
Pre-Feasibility Study

Grapes Farm



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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February 2015

Table of Contents

1	DISCLAIMER	2
2	EXECUTIVE SUMMARY	3
3	INTRODUCTION TO SMEDA	3
4	PURPOSE OF THE DOCUMENT	4
5	BRIEF DESCRIPTION OF PROJECT & PRODUCT	4
5.1	GRAPES CULTIVATION AND PRODUCTION PROCESS FLOW	5
5.2	INSTALLED AND OPERATIONAL CAPACITY	6
6	CRITICAL FACTORS	6
7	GEOGRAPHICAL POTENTIAL FOR INVESTMENT	6
8	POTENTIAL TARGET CUSTOMERS / MARKETS	7
9	PROJECT COST SUMMARY	7
9.1	PROJECT ECONOMICS	7
9.2	PROJECT FINANCING	7
9.3	PROJECT COST	8
9.4	SPACE REQUIREMENT	8
9.5	FARM STRUCTURE, PLANTATION AND EQUIPMENT	9
9.6	FURNITURE AND FIXTURE REQUIREMENT	10
9.7	PRE-OPERATING COST DETAIL	10
9.8	HUMAN RESOURCE REQUIREMENT	10
9.9	UTILITIES AND OTHER COSTS	11
9.10	REVENUE GENERATION	11
10	CONTACT DETAILS	11
10.1	FARM STRUCTURE SUPPLIERS	11
10.2	GRAPES PLANTS SUPPLIERS	12
10.3	TECHNICAL EXPERTS / CONSULTANTS	12
11	USEFUL WEB LINKS	13
12	ANNEXURES	15
12.1	INCOME STATEMENT	15
12.2	BALANCE SHEET	16
12.3	CASH FLOW STATEMENT	17
13	KEY ASSUMPTIONS	18
13.1	OPERATING COST ASSUMPTIONS	18
13.2	PRODUCTION COST ASSUMPTIONS	18
13.3	REVENUE ASSUMPTIONS	19
13.4	FINANCIAL ASSUMPTIONS	19

1 DISCLAIMER

This information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although, the material included in this document is based on data / information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information, which is necessary for making an informed decision; including taking professional advice from a qualified consultant / technical expert before taking any decision to act upon the information.

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Document Control

Document No.	PREF-NO 120
Prepared by	SMEDA-Punjab
Revision Date	February 2015
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2 EXECUTIVE SUMMARY

Pakistan has been blessed with fertile agriculture lands, which provides huge potential for cultivating different varieties of crops, fruits and vegetables both for domestic needs and exports. Concerning to that, 'Grapes Farming' is gaining tremendous popularity among the farming community and is being practiced in many areas of Pakistan, especially in Baluchistan, KPK and South Punjab.

This particular pre-feasibility is for cultivation of different varieties of seedless grapes spreading over an area of 5 acres. The main varieties to be cultivated in this particular project are 'Thompson', 'Red Globe', 'Cardinal', 'Sultana', 'Narc Black', etc. The total time; from land preparation and sowing of grapes plant to produce fruits, is around 13 months, whereas, productive life of a plant to produce fruits is more than 10 years. According to this pre-feasibility study, 600 grape plants per acre will be cultivated. The estimated grape fruit production per acre would be 4,200 kgs excluding 10% wastage.

Grapes are grown under different varieties of soil and climatic conditions; therefore, complete adherence to best agronomic practices as well as technical knowledge & experience of entrepreneur is extremely critical to the success of this project.

The cost for setting up the proposed grapes farm is estimated at Rs. 3.10 million out of which Rs. 2.44 million is the capital cost and Rs. 0.67 million is for working capital. The project NPV is projected at Rs. 2.51 million, with an IRR of 34% and a Payback Period of 3.56 years.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity

building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Grapes Production Farm** by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any investment decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

Grapes are grown for eating as well as for producing juices, carbonated drinks, and raisins. There is a huge demand of the fruit all year round. Prices are at the highest at the start and end of the seasons. Grapes cultivation can be a highly profitable business venture for the farmers if modern farming techniques are applied.

