Internship Report

On

Feasibility Study of

"Production of Cavendish Banana in Bangladesh"

a Project of
Rahimafrooz CIC Agro Limited

Daffodil International University
102, SHUKRABAD, MIRPUR ROAD
DHAKA -1207

Feasibility Study of "Production of Cavendish Banana in Bangladesh" a Project of Rahimafrooz CIC Agro Limited

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Subject: Submission of Internship Report on Feasibility Study of "**Production of Cavendish Banana in Bangladesh**" a Project of Rahimafrooz CIC Agro Limited.

Dear Sir,

This is my pleasure that I have completed my internship and hereby ready to submit my internship report on **"Feasibility Study of Production of Cavendish Banana in Bangladesh, a Project of Rahimafrooz CIC Agro Limited".** According to your instruction I have practically worked in Rahimafrooz CIC Agro Limited. I have really enjoyed the working environment. I tried my best to present all those things that I have experienced over there while doing my internship under your supervision and guidelines.

I tried my best to work sincerely to cover all aspects regarding the matter. I have thoroughly enjoyed in preparing this internship report which is carrying out vast description of practical knowledge. This report along with all kinds of necessary information regarding the study is being submitted to you for your evaluation.

I sincerely hope that you will appreciate my effort.

Thank you

Sincerely yours,

_____

Jannatul Ferdaus
ID: 141-14-1347
MBA Program

Certificate of approval

This is to certify that Jannatul Ferdaus bearing ID No: 141-14-1347 was a regular student of MBA program and completed internship program under my supervision. The report, **"Feasibility Study of Production of Cavendish Banana in Bangladesh, a Project of Rahimafrooz CIC Agro Limited"**, is prepared by her. She is recommended for viva/ defense to complete the internship program.

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Acknowledgement

First, I would like to thank the Almighty for giving me the strength, power, energy and nerves to successfully complete the report. Next, with warm gratitude from the deepest of my heart I would like to remember my parents for whom I get a chance to bring myself at this stage of my life.

I express gratitude to my honorable course supervisor Mr. Mahbub Parvez for his splendid suggestion, fantastic guidance, necessary recommendation, positive reinforcement effective discipline, justice and fairness, recognition and rewards. His motivation power is also enormous, for which I engaged my best efforts to prepare such report.

I am also very grateful to my supervisor, Head of Finance of Rahimafrooz CIC Agro Limited and some of my friends who have extended their helpful hands to prepare the report.

Executive Summary:

Rahimafrooz (Bangladesh) Limited and CIC Agri Businesses (pvt.) Limited have come together to form a Joint Venture company, Rahimafrooz CIC Agro Limited.

Rahimafrooz CIC Agro Limited decided to start a new project named "**Production of Cavendish Banana in Bangladesh**". This report is on the feasibility study of growing Cavendish Banana for internal and external marketing. Rahimafrooz CIC intends to produce banana of Cavendish variety that has high potential market in and outside the country. Head of Finance of RCAL and my supervisor, Mir Asraful Islam worked with this project and I helped him to complete this project. After feasibility analysis of physical facility of this Production of Cavendish Banana in Bangladesh, we think that the project is so much profitable. We calculated Net Present Value, Interest Rate of Return and Payback Period for feasibility analysis of this project. The report is also an examination of the management, operations, technical, HR and marketing aspects on "Production of Cavendish Banana in Bangladesh".

Table of Contents

Chapter 1

Introduction

1.1. Introduction:

This report is prepared as an internship report which is a mandatory requirement for successful completion of MBA program under Daffodil International University and which aims to reflect the professional view of real world working environment. I got proper supervision of my academic supervisor Mr. Mahbub Parvez, Associate Professor and Head, Department of Tourism & Hospitality Management, Faculty of Business & Economics, Daffodil International University throughout my internship period for the successful completion of the report titled **— "Feasibility Study of Production of Cavendish Banana in Bangladesh, a Project of Rahimafrooz CIC Agro Limited".**

1.2. Objectives of the Study:

The main objective of the study to indentify the feasibility of production of Cavendish Banana in Bangladesh, which includes the following specific objectives:

1. To recognise the management aspect of the project
2. To recognise the marketing, financial, technical and socio- economical aspect of the project
3. To recognise some problems to implement the project after analysing feasibility
4. To recommended some suggestions to overcome the problems which are identified by analysing the feasibility.

1.3. Scope of the Study:

The report deals with measuring Feasibility of physical facility for Production of Cavendish Banana in Bangladesh. This project provides Feasibility, risk management and technical sustainability for long term measurement. The Financial analysis was done after a thorough survey of all the factors affecting productivity and marketing potentials

1.4. Methodology of the Study:

Type of research: The report is analytical in nature. Both primary and secondary sources are used to prepare the report.

Sources of Records:

i. Primary Records Collection

I collect primary records from Head of Finance of RCAL and my supervisor, Mir Asraful Islam and Head of Bio- Technology, Nilufer Hye Karim and other related persons. They are all connected with this project. The time period of my study lies in between February 01, 2016 to May 31, 2016.

ii. Secondary Records Collection

The secondary sources of my evidence are as below-

1. Annual report of Rahimafrooz CIC Agro Limited
2. Desk report of the related department
3. Different reference books, published literatures, journals and websites
4. Some of my course elements as related to this report

Population Size: All Employees of Rahimafrooz CIC Agro Limited. There are 50 employees.

Sample Size: No. of Employees: 5

Sampling Method: Judgemental Sampling Method is used to collect records.

Method of Records Collection: Interview and discussion.

Records Analysis & Interpretation: All the quantitative records collected by long term measurement of technical sustainability of production of Cavendish Banana. I used Microsoft Excel 2007 for calculation. Net Present Value, Interest Rate of Return and Payback Period calculation are used for financial analysis of the project. Some evidence have presented by using tables, graphs and pictures.

1.5. Limitations of the report

The limitations of the report are follows:

- As time frame was short and the whole study was conducted by one person there is chance of having error in any stage of records collection, records entry, records organizing, records sorting, records testing, records presentation, interpretation of result, etc.
- There are not enough secondary research materials and published evidence available in Bangladesh.
- The companies don't publish anything almost the project. Since the competition is increasing day by day, the researchers are not focusing this subject well enough.

Chapter 2

ORGANIZATIONAL PROFILE

2.1. Background of Rahimafrooz CIC Agro Limited

A man of strict religious values, yet a believer in progressive dynamism, and a dreamer – Late A C Abdur Rahim overcame numerous challenges and obstacles to become one of the most accomplished entrepreneurs of this country

Rahimafrooz is one of the respected and reputed business houses in Bangladesh. Over the last 50 years it has transformed itself from a small trading company into a leading diversified business firm in Bangladesh. Rahimafrooz consists of nine SBUs that cover automotive aftermarket (such as batteries, tyres, lubricants), power & energy and retail chain 'Agora' which is the first retail chain in Bangladesh, launched in 2001. It produces and markets a range of battery products – automotive, motorcycle, and appliance batteries, Industrial (stationary, deep cycle, traction, VRLA) batteries, IPS and UPS batteries, and rectifiers. The Group's portfolio also includes international tyre brands Dunlop and Kenda, and its own brand RZ Tyre. Rahimafrooz is the exclusive franchisee of the full range of lubricant brand Castrol in Bangladesh. The Company brings to Bangladesh leading gas and diesel generator brands – Pramac as well as Mitsubishi. It also markets home and industrial lighting products from General Electric USA (GE) and electrical accessories from Hager France. The Group operates a non-profit organization Rural Services Foundation (RSF) through which the solar home systems reach the customers in the rural areas of Bangladesh.

Rahimafrooz is a private limited liability company with the Board of Directors comprising six members. The total manpower is 4,000 and has a reported turnover of US$ 250 million with an overall PBT 6 percent of NSV. They now focus on diversifying into agro businesses in order to have a diverse investment portfolio while fulfilling the market need.

Rahimafrooz CIC Agro Limited (RCAL) is a new operational business of agro products segments of Rahimafrooz Bangladesh Limited. Rahimafrooz CIC Agro Limited (RCAL) is a joint venture

private enterprise of Rahimafrooz Bangladesh Limited and CIC Agribusiness Private Limited, Srilanka aimed at production and marketing agricultural products of economic importance. Their wider objective is to export food, seed and seed cultures to countries where there is high demand. RCAL presently is developing facilities for long term production of grasses, sedges varieties; banana and potato tubers in in-vitro form for marketing of cultures or the end product both in country consumption and export with its head office at 13 Mohakhali Commercial Area, Dhaka 1212 hereinafter referred to as the "RCAL" or the 2nd party (which expression wherever the context so permits, shall include its successors in-interest, administrators and legal assigns).

- **Corporate Evidence**

Rahimafrooz CIC Agro Limited (RCAL) was established in 2011 as an Emerging Joint Venture company in Agri-sector of Bangladesh. Their partner is Chemical Industries Corporation (CIC) Srilanka, a leading Agricultural Organization in national agriculture development. It's the reflection of Rahimafrooz vision to engage the agriculture sector to bring the changes in business practices and to contribute in national economy through sustainable solutions to the agricultural sector. Their strategic business units-Agro-Machineries, Seed & Fertilizer provide highly effective products to fulfil the wide gap in Bangladesh market. They aim to provide this nation with a better future with complete solution to the farmer through inspiring innovations and keen focus on research and development.

