Generally, farmers want maximum revenue over total variable cost of production. The argument for using the gross margin analysis is that the farmers are interested to get revenue over total variable cost. Gross margin was calculated on TVC basis. Per hectare gross margin was obtained by subtracting total variable costs from gross return. That is,

Gross margin = Gross revenue – Total variable cost

3.9.2.12 Net Revenue

Net revenue or profit was calculated by deducting the total production cost from the total revenue or gross revenue. That is,

Net revenue = Total revenue – Total production cost

3.9.2.13 Undiscounted Benefit Cost Ratio (BCR)

Average return to each taka spent on production is an important criterion for measuring profitability. Undiscounted BCR was estimated as the ratio of total revenue to total cost per hectare.

$$\textbf{BCR} = \frac{\text{Total revenue (Gross revenue)}}{\text{Total cost}}$$

3.10 Problems faced in collecting data

There are some problems and difficulties faced by the researcher during the period of data collection. Data were collected within shortest possible time, due to limited fund. Most of the respondents did not keep any exact records of cost and returns, so the researcher had to depend only on the conception of the respondents for collecting necessary information. Moreover, the farmers and traders always tried to abstain providing accurate information relating to the actual volume of holding income saved from jute production. In a few cases, the farmers were not found at home and traders were not found at bazar. This needed two or three visits to conduct even a single interview. To overcome all these problems and to obtain accurate information, it required a adequate level of patience of the researcher.

3.11 Limitations of the study

The present study provides some useful information for researcher, farmers, traders and decision makers regarding jute production. However, there are some limitations of the study, the main limitations are as follows:

i) The current study was conducted on a precise sample size and in a specific geographic area (Bhangga Upazila of Faridpur District) of Bangladesh due to limitation of time and fund. Observation of only 160 samples may be inadequate to represent actual situation. The result might be more accurate and authentic if data were collected from large sample covering a large area.

ii) In rural Bangladesh, most of the farmers and traders are illiterate or have a few years formal education, they do not keep any records of farm transactions, that's why it was difficult to get accurate information. As a result, the accuracy of data entirely depends upon their retention and sincerity. Hence, there may be possibility of data errors.

iii) Some farmers and traders at first did not show interest to provide information as there was no direct benefit for them.

iv) There was disparity in data of cost and revenue collected from different farmers and traders having same amount of area under jute production. It propagated some confusing situations.

Chapter IV

SOCIOECONOMIC CHARACTERISTICS OF SAMPLE FARMERS

4.1 Introduction

The aim of this chapter is to speculate the socioeconomic characteristics of the farmer producing jute. Socio-economic characteristics of any decision maker are very significant for overall farm decision, as crop selection, production pattern and technology adoption are largely influenced by individual's socio-economic characteristics. People differ from one another in many aspects, because there are numerous interrelated and requisite attributes that determine the evolution of behavior and personality. Some essential features of the socio-economic profiles such as age, education, family size etc. of the sample farmers are presented here.

4.2 Age

The selected jute farmers were grouped into four categories according to their age. The different age groups of the jute farm owners from Bhangga Upazila are given in Table 4.2. It is revealed from the Table that the highest number of farmer (33.0 %) came from age group 31-45 years and the lowest (19.0 %) came from age group less than 31 years. 26.0 % of the jute farmers fell into the 46-55 years age group and remaining 22.0 % fell into above 55 years age group. The study revealed that majority of the farmers were of middle age to old age group.

Table 4.1 Age distribution status of the farmers

Age Range	**% of farmers**
Below 31 years	19.0
31-45 years	33.0
46-55 years	26.0
Above 55 years	22.0
Total	**100.0**

Source: Farmer's household survey, 2022

4.3 Family size of the selected farmers

Family is a primary social group that consists of parents and their offspring, the principle function of which is provision for its members. Family size in the study area has been defined as total number of persons living together and taking meals from the same kitchen. Table 4.2 shows the family size

of respondents of the location. Majority of the sample farmers' families (79.0 %) were small size; consisted of 1-5 members. Total 21.0 % families were medium families and no family belong to large families consisting of above 7 members. The findings show that the number of small families is higher at the location of Bhangga Upazila.

Table 4.2 Family size of sample farmers in the study area

Family size (no)	**No. of families**	**% of farmers**
Small (1-5)	79.0	79.0
Medium (6-7)	21.0	21.0
Large (above 7)	–	–
Total	**100.0**	**100.0**

Source: Farmer's household survey, 2022

4.4 Level of literacy

Education may be defined as the ability of an individual to read and write or formal literacy received up to a certain standard. It creates the power of understanding and analyzing fact and situations.

Table 4.3 Level of literacy among jute farmers in the study area

Level of Education	**No. of farmers**	**% of farmers**
Illiterate and can sign only	2.0	2.0
Up to primary	69.0	69.0
Up to secondary	24.0	24.0
Up to Higher secondary	5.0	5.0
Total	**100.0**	**100.0**

Source: Farmer's household survey, 2022

Educated farmers have more access to improved cultivation methods and they are able to make rational economic decisions. Education helps to develop production process and to keep accurate account of production costs and returns. Literacy status of Bhangga upazilla, is represented in the table 4.4. From the educational point of view, all members in the study area are categorized into four groups. i.e. illiterate and can sign only, to primary, up to secondary

and up to higher secondary. The above categories are followed for displaying literacy level of sample farmers at Table 4.4. 2.0 % of the farmers can sign only and 69 % of the farmers had primary education, 24 % of the farmers had secondary education and 5.0 % of the farmers had higher secondary education.

4.5 Conclusion

It is clear from the above discussion that socio-economic characteristics differ among farmers. There was many socio-economic differences among the farmers of the study area. Majority of the farmers came from age group 31-45 years, majority of the sample farmers families were small size and majority of the farmers had primary education.

Chapter V

Profitability Analysis of Jute Farmers

5.1 Introduction

The primary objective of this chapter is to evaluate the costs, returns, and profitability of cultivating jute. Profitability is a critical factor in determining whether to produce any crop at the farm level. It may be quantified in terms of net revenue, gross margin, and revenue on total cost. The overall cost of manufacturing was determined by adding the expenses of all products. The crop returns have been approximated using the values of the primary products and by-products.

5.2 Profitability of Jute (Rabi 1) Cultivation

5.2.1 Variable Costs

5.2.1.1 Cost of Hired Labour

Labour cost is one of the major cost components in the cultivation process. It is one of the most important and largely used inputs for producing jute. It is generally required for different operations such as land preparation, sowing, weeding, fertilizer and pesticides application, irrigation, harvesting and carrying, threshing, cleaning, drying, storing etc. The quantity of average hired human labor used in jute cultivation was found to be 45 man-days per hectare and average price of human labor was Tk. 500 per man-day. Therefore, the total cost of hired human labor was found to be Tk. 22500.0 representing 23.74 % of total cost (Table 5.1).

5.2.1.2 Cost of Land Preparation

Land preparation is important components in the cultivation process. Land preparation included ploughing and other activities needed to make the soil suitable for jute cultivation. Thus, the average land preparation cost of jute cultivation was found to be Tk. 3600.0 per hectare, which was 3.80 % of total cost (Table 5.1)

5.2.1.3 Cost of Seed

Cost of seed varied widely depending on its quality and availability. On an average, farmers used seed 25 kg per hectare. Per hectare total cost of seed for jute cultivation were estimated to be Tk. 5000.0, which constituted 5.27 % of total cost (Table 5.1)

Table 5.1: Per hectare Return and Cost of Jute (Rabi 1) Cultivation

Cost Items	Quantity (Unit/ha.)	Price Per Unit (Tk.)	Costs/Returns (Tk./ha)	% of total costs
A. Gross Return				
Fiber (Kg)	1780.13	87.5	155761.42	83.67
Stick (Bundle)	3040.42	10.0	30404.20	16.33
Total return			**186165.62**	**100.0**
B. Gross Cost				
C. Variable Cost				
Hired Labor	45	500.0	22500	23.74
Land Preparation			3600.0	3.80
Seed (Kg)	25	200.0	5000.0	5.27
Urea (Kg)	125	20.0	2500.0	2.64
TSP (Kg)	120	20.0	2400.0	2.53
MoP (Kg)	85	18.0	1530.0	1.61
Insecticides	-	-	2343.01	2.36
Irrigation	3.0	1200.0	3600.0	3.80
Total variable cost (TVC)			**43473.67**	**43.39**
D. Fixed Cost				
Rental value of land	-	-	41666.67	43.96
Family labor	18.0	500.0	9000	9.49
Interest on operating capital	-	-	652.10	0.69
Total Fixed cost (TFC)			51318.77	54.14
E. Total costs			**94791.78**	**100.0**

Source: Farmer's household survey, 2022

5.2.1.4 Cost of Urea

In the study area, farmers used different types of fertilizers. On an average, farmers used urea 125 kg per hectare. Per hectare cost of urea was Tk. 2500.0, which represents 2.64 percent of total cost(Table 5.1).