The proposed project is designed as a medium sized grapes cultivation farm on 5 acres of land. There are numerous varieties of grapes, which are suitable for cultivation in three distinctive agro-climatic zones; namely, 'Sub-tropical', 'Hot Tropical' and 'Mild Tropical' climatic regions in Pakistan. However, for the purpose of this pre-feasibility study, following seedless varieties of grape are being proposed with a special consideration of starting the farm in Southern Punjab and Sindh Regions:

- Thompson
- Red Globe
- Cardinal
- Kings Ruby
- Narc Black
- Perlette

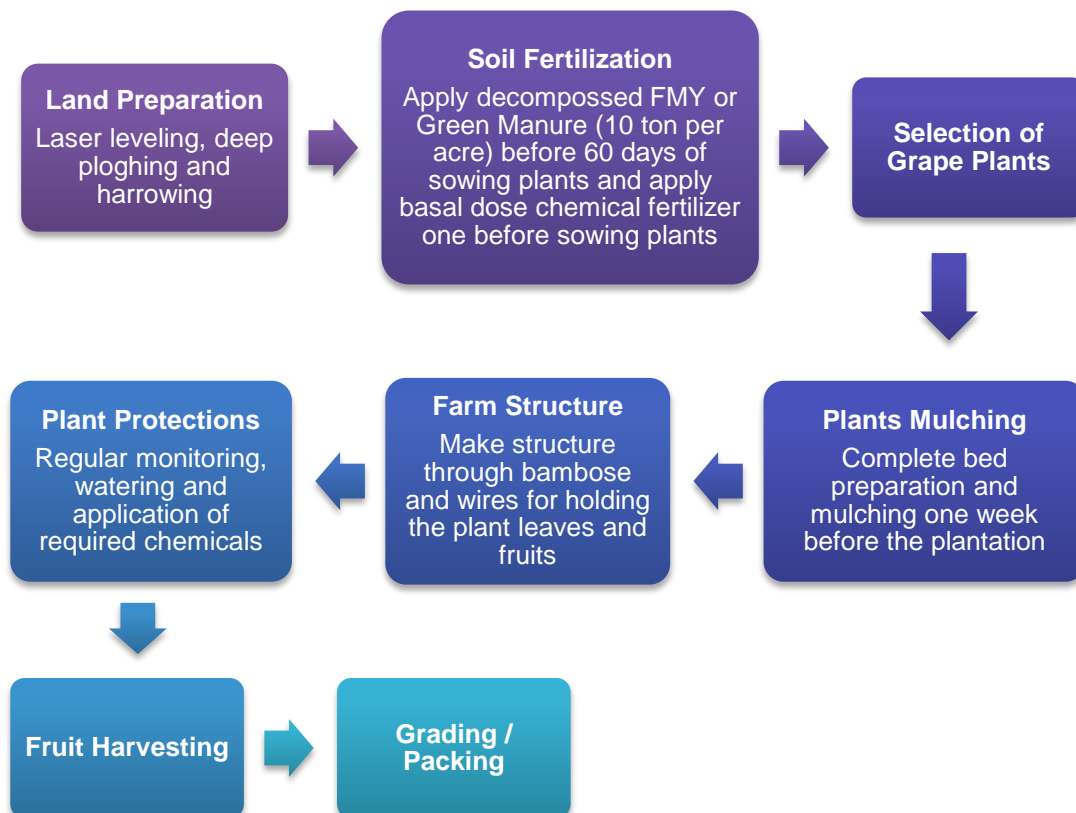
- Crimson
- Sultana (Sundar Khani)

The total time frame; from preparation of land and sowing of grapes plant to produce fruits, is around 13 months, whereas, productive life of a grape plant to produce fruits is more than 10 years. As per the estimates, around 600 grape plants per acre will be cultivated, while estimated grape fruit production per acre would be approximately 4,200 kgs excluding 10% wastage.

The proposed farm will produce around 21,000 kgs of grapes annually and provide employment opportunities to two (02) individuals directly, while seasonal pickers & packers would also be required. The farm is proposed to be started on 5 acres of agriculture land acquired on lease basis. The total cost of project is assumed as Rs. 3.10 million. Financial analysis shows the unit shall be profitable from the second year of operation.

5.1 Grapes Cultivation and Production Process Flow

The process flow for grapes cultivation and production mainly entails the following steps:



5.2 Installed and Operational Capacity

The proposed 'Grapes Farm' would be located in 5 acre of agriculture land. Approximately 3,000 plants will be sowed with a ratio of 600 plants per acre.

The average grapes produced per plant during year one is assumed as 5 kgs whereas maximum grapes produced from a plant in the subsequent years is estimated as 7 kgs. Therefore, total grapes produced from the proposed farm in year one is 15,000 kgs and subsequently around 21,000 kgs in the later years.