They have the expertise and equipment to provide their clients with a complete range of services necessary to maximize their rural investment. Their team has always been at the forefront to solve the demand of growers as well as the demand of final customers in the target market. They believe that in order to promote today's global agriculture it is essential to assist to the growers benefit, profit and happiness, along with fulfilling the needs of the final consumer, price and quality wise.

2.2. Vision Statement:

- To be a leader of the best quality produce from 'seed to shelf'.
- To be the pioneer of Diversified & Quality Product Varieties.
- Best after sales service provider in Agribusiness.

2.3. Mission Statement:

We want to bring ethical and excellence in business practices in agro sector contributing significantly to **GDP** and ensuring trust from grower to consumer.

2.4. Values of the Organization

Integrity **:** We are honest, transparent and ethical in all our dealings

Passion to Win **:** We deliver what we promise by bringing the best in all of us

Respect to individual **:** We win the hearts and minds of all people we interact with

Teamwork **:** We believe in trust, truth and team effort

Making a Better World **:** We compassionately contribute to the community we live in

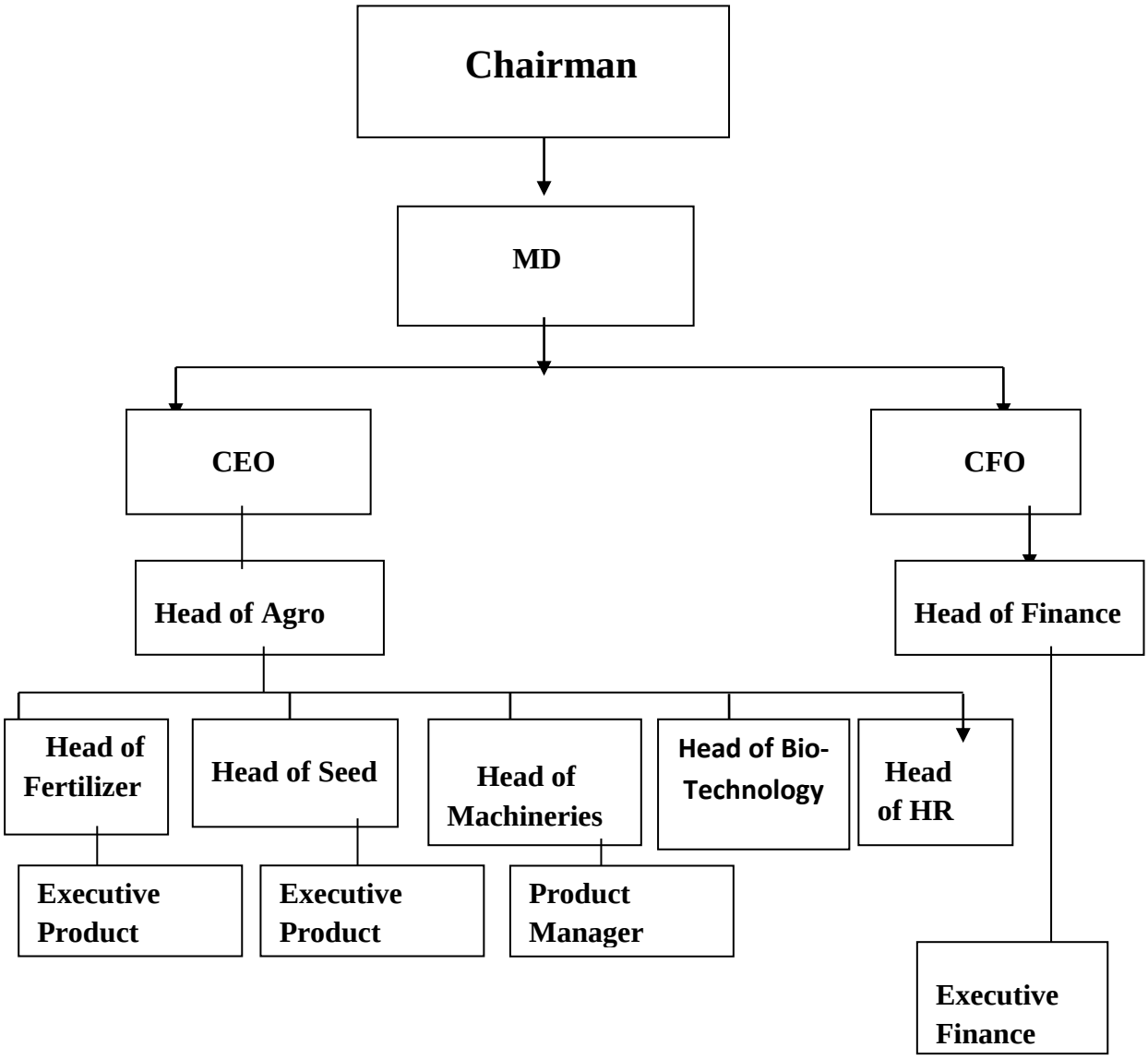
Continuous Improvement: We strive to learn and innovate new paradigms

Every Paisa Counts **:** We treat every taka spent as our own

2.5. The Board of Directors of **Rahimafrooz Bangladesh Limited**

NIAZ RAHIM	Group Director
MUNAWAR MISBAH MOIN	Group Director
AFROZ RAHIM	Group Chairman
MUDASSIR MURTAZA MOIN	Group Director
FEROZ RAHIM	Group Managing Director
MOHAMED ISMAIL	Group Deputy Managing Director

2.6. Hierarchy of the Organization



2.7. Organization Structure

- Three business segments- Agro-Machineries, Fertilizer and Seed operates countrywide regional divisions contribute to the local development of our business and help to develop market potential. For financial flexible our divisions are grouped into the following four regions: North; South; North-East & South-East.
- Clients of Rahimafrooz CIC Agro Limited include a diverse range of private and public organizations involved in the development and adoption of seeds, pesticides, fertilizers,

crop varieties, agro-machineries and other agricultural inputs. Their prime clients include farmer groups, agricultural distributors, universities, research corporations and other government organizations.

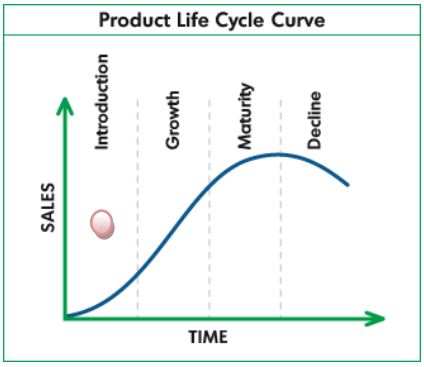
- Their team of experienced staff, proven systems, leading edge technology and equipment reflects to your individual requirements.

  They provide centrally coordinated after sales service on a national scale with our extensive network of collaborators in other regions.

2.8. Number of Employees

Rahimafrooz CIC Agro Limited has been continuously creating new fields of employment every year by way of expansion of its business activities. The business consolidated the "One-Bank One-Family" concept since its inception and sought to create a work culture that excites and motivates staff. The company's goal is to make it "the best place" to work in by creating an exciting, healthy, caring and productive environment for all levels of staff. RCAL has 50 employees provides due importance for the well being of its employees by offering attractive remuneration and other fringe benefits.

2.9. Stage of Life-cycle



- "Tara Tissue Culture" is still in its research and introduction phase. However Rahimafrooz CIC has already received order for grass products under this section.
- The products of "Tara seeds", "Tara fertilisers" and "Tara machineries" of Rahimafrooz CIC Agro limited are in its growth stage. After the introduction and good marketing it has received huge response from its consumers and has steadily reached the next phase of the life cycle.
- The business plan of Rahimafrooz CIC Agro Ltd. has been done uptil 2015 at which point the company is expecting to reach its maturity level.

2.10. SWOT Analysis:

SWOT analysis is very important for every company. SWOT analysis helps the company to justify almost their strength, weakness, opportunity &threats.

S=Strength
W=Weakness
O=Opportunity
T=Threats

SWOT analysis of Rahimafrooz CIC Agro Limited is as follows:

Strength:

- Company Image
- Strong Financial capabilities
- Identified customer need
- Professional sales team
- Modern technology
- Strong Raw materials

Weakness:

- New entry in agribusiness
- Lack of experience in lease financing/ hire purchase
- Quick decision making problem
- Manpower setup problem
- Well distribution network problem

Opportunity:

- Rapid mechanization of agriculture sector
- Increase construction works in rural areas
- ROI is substantial

- Extension of variability of product
- Ensure Market coverage against competitor's product.
- Add value to Attract Consumer.
- Advertising and targeting the Target customer
- Govt. support for agribusiness
- Increase farmers awareness
- Rapid mechanization of agriculture sector
- Technology used in agribusiness

Threat:

- Global economic recession
- Dependent on foreign supply
- Higher purchase model
- Change the govt. policy
- Risk factor
- Credit based business
- High competition
- Many national and international company in the market
- Low quality product in the market
- Maximizing sales

2.11. Product Details of the Organization

a. **Tissue Culture** (Plant variety)