5.2.1.5 Cost of TSP

Among the different kinds of fertilizers used, application rate of TSP was 120 kg per hectare.The average cost of TSP was Tk. 2400.0 per hectare which representing 2.53 percent of total cost

(Table 5.1).

5.2.1.6 Cost of MoP

The application of MoP per hectare was 85 kg and per hectare cost of MoP was found Tk. 1530.0, which represents 1.61 percent of total cost (Table 5.1).

5.2.1.7 Cost of Insecticides

Farmers used different kinds of insecticides to keep their crop free from pests and diseases. The average cost of insecticides for jute cultivation was found to be Tk. 2343.01 which was 2.36 percent of total cost(Table 5.1).

5.2.1.8 Cost of Irrigation

Cost of irrigation is one of the most important costs for jute cultivation. Cultivation of jute largely depends on irrigation. Right doses application of irrigation water helps to increase cultivation. The average cost of average irrigation was found Tk. 3600.0 per hectare that represents 3.80 % of total cost (Table 5.1).

5.2.1.9 Total Variable Cost

The total variable cost of jute cultivation was Tk.43473.23 per hectare, which was 43.39 percent of total cost (Table 5.1).

5.2.2 Fixed Cost

5.2.2.1 Rental Value of Land

Rental value of land was calculated on the basis of opportunity cost of the use of land per hectare for the cropping period of four months. Cash rental value of land has been used as cost of land use. On the basis of the data collected from the jute farmers the land use cost was found to be Tk. 41666.67 per hectare, and it was 43.96 percent of total cost (Table 5.1).

5.2.2.2 Cost of Family Labor

Human labor cost is one of the major cost components in the cultivation process. It is one of the most important and largely used inputs for producing jute. It is generally required for different operations such as land preparation, sowing, weeding, fertilizer and pesticides application, irrigation, harvesting and carrying, threshing, cleaning, drying, storing etc. The quantity of average family supply labor (Without hired labor) used in jute cultivation was found to be about 18 man-days per hectare and average price of human labor was Tk. 500 per man-day. If we pay those labor

it was found to be Tk.9000.0 representing 9.49 % of total cost (Table 5.1).

5.2.2.3 Interest on Operating Capital

It may be noted that the interest on operating capital was calculated by taking into account all the operating costs incurred during the cultivation period of jute. Interest on operating capital calculated Tk. 652.10 per hectare, which represents 0.69 % of the total cost (Table 5.1).

5.2.2.4 Total Cost (TC) of Jute Cultivation

Total cost was calculated by adding all the cost of variable and fixed inputs. In the present study per hectare total cost of producing jute was found to be Tk. 94791.78 (Table 5.1).

5.2.3 Revenue of Jute (Robi-1) Cultivation

5.2.3.1 Gross Revenue

Revenue per hectare of jute cultivation is shown in table 5.1 & 5.2. From jute (Rabi-1) cultivation, we can see there have main product (Fiber) and also by product (Stick). Per hectare gross revenue was calculated by multiplying the total amount of main product and by-product with respective per unit price and then adding them. It is evident from table 5.1 that the average yield of fiber per hectare was Tk. 87.5 per kg and the average yield of stick was 3040.42 bundle per hectare and the average price of stick was Tk 10 per bundle Therefore, the gross revenue was found to be Tk. 186165.62 per hectare.

5.2.3.2 Gross Margin

Gross margin is the gross revenue over total variable cost. Gross margin was calculated by deducting the total variable cost from the gross revenue . On the basis of the data, gross margin was found to be Tk. 142692.61 per hectare (Table 5.2).

5.2.3.3 Net Revenue

Net revenue or profit was calculated by deducting the total cost from the gross revenue . On the basis of the data, the net revenue was estimated as Tk. 91373.84 per hectare (Table 5.2).

5.2.3.4 Benefit Cost Ratio (Undiscounted)

Benefit Cost Ratio (BCR) is a relative measure, which is used to compare benefit per unit of cost. Undiscounted Benefit Cost Ratio (BCR) was found to be 1.96 which implies that one taka investment in jute (Rabi 1) cultivation generated Tk. 1.96 (Table 5.2).

Table 5.2 Per hectare Revenue , Cost and BCR of Jute (Rabi 1) Cultivation

Cost Item	Value (Tk./ha)
A. Gross Revenue	186165.62
B. Total Variable Cost	43473.01
C. Total Fixed Cost	51318.77
D. Total costs	94791.78
E. Gross Margin (A-B)	142692.61
F. Net Revenue (A-D)	91373.84
G. Undiscounted BCR (A/D)	1.96

Source : Farmer's household survey, 2022.

5.3 Profitability of Jute (JRO-524) Cultivation

5.3.1 Variable Costs

5.3.1.1 Cost of Hired Labor

Labour cost is one of the major cost components in the cultivation process. It is one of the most important and largely used inputs for producing jute. It is generally required for different operations such as land preparation, sowing, weeding, fertilizer and pesticides application, irrigation, harvesting and carrying, threshing ,cleaning, drying, storing etc. The quantity of average hired labor used in jute cultivation was found to be 47 man-days per hectare and average price of labor was Tk. 500 per man-day. Therefore, the total cost of hired labor was found to beTk. 23500.0 representing 24.4 % of total cost (Table 5.3).

5.3.1.2 Cost of Land Preparation

Land preparation is important components in the cultivation process. Land preparation included ploughing and other activities needed to make the soil suitable for jute cultivation. Thus, the average land preparation cost of jute cultivation was found to be Tk. 3600.0 per hectare, which was 3.74 % of total cost (Table 5.3).

5.3.1.3 Cost of Seed

Cost of seed varied widely depending on its quality and availability. On an average, farmers used seed 28 kg per hectare. Per hectare total cost of seed for jute cultivation were estimated to be Tk.

5600.0, which constituted 5.81% of total cost (Table 5.3).

5.3.1.4 Cost of Urea

In the study area, farmers used different types of fertilizers. On an average, farmers used urea 128 kg per hectare. Per hectare cost of urea was Tk. 2560.0, which represents 2.66 % of total cost (Table 5.3).

5.3.1.5 Cost of TSP

Among the different kinds of fertilizers used, the rate of application of TSP was 125 kg per hectare. The average cost of TSP was Tk. 2500.0 per hectare which representing 2.60 % of total cost (Table 5.3).

5.3.1.6 Cost of MoP

The application of MoP per hectare was 125 kg and per hectare cost of MoP was found Tk. 2250.0, which represents 2.34 % of total cost (Table 5.3).

5.3.1.7 Cost of Insecticides

Farmers used different kinds of insecticides to keep their crop free from pests and diseases. The average cost of insecticides for jute cultivation was found to be Tk. 2624.61 which was 2.60 % of total cost (Table 5.3).

5.3.1.8 Cost of Irrigation

Cost of irrigation is one of the most important costs for jute cultivation. Cultivation of jute largely depends on irrigation. Right doses application of irrigation water helps to increase cultivation. The average cost of average irrigation was found Tk. 3600.0 per hectare that represents 3.74 % of total cost (Table 5.3).

5.3.1.9 Total Variable Cost

Therefore, from the above different cost items it was clear that the total variable cost of jute cultivation was Tk.43984.61 per hectare, which was 47.89 % of total cost (Table 5.3).

5.3.2 Fixed Cost

5.3.2.1 Rental Value of Land

Rental value of land was calculated on the basis of opportunity cost of the use of land per hectare for the cropping period of four months. Cash rental value of land has been used as cost of land use. On the basis of the data collected from the jute farmers the land use cost was found to be Tk.