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Complete adherence to best agronomic practices is critical to the success of this project; therefore, technical knowledge & experience of the entrepreneur is absolutely necessary.
- ⇒ Commercial viability of the project depends upon the regular and consistent supply of good quality of grapes plants and fertilizers.
- ⇒ Identification of suitable varieties according to soil and climatic conditions of the area.
- ⇒ Proper soil analysis for determining soil nutritional level.
- ⇒ Fertile land and its maintenance within the tunnel during the period of cultivation.
- ⇒ Timely control of pests, diseases and exercise of all recommended agronomic measures.
- ⇒ Timely irrigation, fertilization, training and grading of plantation.
- ⇒ Appropriate post-harvest arrangement for washing, grading, packing, and transportation of product to the market.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

As per the current agricultural practices, more than 70% of grapes production in Pakistan is concentrated in Balochistan with rest of the majority share in KPK and in some parts of Punjab. Following are the prominent geographical locations known for grapes cultivation in Pakistan:

Quetta, Pishin, Kot Abdullah, Loralai, Kalat, Mastung, Kharan, Panjgor, Swat, Charsada, Nowshera, Chakwal, Abbotabd, Chitral, Bahawalpur, etc.

However, recent success of India for cultivation of grapes in Rajasthan Region and declaring it as a 'Rajasthan Grapes Valley' compels to follow the same practices in

similar agro-climatic regions i.e. Cholistan and Thar in Pakistan. Therefore, following areas of Southern Punjab and Sindh could also be the most appropriate / ideal locations for the proposed farm:

Bahawalpur, Rahim Yar Khan, Sadiqabad, Multan, Muzzafargar, Dera Ghazi Khan Khairpur, Mirpur Khas, Sargodha, etc.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential local target market for the packed fresh grapes will be the general public of upper-middle income group of urban cities, who generally prefer to buy the fresh fruits and vegetables from super markets and big departmental stores. Considering to that, major cities for instance Karachi, Lahore, Peshawar, Quetta, Rawalpindi, Islamabad, Multan, Sialkot, Faisalabad, Hyderabad and etc. with large urban base would be the potential local target markets for the proposed business. Similarly, fruit market of these cities will be also focused as wholesale market.

Additionally, juice manufacturers having their set-ups in major cities; for instance Karachi, Lahore, Peshawar, Quetta, Rawalpindi, Multan, Gujranwala, Faisalabad, and etc. will also be the potential target customers for the proposed business. In export market, Pakistani fruits have a huge demand in Middle East, Europe, Iran, Russia, USA, Hong Kong, Taiwan, Canada, etc.

9 PROJECT COST SUMMARY

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of grapes of Rs.1.56 million in the year one. The grapes production per plant during year one is assumed at 5 kgs against the maximum produce of 7 kgs for later years.

The following table shows internal rate of return, payback period and net present value of the proposed venture:

Table 1: Project Economics

Description	Details
Internal Rate of Return (IRR)	34%
Payback Period (Yrs.)	3.56
Net Present Value (Rs.)	2,508,607

9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

Table 2: Project Financing

Description	Details
Total Equity (50%)	1,549,442
Bank Loan (50%)	1,549,442
Markup to the Borrower (%age / annum)	14%
Tenure of the Loan (Years)	5 Years

9.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business:

Table 3: Project Cost

Description	Amount Rs.
Capital Cost	
Building / Infrastructure	690,000
Farm Structure, Plantation and Equipment	1,191,750
Furniture & Fixture	25,900
Pre-operating Cost	528,049
Total Capital Cost	2,435,699
Raw Material Inventory	36,781
Up-front Agricultural Land Lease Rent	301,309
Cash	325,095
Total Working Capital	663,185
Total Project Cost	3,098,885

9.4 Space Requirement

The proposed grapes farm will be spread on five (05) acres of agricultural land. It is recommended to acquire the land on lease basis. The average lease cost in Southern Punjab, or adjoining Sindh areas or other agricultural locations may vary from 30,000 ~ 70,000 per acres, annually. For the purpose of this pre-feasibility, average land lease cost is estimated at Rs. 60,000 per acres.