- Potato Plant
- Banana Plant
- Ornamental Grasses Plant

Banana	
Plant Variety	**Family**

Cavendish banana *Musa spp*	Musaceae

POTATO	
Plant Variety	**Family**
Solanum tuberosum	Solanaceae

Ornamental Grasses	
Plant variety	**Family**
1. Baumea articulata 16 genotypes	Cyperaceae
2. Baumea juncea Geographe 10 genotypes	Cyperaceae
3. Baumea juncea multiple genotypes	Cyperaceae
4. Baumea preissii Bennett Brook (10039) G1-12	Cyperaceae
5. Baumea vaginalis Perth (10004) G1-20	Cyperaceae
6. Hypolaena exsulca Collie multiple genotypes	Restionaceae
7. Lepidosperma gladiatum Busselton mixed Genotypes	Cyperaceae
8. Lepidosperma gladiatum dunsborough 7 Genotypes	Cyperaceae
9. Lepidosperma gladiatum Perth few Genotypes	Cyperaceae
10. Lepidosperma pubisquameum Gull Rock Albany (09085) G1-30	Cyperaceae
11. Lepidosperma squamatum Collie 2 Genotypes	Cyperaceae
12. Lepidosperma squamatum (seedlings)	Cyperaceae
13. Baumea vaginalis Geographe (09046) G1-3	Cyperaceae
14. Evandra aristata Albany 6 Genotypes	Cyperaceae
15. Lepid sp. Albany small Glad. Cable bch (10009) G1-11	Cyperaceae

16. Lepidosperma sp. Albany smaller beach (10008) G1-20	Cyperaceae
17. Lepidosperma sp. Albany Prison small Glad. (10007) G1-2	Cyperaceae
18. Hypolaena exsulca Collie multiple genotypes	Restionaceae
19. Lepidosperma gladiatum Busselton 11 Genotypes	Cyperaceae
20. Lepidosperma gladiatum dunsborough 24 Genotypes	Cyperaceae
21. Lepidosperma gladiatum Lechenault 20 Genotypes	Cyperaceae
22. Lepidosperma gladiatum Perth 25 Genotypes	Cyperaceae
23. Lepidosperma squamatum Collie 21 Genotypes	Cyperaceae
24. Evandra aristata Albany 5 Genotypes (losing 1)	Cyperaceae
25. Baumea articulata 7 genotypes	Cyperaceae
26. Baumea juncea 10 genotypes (losing 1)	Cyperaceae

b. Seeds

Product name	Variety	Packet Size	Category
Coriander	Green Star	1 kg	Hybrid
Radish	TARA 40	500 g	OP
Red Amaranth	LAL TARA	500 g	OP
Bean	TARA Hatikani	20 g	OP
	TARA Hatikani	50 g	OP
	TARA Hatikani	100 g	OP
Okra	TARA Onamika	500 g	OP
Paddy Seed	BRRI Dhan 28	10 kg	Foundation
		2 kg	

	BRRI Dhan 28	10 kg	Certified
		2 kg	
	BRRI Dhan 29	10 kg	Foundation
		2 kg	
	BRRI Dhan 29	10 kg	Certified
		2 kg	
	BRRI Dhan 50	10 kg	Foundation
		2kg	
Paddy Seed	Sonar Bangla 6	1 kg	Hybrid
	Malik 1	1 kg	Hybrid
Watermelon	Green Sweaty	100 g	HYB
	TARA Dragon	100 g	HYB
	Black King	100 g	HYB
	Black Honey	100 g	HYB
Chilli	TARA Lanka Super	05 g	HYB
	TARA Lanka	05 g	HYB
Okra	TARA Sonali	20 g	HYB
		50 g	HYB
		100 g	HYB
Tomato	TARA Lovely	05 g	HYB
	TARA Red Ball	05 g	HYB
CaMBAge	TARA Early Super	10 g	HYB

Cauliflower	Sada TARA	10 g	HYB
Brinjal	TARA Labiba	10 g	HYB
Bitter Gourd	TARA Shaktiman	10 g	Hybrid
Ridge Gourd	TARA Basonti	10 g	Hybrid
Sponge Gourd	TARA Ruposhi	10 g	Hybrid
Pumpkin	TARA Diamond	10 g	Hybrid
Okra	TARA Komol	20 g	Hybrid
Cucumber	TARA Evergreen	10 g	Hybrid
Bottle Gourd	TARA Meghna	10 g	Hybrid
Snake Gourd	TARA Surma	10 g	Hybrid
Okra	TARA Anamika	500 g	OP

c. Fertilizers:

Product Name	Specification	Pack Size
Tara Mono Zinc	Zinc Sulphate Monohydrate- Zinc 36%	1 Kg
Tara Hepta Zinc	Zinc Sulphate Heptahydrate-Zinc 21%	1 Kg
Tara Chelated Zinc	Chelated Zinc- EDTA Zinc 10%	17g,50g,100g
Tara Mag	Magnesium Sulphate- Magnesium 9.5% & Sulphur-12.5%	1 KG
Tara Gypsum	Gypsum- Calcium-23% & Sulphur-17%	5 Kg, 10 Kg
Tara Sulphur -90%	Sulphur-90%	1 Kg
Tara Boron	Boric Acid- Boron 17%	500g, 1 Kg

Tara Solubor Boron	Boric Acid- Boron 20%	50g,100g,250g,500g
Tara Fertibor	Boric Acid- Boron 15%	500g, 1 Kg
Tara Shakti(4CPA)	4-Chlorophenoxy Acetic Acid	50ml,100ml,500ml
Tara Green Power	Gibbrelic Acid-3- GA3-80%	1g

d. Machineries:

DEUTZ- FAHR TRACTOR

Product Model
MAXX-40
MAXX-45
AGRO MAXX-50
AGRO MAXX-60
AGRO LUX-45
AGRO LUX-50

TARA POWERTILLER

Product Model
GN-12

GN-16

TARA DIESEL ENGINE

Product Model
Z 170 F ($ HP)
Z 175 F (5 HP)
R 175A (6 HP)
R 185 A (8.5 HP)
EM R 185 NL (8.5 HP)
S 195 (12 HP)
S 195 NL (12 HP)
S 1100 (16 HP)
S 1100 NL (16 HP)
ZS 1110 (20 HP)

ZS 1115 (24 HP)
ZS 1115 NL (24 HP)
ZS 1125 (30 HP)
ZS 1125 (30 HP) With Pump
ZS 1125 M (30 HP)

Chapter 3

Feasibility Study of "Production of Cavendish Banana in Bangladesh" Project

3.1. Introduction

Rahimafrooz CIC agro Limited is a joint Venture Company engaged in production and possible export of products of agricultural and economic importance. Rahimafrooz CIC Agro limited therefore intends to add other branches of agricultural product business in addition to seed, fertilizer and machinery. Fruit is an essential food crop supplying a substantial calorie requirement of a population. Banana falls in number one of all the major fruits consumed.

Banana is grown in more than 130 countries. In 2009, world production of bananas reached an estimated 97.3 million metric tons, grown on 4.9 million hectares. A record 15 million tons of banana was exported in the year 2010 (FAO) valued at $ 8.8 million. The five leading banana-exporting countries in 2009 were Ecuador, Colombia, the Philippines, Costa Rica, and Guatemala. The major importers of bananas are United States, Japan, European Union and the Middle East. The four leading transnational corporations (TNCs), Del Monte, Chiquita, Dole, Fyffes, and Noboa, an Ecuadorian company, control more than 80 percent of the trade, which includes shipping, ripening and distribution.

Rahimafrooz CIC intends to produce banana of the Cavendish variety that has high potential market in and outside the country. The plantlets derived from tissue culture will be used as seed because of its high yield and disease resistance. Considering the export potential and the need for quality food for the nutrition deficient, RCAL intend to go into banana production as an addition of its agricultural product.

3.2. Some facts to choose this Project:

Population	: 164 million
Land Area	: 8.4 million ha cultivated
Banana area	**: 40, 500 hectares**
Production	: 877, 000 metric tons (BBS.2007-08)
Average yield	: 15+ tons/ ha

Requirement of fruit : 3.73 million tons

Requirement of Fruits /person/day : 70 g

Status : 41% of the total fruit production

Export : None at the moment

Importance : Banana is a source of food essential to fulfill the required food security (454g food/ person/day) plus the nutritional and caloric requirement

: High export potential

3.3. Feasibility Study & Project Justification:

Feasibility literally means whether some idea will work or not. It knows beforehand whether there exists a sizeable market for the proposed product/ service, what would be the investment requirements and where to get the funding from, whether and wherefrom the necessary technical know-how to convert the idea into a tangible product may be available, and so on. In other words, feasibility study involves an examination of the management, operations, financial, HR and marketing aspects of a business. Now, this part of the report will discuss almost the management, marketing, financial, technical, and socio economical aspects of this project.

a. Management Aspects:

Rahimafrooz CIC Agro limited proposes to use modern technologies in the field of Plant Tissue Culture and Plant Biotechnology mainly on production marketing of quality seeds from Bangladesh. Equality important is production of banana and potato seed the former having a huge foreign market and the later a large deficit within the country. This part will discuss almost the management aspects of the project.While conducting a management appraisal of a project certain aspects have to be looked into like:

- **Executive Summary:**

This report contains the following evidence towards production and marketing of Cavendish Banana in 200 acres of land in Bangladesh.

1. A plan of 200 acres to produce an average of 16.5 tons of Cavendish Banana for export and internal consumption.
2. Use of the high quality tissue cultured seed stock and modern management for high production.
3. Planting schedules and project implementation over a 5 year period.
4. Human resources, investments costs and financial analysis.