41666.67 per hectare, and it was 43.26 % of total cost (Table 5.3).

Table 5.3 Per hectare Revenue and Cost of Jute (JRO-524) Cultivation

Cost Items	Quantity (Unit/ha.)	Price Per Unit (Tk.)	Value (Tk./ha)	% of total costs
A. Gross Revenue				
Fiber (Kg)	2963.77	87.5	259329.88	85.24
Stick (Bundle)	4489.83	10.0	44898.30	14.76
Total return			**304228.18**	**100.0**
B. Gross Cost				
C. Variable Cost				
Hired Labor	47.0	500.0	23500.0	24.4
Land Preparation	-	-	3600.0	3.74
Seed (Kg)	28.0	200.0	5600.0	5.81
Urea (Kg)	128.0	20.0	2560.0	2.66
TSP (Kg)	125.0	20.0	2500.0	2.60
MoP (Kg)	125.0	18.0	2250.0	2.34
Insecticides	-	-	2624.61	2.60
Irrigation	3.0	1200.0	3600.0	3.74
Total variable cost (TVC)			**43984.61**	**47.89**
D. Fixed Cost				
Land use cost	-	-	41666.67	43.26
Family labor	20.0	500.0	10000.0	10.38
Interest on operating capital	-	-	659.77	0.69
Total Fixed cost (TFC)			52326.44	54.33
E. Total costs			**96311.05**	**100.0**

Source: Farmer's household survey, 2022

5.3.2.2 Cost of Family Labor

Labour cost is one of the major cost components in the cultivation process. It is one of the most important and largely used inputs for producing jute. It is generally required for different operations such as land preparation, sowing, weeding, fertilizer and pesticides application, irrigation, harvesting and carrying, threshing, cleaning, drying, storing etc. The quantity of average family supply labor (Without hired labor) used in jute cultivation was found to be about 20 man-days per hectare and average price of labor was Tk. 500 per man-day. If we pay those

labor it was found to be Tk.10000.0 representing 10.38% of total cost (Table 5.3).

Table 5.4 Per hectare Return, Cost and BCR of Jute (JRO-524) Cultivation

	Value (Tk./ha)
A. Gross Return	304228.18
B. Total Variable Cost	43984.61
C. Total Fixed Cost	52326.44
D. Total costs	96311.05
E. Gross Margin (A-B)	260243.51
F. Net Return (A-D)	207913.13
G. Undiscounted BCR (A/D)	3.15

Source: Farmer's household survey, 2022.

5.3.2.3 Interest on Operating Capital

It may be noted that the interest on operating capital was calculated by taking into account all the operating costs incurred during the cultivation period of jute. Interest on operating capital calculated Tk. 659.77 per hectare, which represents 0.69 % of the total cost (Table 5.3).

5.3.3 Total Cost (TC) of Jute Cultivation

Total cost was calculated by adding all the cost of variable and fixed inputs. In the present study per hectare total cost of producing jute was found to be Tk. 96311.05 (Table 5.3)

5.3.4 Revenue of Jute (JRO 524) Cultivation

5.3.4.1 Gross Revenue

Revenue per hectare of jute cultivation is shown in table 5.3 From jute (JRO-524) cultivation, we can see there have main product (Fiber) and also by-product (Stick). Per hectare gross revenue was calculated by multiplying the total amount of main product and by-product with respective per unit price and then adding them. It is evident from table that the average yield of fiber per hectare was 2963.77 Kg and the average price of fiber was Tk. 87.5 per kg and the average yield of stick was 4489.83 bundle per hectare and the average price of stick was Tk 10 per bundle Therefore, the gross revenue was found to be Tk. 304228.18 per hectare.

5.3.4.2 Gross Margin

Gross margin is the gross revenue over total variable cost. Gross margin was calculated by deducting the total variable cost from the gross revenue. On the basis of the data, gross margin was found to be Tk. 260243.51 per hectare (Table 5.4).

5.3.4.3 Net Revenue

Net revenue or profit was calculated by deducting the total cost from the gross revenue. On the basis of the data, the net revenue was estimated as Tk. 207913.13 per hectare (Table 5.4).

5.3.4.4 Benefit Cost Ratio (Undiscounted)

Benefit Cost Ratio (BCR) is a relative measure, which is used to compare benefit per unit of cost. Undiscounted Benefit Cost Ratio (BCR) was found to be 3.15 which implies that one taka investment in jute (JRO-524) cultivation generated Tk. 3.15 (Table 5.4). So, JRO 524 jute variety production is profitable in the study area.

5.4 Conclusion

The study found that jute production was profitable for both two varieties of jute. Total cost of producing Robi-1 jute was found to be Tk. 94791.78/ha and net return from Robi-1 was Tk. 91373.84/ha. Total cost of producing JRO 524 jute was Tk. 96311.05/ha and net return from JRO 524 was tk. 207913.13/ha. Undiscounted Benefit Cost Ratio (BCR) for Robi-1 was found to be 1.96 which implies that one taka investment in jute (Rabi-1) cultivation generated Tk. 1.96 and Undiscounted Benefit Cost Ratio (BCR) for JRO 524 was found to be 3.15 which implies that one taka investment in jute (JRO-524) cultivation generated Tk. 3.15. BCR of both variety shows that both variety of jute production were profitable but production of JRO 524 jute variety was more profitable than Robi-1 jute variety in the study area.

Chapter VI

Marketing Margin of Jute Traders

6. Introduction

The primary objective of this chapter is to evaluate the costs, returns, and profitability of trading jute.The types of jute traders are faria, bepari, aratdar, Pucca baler and Kutcha baler. This chapter discuss about the cost, returns and profitability of these traders.

6.1 Faria

Faria means a petty dealer and also includes an agent who in consideration of commission offers his service to purchase or sell agricultural produce. Farias purchase loose jute in small quantities from farmers and other small dealers who who may not possess any license. They sell unsorted jute to the Beparis who usually handle a large volume. Generally Farias do not have adequate storage facilities and they sell their unassorted raw jute in Bhangga Bazar immediately. If needed, they store jute for a short period either at their dwelling houses or in the godowns. Two types of risks were involved such as physical risk and market risk. Physical risk occurred due to accident, wastage, damage etc. Market risk occurred due to fall of market price. They are mostly self financed. Besides own capital other sources of financing of the Farias are Aratdars, friends, relatives, and Bank. They usually did not get institutional credit.

6.1.1 Marketing cost of Faria

The total marketing costs of Faria for performing various marketing functions is Tk. 53.54/ mound

Table 6.1.1 Marketing cost of Faria

Cost items	Tk./Mound
Transportation	17.37
Loading & Unloading	3.0
Storage	8.54
Commission paid	6.0
Market toll	4.0
Tips & donations	1.0
Assortment & weighing	3.0
Packaging cost	2.0
Telephone bill	1.0
Electricity bill	0.5
Salary & wages	4.12
Personal expenses	3.0
Total marketing cost	53.54

Source : Market survey, 2022

Table (6.1.1). Farias transportation cost was Tk. 17.37/ mound and loading & unloading cost was Tk. 3.0/ mound. Faria's storage cost was Tk. 8.54/ mound. And they paid Tk. 6.0/ mound for commission. Faria's paid Tk. 4.0/ mound for tips and donation and they paid Tk. 3.0/ mound for assortment & weighing. Faria's paid Tk. 2.0/ mound for packaging and they paid Tk. 1/ mound for telephone bill. They paid Tk. 5.0/ mound for electricity bill and they paid Tk. 4.12/ mound for salary & wage purpose. Total personal expenses of Faria was Tk. 3.0/ mound.

6.1.2 Marketing margin of Faria

Total marketing margin of Faria was Tk. 79.79/ mound (Table 6.1.2). Table 6.1.2 shows the marketing margin of Faria. Faria's purchase price of jute was Tk. 3500.0/ mound. They sold jute at Tk. 3633.33/ mound. Total marketing cost of Faria was Tk. 53.54/ mound. Marketing margin of Faria was Tk. 79.79/ mound.