Key Objective:

The objective of the feasibility study is to determine the financial feasibility of producing Cavendish Banana in 200 acres of land with modern and appropriate farming technologies for eventual export and internal consumption

Other Objectives:

1. Feasibility of growing Cavendish Banana for internal and external marketing
2. Expansion of agro business of Rahimafrooz CIC with food crops having demand for food and nutrition.
3. To forecast a sale of BDT 118 million by the end of fifth year and earn an additional income through Government subsidy of up to 20% from overseas sales

Management Personnel and Project Execution:

Rahimafrooz CIC Agro Limited
76, Shaheed Tajuddin Ahmed Sarani
Tejgaon Industrial Area
Dhaka 1208

Main features:

Accordingly, the proposed farm plan has been developed with following main feature;

1. Grow Cavendish banana suckers in an area of 200 acres over a period of 1 year and continue to 5 years with the first years' suckers (Annexure II)
2. Suckers will be produced in tissue culture laboratory in Bangladesh to expand the market and ensure availability.
3. Export of 80% of the production as the potential is high with an added benefit of the government for subsidy of up to 20% on LC of food products will bring desired revenue.

SWOT Analysis

STRENGTH

- >Company image
- >Trained Manpower
- >Suitable land
- >Approach to paved road
- >Availability of Labour

WEAKNESS

- >New export business
- > High Investment

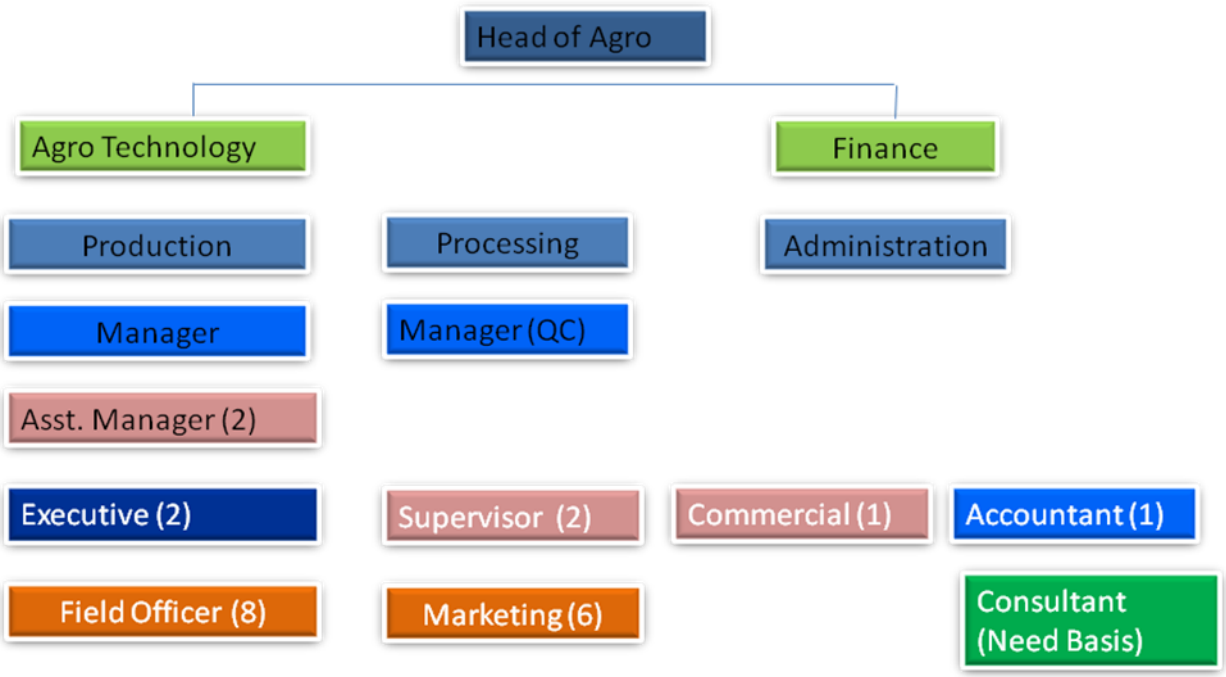
OPPORTUNITY

- >Good demand of Cavendish banana
- >Export potential high

THREAT

- >Price fluctuation
- >Change of government policy on export
- >Theft of Banana from field

- **Organogram of Banana Project**



b. Marketing Aspects:

A market, whether a place or not, is the arena for interaction among buyers and sellers. From seller's point of view, market analysis is primarily concerned with the aggregate demand of the proposed product/ service in future and the market share expected to be captured. Success of the proposed project clearly hinges on the continuing support of the customers. However, it is very difficult to recognise the market for one's product/service. After all, the whole universe cannot be our market. We have to carefully segment the market according to some criteria such as geographic scope, demographic and psychological profile of the potential customers etc. It is the part of market analysis of the project. This part will discuss almost the market demand, Importance and segmentations of the products.

- **Product Details:**

Product Name: Cavendish Banana

Scientific Name: *Musa acuminata*

Musa balbisiana

Native To: South and Southeast Asia

Type of Crop: Tropical herbaceous flowering plants, not trees

Staple food crop: Cooking bananas 400 million people (FAO 2009).

In East African Highland, banana represent a major source of food and income for small hold farmers.

Countries of Staple Food: Uganda, Burundi and Rwanda---- **per capita** consumption has been estimated at 45g (Wikipedia).

Market Demand and importance:

➢ Global Scenario on Banana

Global	Statistics	Source
Area	4.8 Million Ha	FAO Website : March 2012 and for India Records Indian Horticulture Recordsbase 2011
Production	99.99 Million MT	
Yield Rate	20.8 MT/Ha Potential 40.0 MT/Ha	
Status of Food in the World	4th	FAO, Bananes Statistiques 2011, CCP:BA/TF11/CRS1
Status as Fruit	1st	
No. of Countries Growing	150	
No of Varieties	1000	
Multinationals	Chiquita, Dole, Del Monte and Fyffes	
Export (2009)	14.8 M MT	FAO 2009
Market Value	$8.08 billion	
Exporting Countries	India, China, Brazil, Ecuador, Colombia, The Philippines, Costa Rica, and Guatemala.	FAO 2009
Major Importers	United States, The European Union, and Japan	FAO 2009

Source: Lecot 2008 from FAO CCP:BA/TF09/7, Rome 9-11 December 2009

➢ **Bangladesh Scenario:**

Bangladesh Statistics:

Area ---147,570 sq km

Climate– Tropical Monsoon

Land— The Gangetic Delta formed by the confluence of the Ganges (local name Padma) Brahmaputra and Meghna rivers and their respective tributaries makes the soil alluvial and fertile

-Almost 700 rivers in Bangladesh, Total length around 24,140 km

-Divided into 80% floodplains, 8% Terraces and 12% Hills.

Season 6- Winter, Summer and Monsoon are prominant

Winter temperature ---Average for most of the country is 16–20 °C

Summer temperature--- Maximum range between 38-41 °C

Rainfall---Average annual rainfall varies from 1429 to 4338 mm. Mean of 2000 mm

Relative Humidity----- 45% in March to 79% in June-July

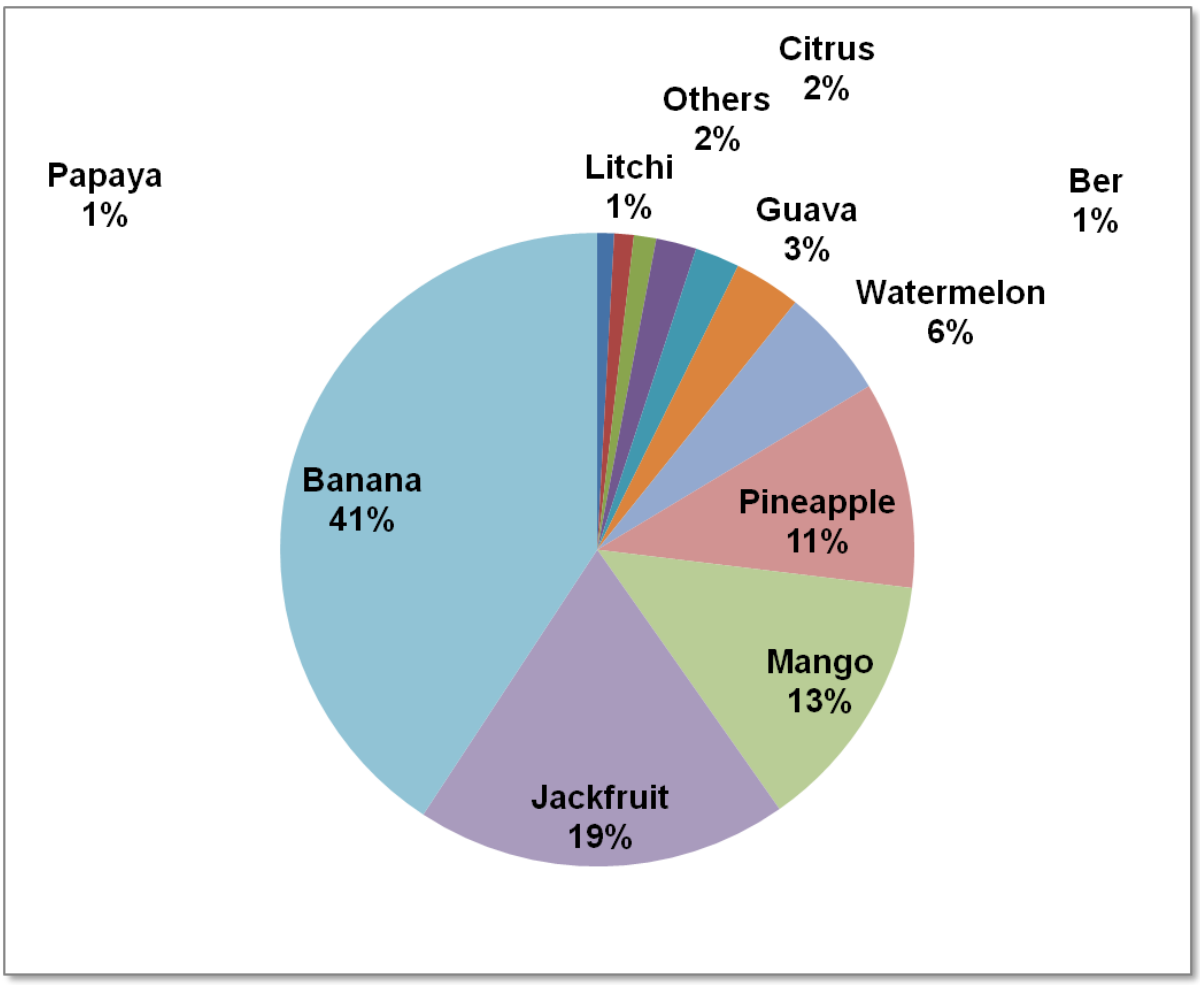
Elevation---Less than **12 m (39.4 ft) above the sea level**,

- The highest point in Bangladesh is in Mowdok at 1,052 m

➢ **Fruit Status**

Bangladesh	**Statistics**	**Source**
Fruit area	183,000 Ha	BBS 2009
Fruit Production	1.4 M MT	
Status in the World	8th	FAO 2009

➢ **Fruit Scenario in Bangladesh:**



➢ **Banana Statistics**

Bangladesh	Statistics	Source
Area	40,500 Ha	BBS 2009
Status of Area	21%	
Production	624,735 MT	FAO 2009
Status of Production	41%	BBS 2009
Position among Fruit	No. 1	
Mean Yield of Country	15.4 tons/Ha	
Export	None	

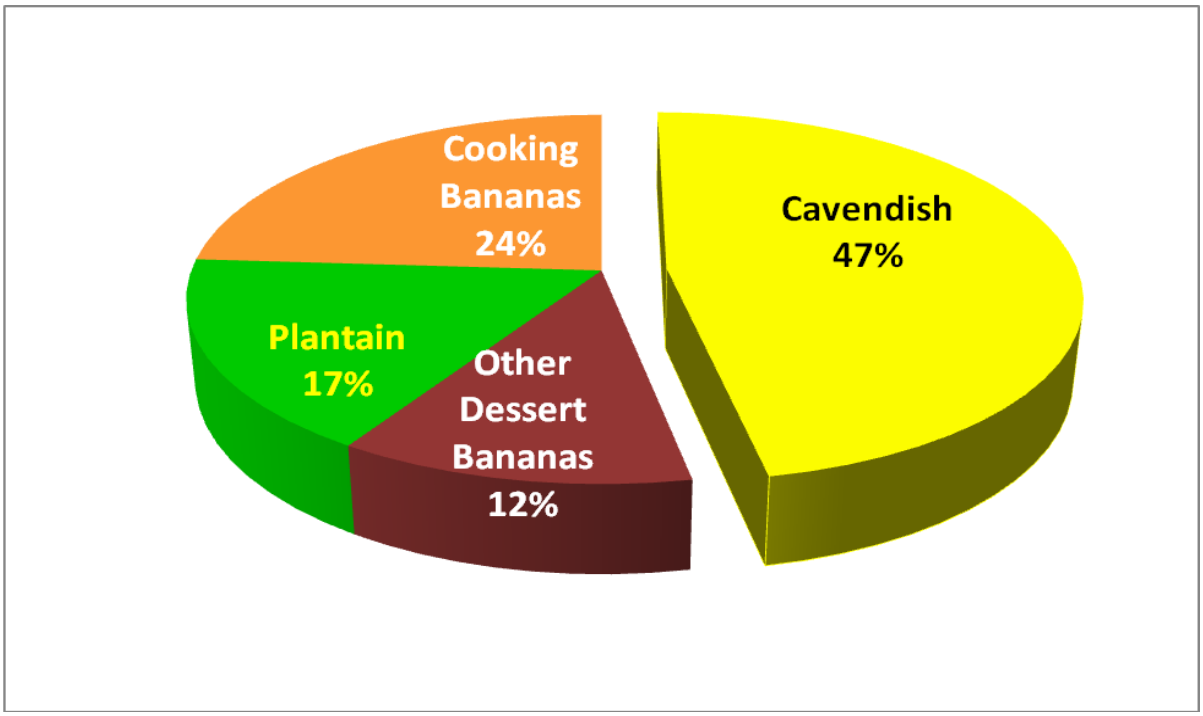
➢ **Stretch of Banana in Bangladesh**

Banana, known by the scientific name *Musa species*

Main Varieties:

Cavendish (Sagar)
BARI Kola-1
Plaintain
Champa
Sabri
Kabri
Mahessagar
Dudsagar
Agniswar
Singapuri
Pahari

➢ **Demand of Cavendish Banana:**



➢ **Major Banana Growing Areas:**

Banana is grown all over Bangladesh. The major producing areas are Dhaka, Barisal, Dinajpur, Faridpur, Mymensingh, Noakhali, Khulna, Rangamati, Rangpur, Narsindhi, Munshiganj. Banana can however be harvested throughout the year.

➢ **Production and Food Value:**

Life Cycle 240 days (Cavendish)

Production All the year round

Peak Production September to October

December to February

Food Value **Nutritional Value of Banana- A wise man's food**

Nutrient	118 g (1 medium)
Calories	105
Calories from fat	0
Total fat	0g
Sodium	1 mg
Total Carbohydrates	27.0g
Dietary Fiber	3.0g
Sugars	14.0g
Protein	1.0g
Vitamin A	2%
Calcium	1%
Iron	2%
Others	Vitamin C, B6, K, Mn, Mg
Medicinal Value	Low GI, antioxidant, high fibre, cancer fighter

Market Segmentation:

Main Dimension Banana	Segmentation Variables	Typical Breakdowns	
Demographic	**Occupation**	All types of general peoples,	
		Dealers, Distributors, Retailers	
	Gender	Male and Female	
	Income	High, Medium, Low	
Psychographic	**Personality**	Trust	
	Lifestyle	Agriculture based	
	Opinions	Depended on words of Dealers, other farmers, NGO, Governmental officials etc.	
Behavioral	**User status**	First-time users.	
	Brand loyalty	Farmers, dealers	high
		General people	shallow
	Benefits sought **i.** Needs	Good quality product, High yield, Good quality yield	
	ii. Price	Reasonable	
	Usage rate	High	

Geographic	**Regional**	Bangladesh
	International	United States, The European Union, and Japan

- ***Demographic Segmentation*** - On the basis of gender, occupation, income the consumers have been segmented. According to occupation they are farmers, dealers, distributors and retailers. Sometimes the main focus is on the dealers as they are the ones who have huge influence on the retailers and farmers. The target consumers are also the general people who buy bananas as a daily food.

  The income ranges are high, medium, low.

- ***Psychographic Segmentation*** - Dividing the target market on the basis of lifestyle and personality is another base of segmentation. According to the base, the consumers have an agricultural based lifestyle as they although having different levels and occupations are engaged with the agricultural business (for example: dealers, distributors, retailers etc.) However, the farmers are the end consumers.

  The products that should be provided to them have to be consistently of good-quality. The process of harvesting of a farmer is very critical. They have to invest their labor, earnings, and time to have a good yield in the end. If in the marketing of the products of seeds, one of the varieties includes a problem (such as germination or fruiting), that word will spread like a virus throughout his village, the districts surrounding that area all the way to the entire country. The negative effect on the brand equity after that will be an extremely hard thing to remove. For example: the company "Syngenta" sold tomato seeds which had good plants yet no fruiting. The knowledge spread into the entire Bangladesh and they had to stop their selling of seeds altogether.

  That is why their attitude is aggressive and they would depend on a product which they can always trust.

  These target consumers have faith on the words of dealers, Government officials, NGO etc. Also the farmers trust other farmers. Thus if one farmer is seen to have good yield

then the words of that brand will spread around the city. And if a farmer with any brand is heard to have bad fruiting, the news will spread all over the country like a virus.

- ***Behavioral Segmentation*** - According to user status, benefits sought, loyalty etc, the consumers have been defined too. The users will be first-time user as "Tara tissue culture" is in its introduction stage. They have a high usage rate, because they depend on these hybrid seeds to have high yield in their fields. Once they get good result from a product of a brand and develop a trust for that brand they are highly loyal to that brand. Reasonable price is one of the most important benefits that they seek. They also want Good quality seed, High yield, and Good quality yield.

- ***Geographic Segmentation*** - According to geographic segmentation the targeted consumers are the distributors, dealers, retailers, farmers of Bangladesh. As for the international segment, RCAL targets the consumers of United States, The European Union, and Japan

c. Financial Analysis:

This part of the report will discuss almost the risk management and sustainability of project results. The Financial analysis was done after a thorough survey of all the factors affecting productivity and marketing potentials.

The financial features of the proposed project are:

a. Investment of BDT 23,650,000 that includes land lease, irrigation, machineries, field and packing equipment, tractors, etc

b. Banana Project achieving a profitability from the 1st year of operation

The production, COGS, cost price and sales price of Cavendish banana.