Table 6.1.2 Marketing margin of Faria

Items	**Tk./Mound**
Purchase price (a)	3500.0
Sale price (b)	3633.33
Total marketing cost (c)	53.54
Profit (b – a - c)	79.79

Source: Market survey, 2022

6.2 Bepari

Beparis are the professional jute traders. Beparis were big merchant and licensed traders having fixed business premises in the wholesale market (Bhangga bazar) and they did business with large volume of product. The Beparis buy jute in loose from both Farias and farmers. The Beparis sold loose jute to the Kutcha balers, Pucca balers and to the mills. Most of them sold jute through Aratdars and some Beparis sold jute directly to the balers. They are mostly self financed. Besides own capital other sources of financing of the Farias are Aratdars, friends, relatives, and Bank. They usually did not get institutional credit.

6.2.1 Marketing cost of Bepari

The total marketing cost of Bepari for performing various marketing functions was Tk. 56.29/ mound (Table 6.2.1). Beparis transportation cost was Tk. 16.96/ mound and loading & unloading

cost was Tk. 4.12/ mound. Beparis storage cost was Tk. 8.5/ mound. And they paid Tk. 6.0/ mound for commission. Beparis paid Tk. 1.5/ mound for tips and donation and they paid Tk. 3.0/ mound for assortment & weighing. Beparis paid Tk. 2.0/ mound for packaging and they paid Tk. 1/ mound for telephone bill. They paid Tk. 0.5/ mound for electricity bill and they paid Tk. 4.37/ mound for salary & wage purpose. Total personal expenses of Bepari was Tk. 4.33/ mound.

Table 6.2.1 Marketing cost of Bepari

Cost items	**Tk./Mound**
Transportation	16.96
Loading & Unloading	4.12
Storage	8.5
Commission paid	6.0
Market toll	4.0
Tips & donations	1.5
Assortment & weighing	3.0
Packaging cost	2.0
Telephone bill	1.0
Electricity bill	0.5
Salary & wages	4.37
Personal expenses	4.33
Total marketing cost	56.29

Source: Market survey, 2022

6.2.2 Marketing margin of Bepari

Total marketing margin of Bepari was Tk. 10.38/mound (Table 6.2.2). Table 6.2.2 shows the marketing margin of Bepari. Beparis purchase price of jute was Tk. 3558.33/ mound. They sold jute at Tk. 3625.0/ mound. Total marketing cost of Bepari was Tk. 56.29/ mound. Marketing margin of Bepari was Tk. 10.38/ mound.

Table 6.2.2 Marketing margin of Bepari

Items	**Tk./Mound**
Purchase price (a)	3558.33
Sale price (b)	3625.0
Total marketing cost (c)	56.29
Profit (b – a - c)	10.38

Source : Market survey, 2022

6.3 Aratdar

Aratdar plays a significant role in jute marketing. Aratdars are commission agents who had fixed

establishments in the secondary market at Upazila level and terminal market. They are the biggest traders in the marketing channel but are limited number. The Aratdars are commission agents having fixed establishment who operated between traders of jute on the one hand and balers and mills on the other hand, and charge a fixed commission. They often serve as a source of financing and provide storage facilities. They had access to international credit. Commercial banks issued loan to them. In the study area the Aratdar of Bhangga bazar received commission at the rate of Tk.6.0/ mound from Beparis and they received commission Tk. 3.0/ mound from balers and exporters.

6.3.1 Marketing cost of Aratdar

The total marketing costs of Aratdar for performing various marketing functions is Tk. 54.83/ mound (Table 6.3.1). Aratdar's transportation cost was Tk. 16.46/ mound and loading & unloading cost was Tk. 3.70/ mound. Aratdar's storage cost was Tk. 8.37/ mound. And they paid Tk. 6.0/ mound for commission. Aratdar's paid Tk. 1.5/ mound for tips and donation and they paid Tk. 3.0/ mound for assortment & weighing. Aratdar's paid Tk. 2.0/ mound for packaging and they paid Tk. 1.0/ mound for telephone bill. They paid Tk. 0.5/ mound for electricity bill and they paid Tk. 4.12/ mound for salary & wage purpose. Total personal expenses of Aratdar was Tk. 4.16/ mound.

Table 6.3.1 Marketing cost of Aratdar

Cost items	**Tk./Mound**
Transportation	16.46
Loading & Unloading	3.70
Storage	8.37
Commission paid	6.0
Market toll	4.0
Tips & donations	1.5
Assortment & weighing	3.0
Packaging cost	2.0
Telephone bill	1.0
Electricity bill	0.5
Salary & wages	4.12
Personal expenses	4.16
Total marketing cost	54.83

Source: Market survey, 2022

6.3.2 Marketing margin of Aratdar

Total marketing margin of Aratdar was Tk. 33.51/ mound (Table 6.3.2). Table 6.3.2 shows the marketing margin of Aratdar. Aratdar purchase price of jute was Tk. 3611.66/ mound. They sold jute at Tk. 3700.0/ mound. Total marketing cost of Aratdar was Tk. 54.83/ mound. Marketing margin of Aratdar was Tk. 33.51/ mound.

Table 6.3.2 Marketing margin of Aratdar

Items	Tk./Mound
Purchase price (a)	3611.66
Sale price (b)	3700.0
Total marketing cost (c)	54.83
Profit (b – a - c)	33.51

Source: Market survey, 2022

6.4 Kutcha baler

Kutcha balers purchased loose jute from farmers, Farias, Beparis and processed into Kutcha bales. They sometimes purchased jute in Kutcha bales from other Kutcha balers. They mainly operate in the secondary markets. Recognized commercial grades and trade standards are practiced by the Kutcha balers who employ permanent and temporary staff as well as labour. They also have storage facilities.The processed jute is sold to the Pucca balers or exporters and jute mills through Dalals/brokers.

6.4.1 Marketing cost of Kutcha baler

Total marketing cost of Kutcha baler for performing various marketing functions is Tk. 57.90/ mound (Table 6.4.1). For buying, Kutcha balers paid Tk. 2.27/ mound for loading & unloading, Tk. 4.66/ mound for transportation, Tk. 3.0/ mound for commission and Tk. 3.0/ mound for weighing. For processing, Kutcha balers paid Tk. 7.0/ mound for assortment, Tk. 0.5/ mound for rope making, Tk. 0.15/ mound for bale ticket and Tk. 4.0/ mound for processing & stacking. For selling, Kutcha balers paid Tk. 1.5/ mound for dispatch, Tk. 4.0/ mound for transportation and Tk. 1.5/ mound for internal brokerage. Other costs paid by Kutcha baler were Tk. 8.0/ mound for insurance premium, Tk. 4.91/ mound for salary & establishment, Tk. 4.0/ mound for godown rent, Tk. 4.0/ mound for storage, Tk. 1.5/ mound for telephone bill, Tk. 1.0/ mound for electricity bill and Tk. 2.9/ mound for personal expenses.

Table 6.4.1 Marketing cost of Kutcha baler

Cost Items		**Tk./Mound**
A. Buying Cost	Loading & unloading	2.27
	Transportation	4.66
	Commission Paid	3.0
	Weighing	3.0
B. Processing Cost	Assortment	7.0
	Rope Making	0.5
	Bale Ticket	0.15
	Processing &stacking	4.0
C. Selling Cost	Dispatch	1.5
	Transportation	4.0
	Internal Brokerage	1.5
D. Others cost	Insurance premium	8.0
	Salary & establishment	4.91
	Godown rent	4.0
	Storage/wastage	4.0
	Telephone bill	1.5
	Electricity bill	1.0
	Personal expenses	2.9
Total Marketing Cost		**57.90**

Source: Market survey, 2022

6.4.2 Marketing margin of Kutcha baler

Total marketing margin of Kutcha baler was Tk. 33.51/ mound (Table 6.4.2). Table 6.4.2 shows the marketing margin of Kutcha baler. Kutcha baler purchase price of jute was Tk. 3642.50/ mound. They sold jute at Tk. 3750.0/ mound. Total marketing cost of Kutcha baler was Tk. 57.90/ mound. Marketing margin of Kutcha baler was Tk. 50.26/ mound.