➢ Expected Production, COGS, Sales of Cavendish Banana

Factors	Yr1	Yr2	Yr3	Yr4	Yr5
Effective Prod (Kg/Acre)*	14,550	17,460	17,460	17,460	15,520
Export Sales price (BDT/Kg)	40	40	40	40	40
Local Sales Price(BDT/Kg)	40	40	40	40	40
Export COGS (BDT/Kg)	29	29	29	29	29
Local COGS (BDT/Kg)	25	25	25	25	25
GP %	27	27	27	27	27

* Each Kg is estimated to be 6 fingers

Capital Expenditure:

CAPEX			
Description	**Unit Cost**	**No.**	**Total Cost**
Sprayers	5000	10	50000
Power Boom	20000	2	20000
Tractor & Trailer	1000000	2	2000000
Fruit Trailer	400000	2	800000
Pack House & Cold	5000000	1	5000000
Lab table, Furniture	1000000		1000000
Reservoir	300000	2	600000
Pump	50000	2	100000
Deep Tube wells	450000	2	900000
Power Generator	200000	2	400000
Washing Unit	2000000	2	4000000
Dryer	500000	2	1000000
Exhaust Fan	30000	6	180000
Mec. Trolley	50000	4	200000
Computer, printer, scanner, photocopier, etc	50000	10	500000
M. Bike	150000	4	600000
accessories	100000	1	100000
Others	200000		200000
Rent Advance			6000000
Total			**23650000**

Income statement for 5 years (In M BDT)

Profit and Loss (BDT)

Statements	Yr 1	Yr2	Yr 3	Yr 4	Yr 5
Sales Volume (Kg)	3,230,000	3,876,000	3,876,000	3,876,000	3,230,000
Export Sales	74,613,000	92,248,800	94,962,000	97,675,200	83,657,000
Local Sales	31,008,000	38,372,400	39,535,200	40,698,000	34,884,000
Sales Revenue	**105,621,000**	**130,621,200**	**134,497,200**	**138,373,200**	**118,541,000**
Export COGS	44,839,888	46,124,400	46,124,400	46,124,400	38,437,000
Local COGS	14,535,000	13,953,600	13,953,600	13,953,600	11,628,000
Cost of Goods Sold	59,374,888	60,078,000	60,078,000	60,078,000	50,065,000
Gross Profit	**46,246,112**	**70,543,200**	**74,419,200**	**78,295,200**	**68,476,000**
Operating Expenses					
Employee expenses	4,072,000	6,972,480	7,530,278	8,132,701	8,783,317
Admin Expenses	5,883,440	6,385,400	6,910,244	7,456,653	8,049,670
Promotional Expenses	510,000	530,000	590,000	600,000	600,000
Depreciation	7,362,000	7,362,000	7,362,000	7,362,000	7,362,000
Selling Expenses 1%	1,056,210	1,306,212	672,486	691,866	592,705
Royalty 1-1.5%	1,056,210	1,306,212	1,344,972	2,075,598	1,778,115
Total Operating Expenses	**19,939,860**	**23,862,304**	**24,409,980**	**26,318,817**	**27,165,807**
EBIT	**26,306,252**	**46,680,896**	**50,009,220**	**51,976,383**	**41,310,193**
Interest on LT Loan	5,340,587	4,460,771	3,434,467	2,237,283	840,769
Interest on WC Loan	10,988,963	12,171,803	11,746,056	11,928,679	10,554,057
Total Financial Expenses	**16,329,550**	**16,632,574**	**15,180,523**	**14,165,962**	**11,394,826**
Other income					
PBT before cash incentive	**9,976,702**	**30,048,322**	**34,828,696**	**37,810,420**	**29,915,367**
Income Tax	-	-	-	-	-
Cash Incentive (20% of Export)	8,967,978	18,449,760	18,992,400	19,535,040	16,731,400
PBT (After Cash Incentive)	**18,944,680**	**48,498,082**	**53,821,096**	**57,345,460**	**46,646,767**

NPV Analysis

No. of Years	Investment Cost (PV)	Net profit after tax Tk	Depreciation Tk	CFAT	Discount Rate	16.0%
					Discount Factor	Discounted cash flow
1	2	3	4	5	6	7
0	6,810,000)	-	-	36,810,000)	1.000	(36,810,000)
1		9,976,702	7,362,000	7,338,702	0.862	14,947,157
2		30,048,322	7,362,000	37,410,322	0.743	27,801,963
3		34,828,696	7,362,000	42,190,696	0.641	27,029,793
4		37,810,420	7,362,000	45,172,420	0.552	24,948,326
5		29,915,367	7,362,000	37,277,367	0.476	17,748,239
6						
Net present value						**75,665,479**

Benefit Cost Ratio (BCR)	**3.06**

Payback Period and IRR

Year	CFAT	Cumulative CFAT	Year Required	
0	(36,810,000)			
1	17,338,702	(19,471,298)	1.00	1.00
2	37,410,322	17,939,024	2.05	1.50
3	42,190,696	60,129,720	0.61	
4	45,172,420	105,302,140	0.35	
5	37,277,367	142,579,507	0.26	
Pay back				2.50

Pay Back period	**2.50**	**Years**

IRR	**76%**

d. **Technical Aspects:** The issues involved in the assessment of technical analysis of the proposed project:

Manpower Aspects:

➢ **Management team and work descriptions:**

Category	Level	Area of Operation	Working Description
Production Team	Senior Manager	Operations/Productions	Overall Planning and responsibility
	Manager	Managing Production	Meeting Target production and Processing targets
	Executive	Management of Individual Components	Management of inputs and application
	Field Officer	Land Preparation, harvesting	Supervision and implementation of farm activities
Post Harvest Processing	Processing Manager	Supervision of Harvesting, grading, packing	Overall responsibilty till shipment
	Quality Control Officer	Processing, grading, weighing	QCL maintenace
	Processing supervisor	Management of all activities after harvest	Maintenance and supervision of all labours in processing
Administration	Head Office Finanace Executive	Manage admin and Finance	
	Accountant Executive	Keep day to day accounts of HR and business	Keep a record of production and accounts and give
	Liason Officer	Shipment Processing	Acquire all permits, shipment work
	Office Assistant	All office errands	Assist all in running errands, maintenance of office

- **Proposed Manpower of the Project:**

Category	Level	Total	Yr 1	Yr2	Yr 3	Yr 4	Yr 5
Production Team	Manager	1	1	1	1	1	1
	Assistant Manager	2	1	1	2	2	2
	Executive	2	2	2	2	2	2
	Field Officer	8	6	6	8	8	8
	Office Assistant	1	1	1	1	1	1
Post Harvest Processing	Processing Manager /Quality Control	1	1	1	1	1	1
	Processing supervisor	2	2	2	2	2	2
	Marketing	6	6	6	6	6	6
Administration	Accountant Executive (H/O)	1	1	1	1	1	1
	Commercial Executive (H/O)	1	1	1	1	1	1
	Consultant (Day basis)	1	1	1	1	1	1
	Total	26	23	23	26	26	26

Production Aspects:

- **Production Basics of Cavendish Banana:**

Life Cycle: 7-8 moths

Soil depth
Spacing : 1.5 meters

Soil pH: 5.0-6.5

Water requirement: Every 15-20 days

Deep tube well cost
Shallow tube well cost
Area coverage
Cost of irrigation

Rainfall FAO: 1250-1900 mm

Temperature: 25-300 C

Fertilizer:

Fertilizer	Per Hole	Quantity	Application method
Cowdung/compost	15-20	Kg	50% at land preparation 505 in hole
TSP	250-400	g	50% in hole, 50% 1.5-2 months by broadcasting
MOP	500	g	50% 1.5-2.0 months after planting 505 after 2-2.5 months
Urea	500-650	g	25% 1.5-2 months after planting, 50% after 2-2.5 months 25% before flowering
Boron	12 x2	Kg	acre
Zinc sulphate	24 x 2	Kg	acre
1 acre=	850	holes	

- **Temperament of Banana:**

Banana plants like

- Bananas will grow in most soils, but thrive, best in a rich, well-drained dark, fertile soils.
- Lots of mulch and organic matter.
- Lots of nitrogen and potassium.
- Steady warmth, not too hot and not too cold climate
- Steady moisture, in the ground and in the air.
- The shelter of other bananas!
- They prefer an acid soil with a pH between 5.5 and 6.5.

Banana plants dislike

- Poorly drained soil
- Poorly aerated soil
- Nutrient deficient soil
- Strong winds exceeding 80 km/hr.
- Extreme heat or cold.

- Being hungry or thirsty.
- Being alone and exposed.
- The banana is not tolerant of salty soils.

➢ **Production Techniques:**

Tissue Culture is a backward linkage project of Banana project. CIC Commercial Tissue culture Laboratory, which comes under the Management of CIC Agri Businesses (Pvt.) Ltd is a state of the art facility, produces over 2.5 million plants per annum. The Laboratory staffed by highly skilled, experienced and trained expertise in the field ensure that the extended facility is fully competent in producing a prodigious array of ornamental and fruit plants through micro propagation.

The proposed facility could also be utilized for production of banana micro tubers. CIC commercial Tissue culture laboratory has already developed a protocol to produce disease free banana micro tubers.