Table 6.4.2 Marketing margin of Kutcha Baler

Items	**Tk./Mound**
Purchase price (a)	3642.50
Sale price (b)	3750.0
Total marketing cost (c)	57.90
Profit (b – a - c)	50.26

Source : Market survey, 2022

6.5 Pucca baler

Pucca balers buy jute in loose form from Faria and also in the form of Kutcha bales from Kutcha balers.They pressed and packed the raw jute according to the export grades in the pucca baling press and sold them to the exporters and millers with the help of Dalals. Basically there was no difference between pucca balers and exporters because some pucca balers operate as exporters. Exporters operate in the terminal market and procure loose jute from dealers of jute and baled jute from Kutcha balers and pucca balers. They also purchased baled jute from the Bangladesh Jute Corporation (BJC).They export raw jute after processing and baling it in their own presses or in other presses on payment of baling charges. They sell baled jute to the mills through Dalals, while selling Pucca bales to the foreign buyers; they sought the help of international brokers. So, we can say that all exporters are Pucca balers but all Pucca balers are not exporters.

6.5.1 Marketing cost of Pucca baler

Total marketing cost of Pucca baler for performing various marketing functions is Tk. 73.20/

Table 6.5.1 Marketing cost of Pucca Baler

Cost Items		**Tk./Mound**
A. Buying Cost	Loading & unloading	1.59
	Transportation	2.08
	Commission Paid	1.0
	Weighing	1.0
B. Processing Cost	Assortment	14.0
	Rope Making	1.0
	Bale Ticket	0.5
	Processing &stacking	14.0
C. Selling Cost	Dispatch	1.0
	Transportation	5.0
	Internal Brokerage	1.75
D. Others cost	Insurance premium	8.0
	Salary & establishment	5.12
	Godown rent	5.5
	Storage/wastage	5.0
	Telephone bill	1.8
	Electricity bill	1.6
	Personal expenses	3.25
Total Marketing Cost		**73.20**

Source : Market survey, 2022

mound (Table 6.5.1). For buying, Pucca balers paid Tk. 1.59/ mound for loading & unloading, Tk. 2.08/ mound for transportation, Tk. 1.0/ mound for commission and Tk. 1.0/ mound for weighing. For processing, Pucca balers paid Tk. 14.0/ mound for assortment, Tk. 1.0/ mound for rope making, Tk. 0.5/ mound for bale ticket and Tk. 14.0/ mound for processing & stacking. For selling, Pucca balers paid Tk. 1.0/ mound for dispatch, Tk. 5.0/ mound for transportation and Tk. 1.75/ mound for internal brokerage. Other costs paid by Pucca baler were Tk. 8.0/ mound for insurance premium, Tk. 5.12/ mound for salary & establishment, Tk. 5.5/ mound for godown rent, Tk. 5.0/ mound for storage, Tk. 1.8/ mound for telephone bill, Tk. 1.6/ mound for electricity bill and Tk. 3.25/ mound for personal expenses.

6.5.2 Marketing margin of Pucca baler

Total marketing margin of Pucca baler was Tk. 63.47/ mound (Table 6.5.2). Table 6.5.2 shows the marketing margin of Pucca baler. Pucca baler purchase price of jute was Tk. 3663.33/ mound. They sold jute at Tk. 3800.0/ mound. Total marketing cost of Pucca baler was Tk. 73.20/ mound. Marketing margin of Pucca baler was Tk. 63.47/ mound.

Table 6.5.2 Marketing margin of Pucca Baler

Items	**Tk./Mound**
Purchase price (a)	3663.33
Sale price (b)	3800.00
Total marketing cost (c)	73.20
Profit (b – a - c)	63.47

Source: Market survey, 2022

6.6 Conclusion

The study found that jute production was profitable for both two varieties of jute for traders. Total marketing cost of Faria was found Tk. 53.54/ mound and Total marketing margin of Faria was found Tk. 79.79/ mound. Total marketing cost of Bepari was found Tk. 56.29/ mound and Total marketing margin of Bepari was found Tk. 10.38/ mound. Total marketing cost of Aratdar was found Tk. 54.83/ mound and Total marketing margin of Aratdar was found Tk. 33.51/ mound. Total marketing cost of Kutcha baler was found Tk. 57.90/ mound and Total marketing margin of Kutcha baler was found Tk. 50.26/ mound. Total marketing cost of Pucca baler was found Tk. 73.20/ mound and Total marketing margin of Pucca baler was found Tk. 63.47/ mound. So we can say that both jute varieties are profitable for jute traders in the study area.

Chapter VII

Problems Faced by Farmers and Traders and Possible Suggestions Mentioned by Them

7. Introduction

This chapter highlights the major problems of the jute farmers in producing jute in the study area. Every respondent farmer was asked if there were any problems faced by them related to farming of jute. Their response were recorded by the researcher. There were multiple numbers of problem faced by the farmers, these problems confronted by the individual farmers were not identical for the production. All of these problems are briefly discussed below.

7.1 Problems faced by farmers

7.1.1 Production problems

7.1.1.1 High price of inputs

High price of input is a major problem for jute farmers. Very few farmers said they were satisfied with the input price. 74.0 % of farmers complained that the input price of jute was too high.

7.1.1.2 Unavailability of inputs

Unavailability of input is another production problem of jute in the study area. 64.0 % of the farmers said that there was unavailability of inputs for jute production in the study area.

7.1.1.3 Unavailability and high price of labour

Jute is a labor intensive crop. So, hired labors are needed for completing various operations of jute production. According to many researchers, the highest percentage of production price goes for labour wages. During the period of weeding and harvesting, shortage of human labor and high price of labour were found in the study area. Following the shortage of labor, wage increased significantly during the production season. 56.0 % of sample farmers complained about unavailability and high price of labour at due time.

7.1.1.4 Disease

Farmers faced various crop diseases during the production period of jute in the study area. More than 49.0 % of the respondents complained about the disease they were facing during their farming period.

7.1.1.5 Unavailability and high price of insecticides

Various insecticides are needed for controlling insects attack in jute production. Unavailability and high price of insecticides is also a major problem in the study area. 51.0 % of the farmers said that there was unavailability and high price of insecticides during their production period.

Table 7.1 production Problems faced by the jute farmers in the study area

Types of problems	**No of respondents**	**% of farmers**
High price of input	74.0	74.0
Unavailability of input	64.0	64.0
Unavailability and high price of labour	56.0	56.0
Disease	49.0	49.0
Unavailability and high price of insecticides	51.0	51.0
Lack of capital	63.0	63.0
High interest rate	100.0	100.0

Source**:** Farmer's household survey, 2022

7.1.1.6 Lack of capital

Huge amount of cash money is needed in jute cultivation. Jute growers need to purchase various inputs like seed, human labor, fertilizers and pesticides in proper time. Most of the sample farmers were not well off and they faced this financial crisis. 63.0 % of farmers had lack of capital at different stage of jute production.

7.1.1.7 High interest rate

High interest rate is the biggest problem for jute farmers in the study area. All the sample farmers complained that the interest rate was very high for jute farmers.

7.1.2 Marketing problems

7.1.2.1 Insufficient no. of purchase center/market

One of the marketing problems of jute growers in the study area was insufficient no of purchase center. 55.0 % of farmers felt the need of more purchase center in that location.

7.1.2.2 Low number of intermediaries for buy jute

Marketing intermediaries of jute are Faria, Bepari, Aratdar, Kutcha baler and Pucca baler. 57.0 % of the sample farmers opined that the market intermediaries of jute were not sufficient in the study area.

Table 7.2 Marketing problems faced by the jute farmers in the study area

Types of problems	No of respondents	% of farmers
Insufficient no. of purchase center/market	55	55
Low number of intermediaries for buy jute	57	57
Irregular payment by buyers	61	61
Deceived in weighing and grading	63	63
Higher transportation cost	100	100
Lower price of jute in relation to production cost	55	55
Insufficient storage facility	67	67
Price fluctuation	96	96

Source: Farmer's household survey, 2022

7.1.2.3 Irregular payment by buyers

Most of the sample farmers were not well off and they faced financial crisis. Payment from buyers of their product were irregular and 61.0 % of the farmers complained about the this irresponsible behaviour of the buyers.

7.1.2.4 Deceived in weighing and grading

Proper weighing and grading is very important for the jute growers to get the exact price from buyers. 63.0 % of the farmers complained that they got deceived by the buyers.

7.1.2.5 Higher transportation cost

Farmers usually sell their product at farm gate in order to save the transportation cost. Most of the times, they sold their products to the Beparis at a lower rate than village market. Some farmers sold their products at village market. It was observed that, selling jute at market needs higher transportation cost. All the sample farmers complained about high transportation cost.

7.1.2.6 Low price of jute

Jute is the main cash crop of the farmers. Many farmers family expect to meet their family needs by selling jute with a good revenue. So, low price of jute is a very big problem. Most of the time jute growers are deprived of a reasonable price. 55.0 % of the sample farmers complained that the market price was too low to cover the production cost.

7.1.2.7 Insufficient storage facility

Farmers need to store their jute fiber for future sale so that they can ensure a fair price. There was poor jute storing facilities in the study area. 67.0 % of the farmers complained about storing place. Farmers used to store jute at their own house and fibers were badly affected by insect sand diseases.

7.1.2.8 Price fluctuation

There was frequent fluctuation in the market price of jute. 96.0 % of the farmers complained that the price of jute is not stable in the study area.

7.1.3 Possible suggestions mentioned by farmers

Table 7.3 shows possible suggestions mentioned by farmers. All the farmers mentioned that they need regular payment by jute buyers, proper weighing and grading, reasonable transportation cost, reasonable price of jute and stable price of jute. 81.0 % of farmers mentioned that they need more storage facility of jute. 53.0 % of the farmers mentioned that they need more number of intermediaries to purchase jute. 50.0 % mentioned that they need more number of jute purchase center.

Table 7.3 Possible suggestions mentioned by farmers

Possible suggestions	No. of respondent	% of farmers
Need more number of jute purchase center	50.0	50.0
Need more number of intermediaries to purchase jute	53.0	53.0
Need regular payment by jute buyer	100.0	100.0
Need proper weighingand grading	100.0	100.0
Need reasonable transportation cost	100.0	100.0
Need reasonable price of jute	100.0	100.0
Need more storagefacility	81.0	81.0
Need stable price of jute	100.0	100.0

Source: Farmer's household survey, 2022

7.2 Problems mentioned by traders

7.2.1 Problems mentioned by Faria

Table 7.4 shows different problems mentioned by Faria. 33.33 % of Faria mentioned the problem of insufficient number of purchase center. 50.0 % of Faria mentioned the problem of irregular payment by buyers. 50 % of Faria mentioned the problem of deceived in weighing and grading. 75.0 % of Faria mentioned the problem of high transportation cost and 58.33 % of Faria mentioned the problem of insufficient storage facility. 75.0 % of Faria mentioned the problem of low price of jute and 58.33 % of Faria mentioned the problem of capital.

Table 7.4 Problems mentioned by Faria

Problems	Percent
Insufficient no. of purchase centre	33.33
Irregular payment by buyers	50.0
Deceived in weighing and grading	50.0
Higher transportation cost	75.0
Insufficient storage facility	58.33
Low price of jute	75.0
Lack of capital	58.33

Source: Market survey, 2022

7.2.2 Possible suggestions mentioned by Faria

Table 7.5 shows possible suggestions mentioned by Faria to solve their problems. All the Faria mentioned that they need capital with low interest rate. 91.67 % of Faria mentioned that they need more facilities in the market. 83.34 % of Faria mentioned that they need reasonable price of jute. 83.34 % of Faria mentioned that they need reasonable transportation cost.

Table 7.5 Possible suggestions mentioned by Faria

Suggestions	Percent
Need capital with low interest rate	100.0
Need more facilities in the market	91.67
Need reasonable price of jute	83.34
Need reasonable transportation cost	83.34

Source: Market survey,2022

7.2.3 Problems mentioned by Bepari

Table 7.6 shows different problems mentioned by Bepari 50.0 % of Faria mentioned the problem of insufficient number of purchase center. 50.0 % of Bepari mentioned the problem of irregular payment by buyers. 66.67 % of Bepari mentioned the problem of deceived in weighing and grading. 83.33 % of Bepari mentioned the problem of high transportation cost and 50.0 % of Bepari mentioned the problem of insufficient storage facility. 83.33 % of Bepari mentioned the problem of low price of jute and 50.0 % of Bepari mentioned the problem of capital.

Table 7.6 Problems mentioned by Bepari

Problems	Percent
Insufficient no. of purchase centre	50.0
Irregular payment by buyers	50.0
Deceived in weighing and grading	66.67
Higher transportation cost	83.33
Insufficient storage facility	50.0
Low price of jute	83.33
Lack of capital	50.0

Source: Market survey, 2022

7.2.4 Possible suggestions mentioned by Bepari

Table 7.7 shows possible suggestions mentioned by Bepari to solve their problems. 91.67 % of

Bepari mentioned that they need capital with low interest rate. 75.0 % of Bepari mentioned that they need more facilities in the market. 91.67 % of Bepari mentioned that they need reasonable price of jute. 83.33 % of Bepari mentioned that they need reasonable transportation cost.

Table 7.7 Possible suggestion mentioned by Bepari

Suggestions	**Percent**
Need capital with low interest rate	91.67
Need more facilities in the market	75.0
Need reasonable price of jute	91.67
Need reasonable transportation cost	83.33

Source: Market survey, 2022

7.2.5 Problems faced by Aratdar

Table 7.8 shows different problems mentioned by Aratdar. 50.0 % of Aratdar mentioned the problem of insufficient number of purchase center. 16.67 % of Aratdar mentioned the problem ofirregular payment by buyers. All Aratdar mentioned the problem of deceived in weighing and grading. 50.0 % of Aratdar mentioned the problem of high transportation cost and 33.33 % of Aratdar mentioned the problem of insufficient storage facility. 66.66 % of Aratdar mentioned the problem of low price of jute and 50.0 % of Aratdar mentioned the problem of capital.

Table 7.8 Problems mentioned by Aratdar

Problems	**Percent**
Insufficient no. of purchase centre	50.0
Irregular payment by buyers	16.67
Deceived in weighing and grading	100.0
Higher transportation cost	50.0
Insufficient storage facility	33.33
Low price of jute	66.66
Lack of capital	50.0

Source: Market survey, 2022

7.2.6 Possible suggestions mentioned by Aratdar

Table 7.9 shows possible suggestions mentioned by Aratdar to solve their problems. 91.67 % of Aratdar mentioned that they need capital with low interest rate. 83.33 % of Aratdar mentioned that

they need more facilities in the market. 66.67 % of Aratdar mentioned that they need reasonable price of jute. 75.0 % of Aratdar mentioned that they need reasonable transportation cost.

Table 7.9 Possible suggestions mentioned by Aratdar

Suggestions	Percent
Need capital with low interest rate	91.67
Need more facilities in the market	83.33
Need reasonable price of jute	66.67
Need reasonable transportation cost	75.0

Source: Market survey,2022

7.2.7 Problems mentioned by Kutcha baler

Table 7.10 shows different problems mentioned by Kutcha baler. 58.33 % of Kutcha baler mentioned the problem of insufficient number of purchase center. 16.67 % of Kutcha baler mentioned the problem of irregular payment by buyers. 91.66 % Kutcha baler mentioned the problem of deceived in weighing and grading. 50.0 % of Kutcha baler mentioned the problem of high transportation cost and 25.0 % of Kutcha baler mentioned the problem of insufficient storage facility. 66.66 % of Kutcha baler mentioned the problem of low price of jute and 33.33 % of Kutcha baler mentioned the problem of capital.

Table 7.10 Problems mentioned by Kutcha baler

Problems	Percent
Insufficient no. of purchase centre	58.33
Irregular payment by buyers	16.67
Deceived in weighing and grading	91.66
Higher transportation cost	50.0
Insufficient storage facility	25.0
Low price of jute	66.66
Lack of capital	33.33

. Source: Market survey, 2022

7.2.8 Possible suggestions mentioned by Kutcha baler

Table 7.11 shows possible suggestions mentioned by Kutcha baler to solve their problems. All the Kutcha baler mentioned that they need capital with low interest rate. 83.33 % of Kutcha baler mentioned that they need more facilities in the market. 75.0 % of Kutcha baler mentioned that they need reasonable price of jute. 91.67 % of Kutcha baler mentioned that they need reasonable transportation cost.