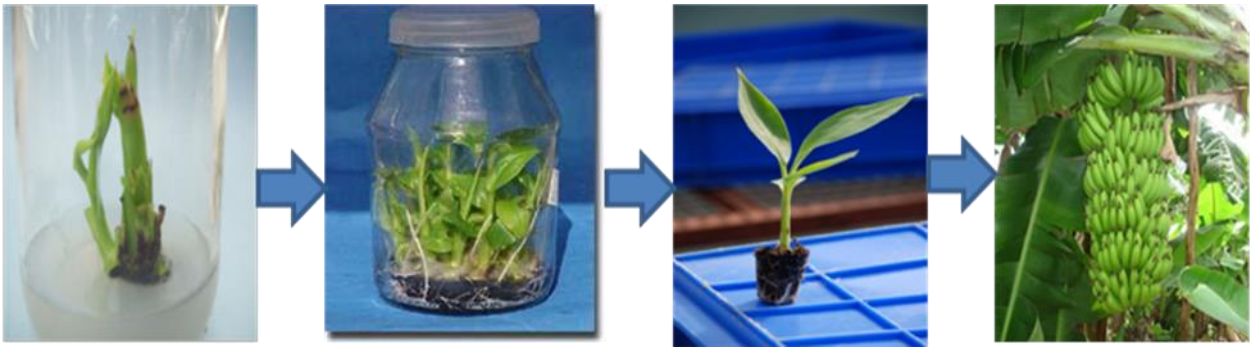
▪ **Why Tissue Culture?**

Tissue culture ‘is the propagation of a plant by using a plant part, single cell or group of cells in test tubes under very controlled and aseptic in vitro condition

Advantages:

- Higher rates of multiplication of healthy plants (disease and virus free).
- Minimum space required for multiplication of a large number of plants.
- Quality of planting materials (suckers) are of superior with high viability
- Round the year planting possible as seedlings are made available throughout the year.
- Fast growing with uniformity of population compared to traditional method
- High yield potential

- **Tissue Culture Stages of Banana Production:**



Planting stage

- **Benefits of TC technology for small-scale banana producers in Kenya (Source: ISAAA)**

In Kenya, as in many parts of the tropical and subtropical developing world, banana is a highly important food crop. In the last 20 years, however, there was a rapid decline in banana production due to widespread soil degradation and the infestation of banana orchards with pests and diseases. These problems were further aggravated by the common practice of propagating new banana plants using infected suckers. The situation was threatening food security, employment and incomes in banana-producing areas. Tissue culture technology was considered an appropriate option to provide sufficient quality and quantity of such materials.

With proper management and field hygiene, yield losses caused by pests and diseases at farm level have been reduced substantially. Tissue culture technology has made it possible for farmers to have access to the following:

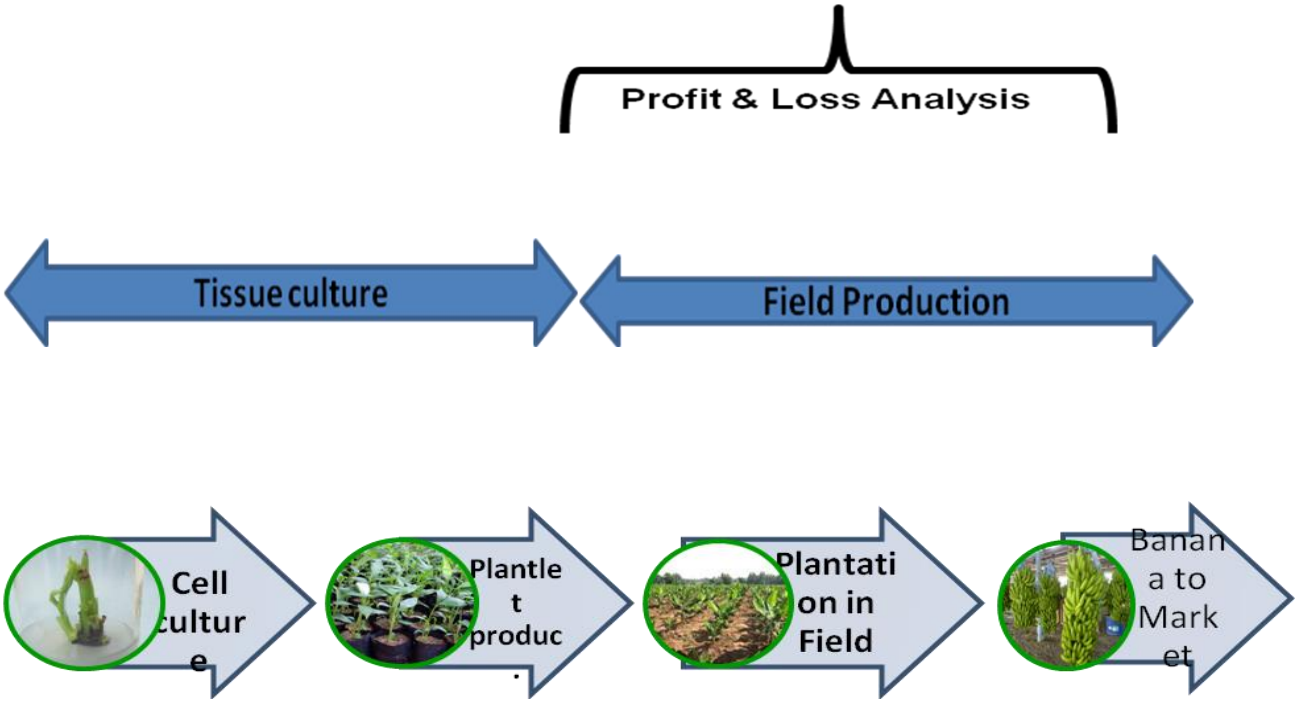
large quantities of superior clean planting materials that are early maturing (12-16 months compared to the conventional banana of 2-3 years)

bigger bunch weights (30-45 kg compared to the 10-15 kg from conventional material)

higher annual yield per unit of land (40-60 tons per hectare against 15-20 tons previously realized with conventional material

- **Method of Production:**

➢ **Growth Phases:**



Land Selection for Banana Production:

- Search for suitable Land for banana production .
- Physiographic and Economic Analysis of 3 locations for Banana.

➢ **Agro ecological Conditions for Banana Production:**

Climate

- A tropical crop,
- Grows well in temperature range of 13ºC – 38ºC
- Relative Humidity regime of 75-85%.

Soil type

- **Alluvial soils-** a fine-grained fertile soil deposited by water flowing over flood plains or in river beds
- **Loam** (combination of sand, silt and clay)

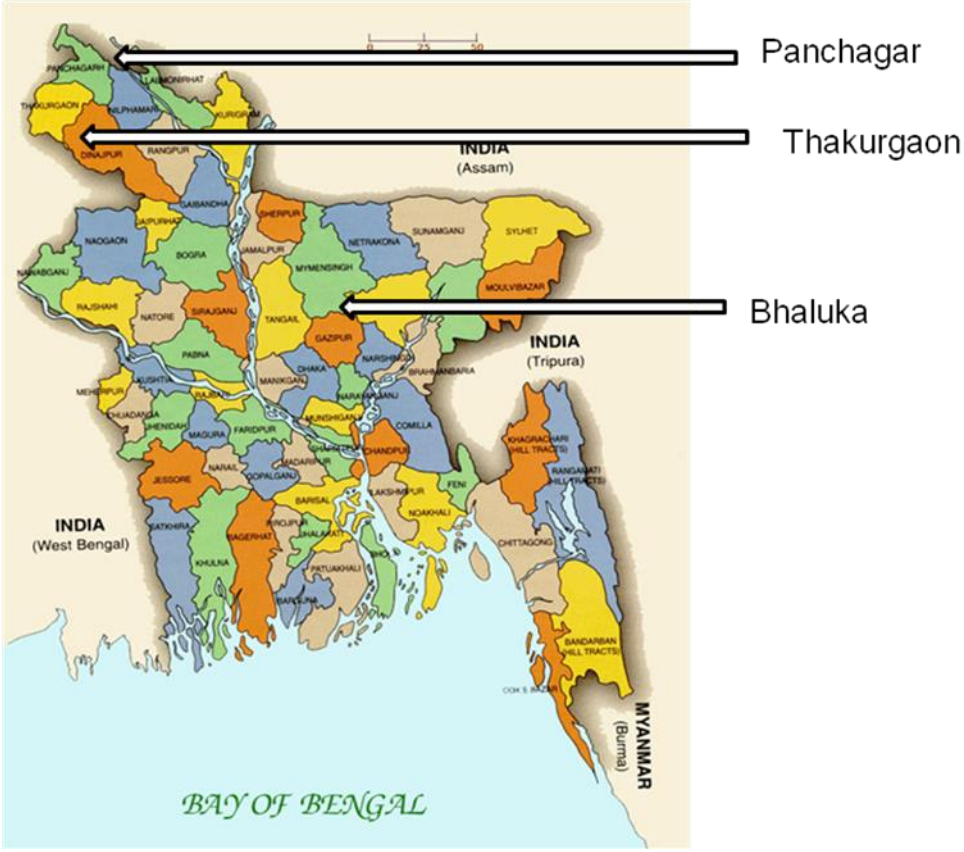
- **Rocky sand-** originating from weathering of rocks
- **Marl-** soil essentially clay mixed with carbonate of lime
- **Red laterite-** is rich in iron oxide and derived from rocks weathering under strongly oxidizing and leaching conditions
- **Volcanic ash-** consists of fragments of pulverized rock, minerals and volcanic glass
- **Sandy clay, even heavy cl**ay—but not fine sand which holds water.