Table 7.11 possible suggestions mentioned by Kutcha baler

Suggestions	Percent
Need capital with low interest rate	100.0
Need more facilities in the market	83.33
Need reasonable price of jute	75.0
Need reasonable transportation cost	91.67

Source: Market survey, 2022

7.2.9 Problems mentioned by Pucca baler

Table 7.12 shows different problems mentioned by Pucca baler. 50.0 % of Pucca baler mentioned the problem of insufficient number of purchase center. 25.0 % of Pucca baler mentioned the problem of irregular payment by buyers. 91.66 % Pucca baler mentioned the problem of deceived in weighing and grading. 58.33 % of Pucca baler mentioned the problem of high transportation cost and 33.33 % of Pucca baler mentioned the problem of insufficient storage facility. 66.66 % of Pucca baler mentioned the problem of low price of jute and 41.66 % of Pucca baler mentioned the problem of capital.

Table 7.12 Problems mentioned by Pucca baler

Problems	Percent
Insufficient no. of purchase centre	50.0
Irregular payment by buyers	25.0
Deceived in weighing and grading	91.66
Higher transportation cost	58.33
Insufficient storage facility	33.33
Low price of jute	66.66
Lack of capital	41.66

Source: Market survey, 2022

7.2.10 Possible suggestions mentioned by Pucca baler

Table 7.13 shows possible suggestions mentioned by Pucca baler to solve their problems. All the Pucca baler mentioned that they need capital with low interest rate. 91.66 % of Pucca baler mentioned that they need more facilities in the market. 83.33 % of Pucca baler mentioned that they need reasonable price of jute. 91.67 % of Pucca baler mentioned that they need reasonable transportation cost.

Table 7.13 Possible suggestions mentioned by Pucca baler

Suggestions	Percent
Need capital with low interest rate	100.0
Need more facilities in the market	91.66
Need reasonable price of jute	83.33
Need reasonable transportation cost	91.67

Source: Market survey, 2022

7.3 Conclusion

There are many Problems faced by jute farmers and traders.These problems are destroying the hope of growth of jute industry in the country. High interest rate is the main problem of farmers and all the farmers mentioned that they need capital with low interest rate to solve this problem. Low price of jute is the main problem of Faria and they need stable price of jute to solve this problem. Higher transportation cost is the main problem of Bepari and they need reasonable transportation cost to solve this problem. Deceived in weighing and grading is the main problem of Aratdar, Kutcha baler and Pucca baler and they need proper weighing and grading. It can, therefore, be concluded that hectarage of jute production could possibly be increased to a large extent if the above mentioned problems can be solved immediately.

Chapter VIII

Summary, Conclusion and Recommendation

8.1 Summary

The economy of Bangladesh largely depends on jute which earns a vital share of its foreign exchange. Raw jute and jute product produced in Bangladesh are world famous for its quality like color, length, strength, luster, texture etc. So Bangladesh has strong dominance over other countries on jute industry. Jute was one of the most important export items till the end of 1980s. Jute is the golden fiber of Bangladesh and it plays a very important role in the economy of Bangladesh. At present, Bangladesh is the second largest producer of jute after India. Jute is being produced at about 55 districts of Bangladesh. This country has got considerable advantage on growing ideal quality jute fiber of the world. Bangladeshis famous for jute and allied fibers, but garments industries have faster growth due to cheap labor cost comparing to jute industry. Jute industry may create a bright future if diversification of its limited resources is possible. Diversified products of jute are eco- friendly, non-plastic, non-toxic and biodegradable. These products help the environment from degradation. Jute Diversification Promotion Centre (JDPC) was established in Bangladesh in 2002 for the promotion of jute cultivation in Bangladesh. Cultivable land is decreasing day by day as a result of increasing population. Government of Bangladesh perceived the importance of jute in the economy of the country, which provides sustenance of millions of people engaged in jute industry as farmer, manufacturer, businessman, labor, etc. Jute is economically a significant industry of the country, any problem of this industry should be scrutinized carefully and should be composed as early as possible. Cost effective technologies should be amplified for production and processing of jute so that production cost can be reduced and profit margin increases.The current study has been commenced considering the importance of jute sector in the economy of Bangladesh. It inquire economic profitability of jute production at the selected study area. The specific objectives of the study are to know the socioeconomic characteristics of sample farmers, to compare the profitability of two jute varieties (Robi-1 & JRO 524) and to identify the problems faced by farmers and traders and suggest some policy recommendations. The study was conducted in two villages under Bhangga Upazila of Faridpur district. The study area were purposively selected. In total 160 samples were selected, 100 of them were jute farmers and 60 are jute traders from Bhangga Upazila. In the present study, purposive

sampling technique was followed for reducing time and cost and to accomplish the ultimate objectives of the study. Necessary primary and secondary data were collected for the study. The study is mainly based on primary data, which were collected through direct interview with the respondents by the researcher herself. Survey method was used for collecting reliable information regarding cost and revenue of jute per hectare by interviewing sample farmers. After necessary editing the data were tabulated and analyzed by using MS Excel. Socio-economic characteristics of the sample farmers were identified in the present study. About 98percent of the jute farmers were educated, among 100 farmers, 69.0 % had primary level of education. 24.0 % of farmers have up to secondary level literacy, 5.0 % of farmers had higher secondary level literacy. Average family size of the sample farmers was of 5.58. 79% families were small families among the sample farmers, consisting of 1 to 5 members. Only 19% farmers were under 31 years age group among the sample farmers. Majority of the farmers were at the age group 31 to 55 years, what refers to having more strength and experience of farming. 22 farmers among 100 were of above 55years age. Average farm size was 0.3692 hectare or 92.3 decimal in this study. Cost and revenue were calculated to know the income from jute cultivation. The cost items were labour , fertilizer, manure, seed, pesticide, power tiller, family labor cost, interest on operating capital and land use cost. The analysis of cost and revenue revealed that labor was important element for producing jute. Per hectare average cost of labor was Tk. 500/man-days for Robi-1 and JRO524. Per hectare total costs in producing Robi-1 was Tk. 94791.78. The findings of the study showed that the average yield of Robi-1 fiber was 1780.13 kg/ hectare and the average price of Robi-1 fiber was Tk. 87.5/ kg. The average yield of Robi-1 stick was 3040.42/ hectare and the average price of Robi-1 stick was Tk. 10/ bundle. The gross return from selling Robi-1 product was Tk. 186165.62/ hectare. The average net return per hectare was found to be Tk. 91373.84 for Robi-1. BCR came out to be 1.96 for Robi-1. Per hectare total costs in producing JRO524 was Tk.96311.05. The findings of the study showed that the average yield of JRO524 fiber was 2963.77 kg/ hectare and the average price of JRO524 fiber was Tk. 87.5/kg. The average yield of JRO524 stick was 4489.83/ hectare and the average price of JRO524 stick was Tk. 10/ bundle. The gross revenue from selling JRO524 productwas Tk. 304228.18/ hectare. The average net revenue per hectare was found to beTk. 207913.13 for JRO524 . BCR considering total cost was 3.15 for JRO524 . This result showed that JRO 524 jute variety production was profitable for farmers in the study area.For jute traders, the average total marketing cost was found Tk. 53.54, Tk. 56.29, Tk. 54.83, Tk. 57.90, Tk. 73.20 for Faria, Bepari, Aratdar, Kutcha baler and Pucca baler respectively. The average total

profit was found tk. 79.79, tk 10.38, tk 33.51, tk 50.26, and tk 63.47for Faria, Bepari , Aratdar, Kutcha baler and Pucca baler respectively. The study also identified the problems faced by the farmers during jute production. Production problems of farmers were high price of input, unavailability of input, unavailability and high price of labour, disease, unavailability and high price of insecticides, lack of capital, high interest rate. Marketing problems of farmers were insufficient no. of purchase center/market, low number of intermediaries, irregular payment by buyers, deceived in weighing and grading, higher transportation cost, lower price of jute in relation to production cost, insufficient storage facility and price fluctuation. To solve this problems possible suggestions mentioned by farmers were they need more number of purchase center, more number of intermediaries to purchase jute, regular payment by buyers, proper weighing & grading, reasonable transportation cost, reasonable price of jute, more storage facility and stable price of jute. Problems faced by traders were insufficient number of purchase center, irregular payment by buyers, deceived in weighing & grading, higher transportation cost, insufficient storage facility, low price of jute and lack of capital. Possible suggestions mentioned by traders were they need capital with low interest rate, more facilities in the market, reasonable price of jute and reasonable transportation cost.

8.2 conclusion

The specific objectives of the study are to know the socioeconomic characteristics of sample farmers, to compare the profitability of two jute varieties (Robi-1 & JRO 524) and to identify the problems faced by farmers and traders and suggest some policy recommendations. Some essential features of the socio-economic profiles such as age, education, family size of the sample farmers are presented in this study. There was many socio-economic differences among the farmers of the study area. Majority of the farmers came from age group 31-45 years, majority of the sample farmers families were small size and majority of the farmers had primary education. The study found that jute production was profitable for both two varieties of jute. Total cost of producing Robi-1 jute was found to be Tk. 94791.78/ha and net return from Robi-1 was Tk. 91373.84/ha. Total cost of producing JRO 524 jute was Tk. 96311.05/ha and net return from JRO 524was tk. 207913.13/ha. Undiscounted Benefit Cost Ratio (BCR) for Robi-1 was found to be 1.96 which implies that one taka investment in jute (Rabi-1) cultivation generated Tk. 1.96 and Undiscounted Benefit Cost Ratio (BCR) for JRO 524 was found to be 3.15 which implies that one taka investment in jute (JRO-524) cultivation generated Tk. 3.15. BCR of both variety shows that both variety of jute production were profitable but production of JRO 524 jute variety was more

profitable than Robi-1 jute variety in the study area. The study found that jute production was profitable for both two varieties of jute for traders. Total marketing cost of Faria was found Tk. 53.54/ mound and Total marketing margin of Faria was found Tk. 79.79/ mound. Total marketing cost of Bepari was found Tk. 56.29/ mound and Total marketing margin of Bepari was found Tk. 10.38/ mound. Total marketing cost of Aratdar was found Tk. 54.83/ mound and Total marketing margin of Aratdar was found Tk. 33.51/ mound. Total marketing cost of Kutcha baler was found Tk. 57.90/ mound and Total marketing margin of Kutcha baler was found Tk. 50.26/ mound. Total marketing cost of Pucca baler was found Tk. 73.20/ mound and Total marketing margin of Pucca baler was found Tk. 63.47/ mound. So we can say that both jute varieties are profitable for jute traders in the study area. There are many Problems faced by jute farmers and traders.These problems are destroying the hope of growth of jute industry in the country. High interest rate is the main problem of farmers and all the farmers mentioned that they need capital with low interest rate to solve this problem. Low price of jute is the main problem of Faria and they need stable price of jute to solve this problem. Higher transportation cost is the main problem of Bepari and they need reasonable transportation cost to solve this problem. Deceived in weighing and grading is the main problem of Aratdar, Kutcha baler and Pucca baler and they need proper weighing and grading. It can, therefore, be concluded that hectarage of jute production could possibly be increased to a large extent if the above mentioned problems can be solved immediately.

8.3 Recommendations

On the basis of major findings of the study, the following important recommendation may be made for policy formulation to develop the jute sector of Bangladesh.

- ❖ More number of jute purchase center should be established
- ❖ More number of intermediaries to purchase jute
- ❖ Regular payment by jute buyer
- ❖ Proper weighing & grading
- ❖ Reasonable transportation cost
- ❖ Reasonable price of jute
- ❖ More storage facility
- ❖ Stable price of jute
- ❖ Capital with low interest rate

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Department of Agribusiness & Marketing

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Questionnaire for Jute Farmers

Research title: Comparative Economic Performance of Two Jute Varieties in Faridpur District of Bangladesh

Sample no. Date:

1. Name:
2. Address:
3. Age:
4. Education (years of schooling)

Primary: Secondary:

5. Occupation:

Code: 1= Agriculture, 2= Employment, 3= Day labour, 4= Petty businessman, 5= Others

6. Total number of family member:

Contact Number:

Table: Different Characteristics of Farmers

Characteristics	**Value**
1.No. of agricultural training	
2.No. of extension contact	
3.Years of farming experience	
4. Organizational Participation (NGOs, Cooperatives) Yes/ No	
5. Farmers have access to TV (Yes/ No)	
6. Farmers have mobile phone (Yes/ No)	
7. Farmers have internet in the mobile phone (Yes/ No)	
8. Homestead area (decimal)	
9. Farm size (decimal)	
10. Jute cultivation area (decimal)	
11. Farmers used organic fertilizer (Yes/ No)	
12. Farmers used inorganic fertilizer (Yes/ No)	
13. Distance from home to local market (km)	

Table: Cost of Jute Production for Different Varieties

Item	Per unit	Quantity	Cost (Tk.)	Cost (Tk.)
Human Labour • Family • Hired				
Land • Preparation • Power tiller				
Seed • Own • Purchased				
Fertilizer • Urea • TSP • MOP • Gypsum • Zinc				
Manure • Own • Purchased				
Pesticide				
Insecticide				
Irrigation				
Transportation				
Total variable cost				
Land rent				
Interest on operating capital				
Total cost				

Table: Revenue of Jute cultivation (fiber) for different varieties

Item	**Variety**	
Product • Fibre • Stick		
Price of fibre Price of stick		
Gross revenue • Value of fibre • Value of stick		

Table: Production problem of jute as reported by the farmers

Problems	**Variety**	
	Robi-1	**JRO-524**
High price of inputs		
Unavailability and high price of labour		
Disease		
Lack of capital		

Table: Possible suggestions to solve production problem of farmers

Possible suggestions	**Variety**	
	Robi-1	**JRO-524**
Need reasonable price of input		
Need capital with low interest rate		
Need available supply of insecticide		
Need available supply of pesticide		

Table: Marketing problems of jute as reported by the farmers

Problems	**Variety**	
	Robi-1	**JRO-524**
Insufficient no. of purchase center/ market		
Low number of intermediaries for buy jute		
Irregular payment by buyers		
Deceived in weighing and grading		
Higher transportation cost		
Lower price of jute in relation to production cost		
Insufficient storage facility		
Price fluctuation		

Table: Possible suggestions to solve marketing problems of farmers

Problems	**Variety**	
	Robi-1	**JRO-524**
Need more number of purchase center/ market		
Need more number of intermediaries to purchase jute		
Need regular payment by jute buyers		
Need proper weighing and grading		
Need reasonable transportation cost		
Need reasonable price of jute		
Need more storage facility		
Need stable price of jute		

Department of Agribusiness & Marketing

Sher-e-Bangla Agricultural University, Dhaka

Questionnaire for Jute Traders

Research title: Comparative Economic Performance of Two Jute Varieties in Faridpur District of Bangladesh

Sample no. Date:

1. Name:
2. Address:

a) Bazar name:

b) Union:

c) Upazila:

d) District:

Contact Number:

Table 1: Price of jute (Taka per mound) at different market intermediaries

Types of buyers	Purchase price	Sale price
Faria		
Bepari		
Aratdar		
Kutcha baler		
Pucca baler		

Table 2: Marketing cost of Faria, Bepari and Aratdar

Cost items	Faria	Bepari	Aratdar
Transportation			
Loading and unloading			
Storage			
Commission paid			
Market toll			
Tips and donations			
Assortment and weighing			
Packaging cost			
Telephone bill			
Electricity bill			
Salary and wages			
Personal expenses			

Table 3: Marketing cost of Kutcha baler and Pucca baler

Cost items	Cost of jute (Tk./mound)	
	Kutcha baler	**Pucca baler**
A. Buying cost Loading and unloading Transportation Commission paid Weighing		
B. Processing cost Assortment Rope making Bale ticket Pressing and stacking		
C. Selling cost Dispatch Transportation Internal brokerage		
D. Other cost Insurance premium Salary and establishment Godown rent Storage/Wastages Telephone bill Electricity bill Personal expenses		

Table 4: Marketing problem of jute as reported by the traders

Problem	Please give tick mark
Insufficient number of purchase center	
Irregular payment by buyers	
Deceived in weighing and grading	
Higher transportation cost	
Insufficient storage facility	
Low price of jute	
Lack of capital	

Table 5: Possible suggestions to solve traders problem

Possible solutions	Please give tick mark
Need capital with low interest rate	
Need more storage facilities in the market	
Need reasonable price of jute	
Need reasonable transportation cost	