Hydrology

- Deep, well-drained
- No water logging
- **Area** ---147,570 sq km
- **Climate**– Tropical Monsoon
- **Land**— -The Gangetic Delta formed by the confluence of the Ganges (local name Padma) Brahmaputra and Meghna rivers and their respective tributaries makes the soil alluvial and fertile
- -Almost 700 rivers in Bangladesh, Total length around 24,140 km
- -Divided into 80% floodplains, 8% Terraces and 12% Hills.
- **Season** 6- Winter, Summer and Monsoon are prominant
- **Winter temperature** ---Average for most of the country is 16–20 °C
- **Summer temperature**--- Maximum range between 38-41 °C
- **Rainfall**---Average annual rainfall varies from 1429 to 4338 mm. Mean of 2000 mm
- **Relative Humidity-----** 45% in March to 79% in June-July
- **Elevation**---Less than **12 m (39.4 ft) above the sea level**,
    - The highest point in Bangladesh is in Mowdok at 1,052 m

- **Bangladesh: Locations Visited for Selection of Land for Banana**

3 Districts



- **Agro ecological Conditions of 3 Sites**

Characteristics	Panchagar	Thakurgaon	Bhaluka
Agro ecological Zone (AEZ)	1	1	28
Physiographic unit	Old Himalayan Piedmont Plain	Old Himalayan Piedmont Plain	Madhupur Tract
Elevation*	HL MHL	HL MHL	HL MHL
Climate	ean annual rainfall is almost 1600 2500mm. Maximum temperature 30.2°C and inimum 10.1°C;	Mean annual rainfall is almost 1600 to 2500mm. Annual rainfall 2536 mm. Maximum temperature: 33.5°C, Minimum 10.5°C	Mean annual rainfall is almost 2000mm to 2300 mm Maximum temperature 27°C, minimum of 9° C

pH	4.5-5.5	4.5-5.5	4.8-5.5
Organic Matter (%)	>2	>2	1.0-1.5
Water resources	Ample ground water is available at a shallow or moderate depth. Surface water available where dry season irrigation are limited.	Ample ground water is available at a shallow or moderate depth. Surface water supplies available for dry season irrigation are limited	Only limited amount of surface water are available in rivers and bils. Ground water is generally available.

*****Depth of Flooding during flood season Highland (H) above normal flood-level. Medium Highland (MH) : 90 cm deep Medium Lowland (ML) : 90 cm. and 180 cm Lowland (L) : 180 and 300 cm. Very Lowland (VL) : deeper than 300 cm

- **Soil Types of AEZ**

Location Name	AEZ	Main Soil Type	% Composition of 3 Components		
			Sand	Loam	Clay
Panchagar	1	Non-calcareous brown	10	82	8
Thakurgaon	1	Non-calcareous brown	10	82	8
Bhaluka	28	Shallow Grey terrace	>1	13	87

- **Evidence on the 3 Locations Visited**

Location No.	Name	Address	Distance From Dhaka km	Hours Drive From Dhaka	Distance to Port km	Area (acres) Available	Status of expansion (Acres)	Lease Rate Tk/acre/yr	Type of soil	Approach Road to Land
1	Atwari	Govindapur, Panchagar	415	12	679	120	250	20,000	Rice, potato	Good
2	Ghedura	Haripur, Thakurgaon	410	11	674	65	100	17,000-18,000	Rice, sugarcane veg, oilseed	Dirt road
3	Bhaluka	Bhaluka, Mymensingh	60	4	329	200	200+	20,000	Barren, rice, vegetable	Paved

Location Map	Address	Distance from Indian border (Kilo meters)	Cost of 13 ton truck to Port (Tk/trip)	Cost of Transport (Tk/Kg)	Cost of Labour (Tk/day)	All Cost of labour (Tk/Kg)	Cost of Transport +Labour (Tk/Kg)	Time required for truck to reach Port (Hrs)	Time Reqd. for Visit from Dhaka to Site & back
Atwari	Govindapur, Panchagar	15	25,000	1.92	200	1.50	3.42	15-20+	At least 3 days
Ghedura	Haripur, Thakurgaon	1	24,000	1.85	200	1.50	3.35	15-20+	At least 3 days
Bhaluka	Bhaluka, Mymensingh	200	15,000	1.00	250	2.34	3.34	8-10+	1 day

- **Approximate Cost of Transport and Labour for Banana**

Location	Cost of Truck (Tk/Kg) (Field to Port)	Cost of Labour (Tk/Kg) (Prod-Port)	Total Cost (Tk/Kg)
Panchagar	1.92	1.50	3.42
Thakurgaon	1.85	1.50	3.35
Bhaluka	1.00	2.34	3.34

➢ **Main Issues:**

- The climate and physiographic conditions of the 3 locations is suitable for Banana cultivation. Confirmation after soil analysis.
- Panchagar is suitable for potato seed production (local people's view)
- However, as potato needs sandy soil, more suitable land can be found in other AEZ.
- The area of land now available is expandable.
- The lease rate ranges from Taka 17,000 to 20,000/acre/year
- The lease of land is available for a maximum period of 5 years but can be renewed.
- An advance payment is required at the beginning of each year.
- Revenue– from Banana and Potato Seed business is proposed for financing Tissue Culture R and D as Tissue Culture is a backward linkage project.

Land Selection: After collects all evidence almost these 3 places, management decided to select Bhaluka for Banana production.

Area of Land Suitable for Banana Production in Bhaluka

Located 60 Km North of Dhaka

- **Final Production Plan after Land Selection:**

Period	5 Years
Area	200 acres
Location	Rangpur/ Madhupur
No. of Plantlets/acre	850
Time of Planting	Spread over the year with density depending on prime harvest time
Land lease rate	BDT 22,000/year/acre
Harvest Time	All round year with density at season
Export volume	80% of Harvest

- **Planting Pattern throughout the Year:**

No./time	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Acres	5	35	35	20	10			5	35	35	10	10	200
Suckers '000'	4	30	30	17	9			4	30	30	9		170

e. Socio Economical Aspects:

In recent years, environmental concerns have assumed a great deal of significance especially for projects, which have significant ecological implications like power plants and irrigation schemes, and for environment polluting industries (like bulk drugs, chemicals and leather processing). In this concern the selected project is fully safe for environment and it is an agro based project. Moreover, uniformity in orchard establishment and simultaneous plantation development made

marketing easier to coordinate. It also offered the possibility of transforming banana growing from merely a subsistence level into a commercial enterprise. An encouraging finding from a cost-benefit analysis of the project is that TC banana production is more remunerative as an enterprise than traditional banana production. The project has also benefited mainly women who tend the crop, thus helping to narrow the gender gap. This project makes high employment opportunity for the country and it helps our nation to increase its GDP. The income statement shows a total turnover of BDT 628 Million at the end of the fifth year.

3.4. Decision: After Check the issues of feasibility analysis, we see that it is a good project and the company can choose this.

The income statement shows the PBT is positive from the first year both from 80% export and 20% sales with figures of BDT 09.98, 30.04, 34.8, 37.8 and 29.9 Million over a 5 year period and total turnover of BDT 628 Million at the end of the fifth year. An additional income of up to 20% as subsidy from the government is expected from export LC value. The NPV analysis shows a figure of BDT 75,665,479. The payback period of the investment shows a period of 2.5 years with Internal Rate of Return (IRR) of 76%.

This project can earn high profit at future and it is also benefit able for our country. So, we can say that it is a profitable project.

Chapter 4

Findings and Recommendation

4.1. Findings:

4.1.1. Achievement Tools of the Project:

- Choice of good high land suitable for Banana production
- High quality Banana suckers imported from Srilanka
- Use of best management practices such as fertilizer, cultural practices, irrigation, modern production and processing machines and human expertise.
- Use of appropriate packaging technique for export.

4.1.2. Assumptions of the Project:

- Quality plants could not be available at the right time over the year
- Weather conditions may affect the production
- Export permit and LC opening procedure may hampered the project growing state
- Export market is still uncertain
- The production area should be well protected from thefts, as the success depends on total production quantity.

4.1.3. Probable Critical Situation:

- Area of Land: Minimum 200 acres area is required to set up a plant
- Packaging system should be mentioned and recognise properly, the pack size are 5, 10, 20 Kg but international standard 13 and 18kg and the kind of package should be mentioned properly either virgin pulp (Tk. 75/ 5 Kg) and non-virgin (Tk. 50/ 5 Kg).
- The project use chemical fertilizer to produce Banana.

4.2. Recommendation:

On the basis of problems identified, I would like to recommend the following points:

- The project should be started with an area of consisting at least 200 acres.
- The project should use non- toxic or natural fertilizer to avoid environment pollution.
- They should more careful almost weather conditions, because it's an agro based project.
- They should more analyze the product market demand.
- They should take further steps in establishing the unit, depending on the type of project, location and investment.
- They should minimize the price of raw materials and packaging materials.
- They should analyze the price of competitors.
- They should improve the facilities of technical aspects for more production and distribution.
- They should also think almost strong Supply Chain Management and marketing activities.

4.3. Conclusion:

In case one decide to set up a small – scale industry, it is desirable that have to initially make a project feasibility study which examines various aspects of the venture like marketing, finance, technology, legal, ecological etc. Rahimafrooz is a giant business organization in Bangladesh. They are doing their business all-over the country. Their contribution to the economy is very high. I worked at the Head Office of RCAL. During this time I got an opportunity to observe the overall business process related with the project, "Production of Cavendish Banana in Bangladesh**"**. I also got the scope to know almost expectations and perceptions almost this project. The project analysis shows achievable revenue in the tune of at least a mean BDT 41 million per year. The timely implementation of the project would be an important aspect depending on planned activity and execution of the project. The support of the CORE RCAL with is absolutely committed as many of the permit attainment and finance management is tied to the main project. After feasibility study of the project we can easily say that, it is a profitable business and the company should select this project. Finally, I would like to say that this internship at RCAL has increased my practical knowledge of Masters of Business Administration and made my MBA education more complete and applied. In this report I got the opportunity to apply various tools and concepts I learned in my MBA courses.

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