The infrastructural requirements of the project mainly comprises of the construction of shed, storage, store and washroom. The cost of construction for the proposed infrastructure requirement is provided in the table below:

Table 4: Space Requirement

Description	Estimated Area (Sq ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Grapes Sorting and Packaging Shed	600	700	420,000
Fruit Storage Room	100	800	80,000
Store for Farm Inputs	100	800	80,000
Wash Room	50	600	30,000
Labor Room	100	800	80,000
Total			690,000

9.5 Farm Structure, Plantation and Equipment

Following table provide information on Farm Structure, Plantation and Equipment required for proposed farm:

Table 5: Farm Structure, Plantation and Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Table Grapes Plants	3,000	60	180,000
Concrete Pillars	850	250	212,500
Iron Pipes	2,700	125	337,500
Steel wires	425	110	46,750
Others Farm Equipment's	1	40,000	40,000
Plastic Water Tubs for Washing Grapes	250	300	75,000
Farm Tools for pruning, Cutting fruits	1	20,000	20,000
Spray Machine	1	30,000	30,000
Water Pump and tank with installation	1	25,000	25,000
Pit Digging (Rs. 40 Per plant)	3,000	40	120,000
Pit Filling (Rs. 30 Per plant)	3,000	30	90,000
Weighing Scale	1	15,000	15,000
Total Farm Structure, Plantation and Equipment Cost			1,191,750

9.6 Furniture and Fixture Requirement

Following Furniture and fixture will be required for the proposed grapes cultivation farm:

Table 6: Furniture & Fixture Requirement

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Chairs	2	1,000	2,000
Tables for Packing	3	5,000	15,000
Stools	5	500	2,500
Lighting etc.			2,000
Fans	2	2,200	4,400
Total			25,900

9.7 Pre-operating Cost Detail

The Pre-operating Cost include salary of employees, preparation of land, plantation, etc. Details are stated in table below:

Table 7: Pre-operating Cost

Description	Total Cost (Rs.)
Permanent Staff Salaries for 12 Months	326,000
Irrigation, Green Manure, and Fertilizer before Plantation	103,480
Irrigation for 12 months	78,000
Fungal Spray after 6 months of Plantation	2,750
Accrued Interest	17,819
Total Pre-operating Cost	528,049

9.8 Human Resource Requirement

Permanent and temporary staff required for the project is given in the table below:

Table 8: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Farm Supervisor	1	14,000
Workers (Permanent)	1	12,000

Workers (Temporary) for 2 months	5	12,000
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It is assumed that the owner would have prior experience or knowledge about the fruit processing business. Salaries of all employees are estimated to increase at 10% annually.

9.9 Utilities and Other Costs

An essential cost to be borne by the farm is the cost of water, fertilizer and spray of pesticides, which is estimated as Rs. 390,753 during the year one and an increase 10% annually. Packaging cost is assumed as 60,000 per annum. Similarly, indirect electricity expense is estimated to be around Rs. 5,000 per month, communication expenses of Rs. 3,000 per month.

9.10 Revenue Generation

Based on the estimated grapes production, the sales revenue during first year of operation will be as follows:

Table 9: Revenue Generation – Year 1

Description	Grape Produced (after wastage) Kgs	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
Grapes	12,000	130	1,560,000

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

10.1 Farm Structure Suppliers

Name of Supplier	Address	Phone	Website
Mr. Javed khan	Sumandri, Faisalabad	0344-4475297	
Cholistan Grapes	CDA, main road Bahawalpur	0312-6400510	www.cholistangrapes.com
Dr. Ashraf	National Agriculture Council, Islamabad	0333-5121879	

10.2 Grapes Plants Suppliers

Name of Supplier	Address	Phone	Website
Dr. Manseb Khoker	National Agriculture Research Council, Islamabad	051-9255027	www.parc.gov.pk
Mr. Ishfaq Iftikhar	Sumandri, Faisalabad	0344-5313625	
Chaudhary Abdul Sattar and Ch. Farooq	District Okara	0300-7376088 0300-6989654	

10.3 Technical Experts / Consultants

Name of Expert / Organization	Address	Phone	Website
Alfateh Group	Alfateh Farms, Bahawalpur	0313-6819760	www.alfatehfarms.com
Dr. Khalid Mehmud	National Agriculture Research Council, Islamabad	051-9255027	www.parc.gov.pk
Mr. Iftikhar Ahmed	National Agriculture Research Council, Islamabad	0335-5795064	www.parc.gov.pk
Dr. M. Aslam Parvez	Director Institute of Horticultural Sciences, Faculty of Agriculture, University of Agriculture, Faisalabad	+92-41-9201281, +92-41-920161 Ext. 2952	www.uaf.edu.pk

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Ministry of Education, Training & Standards in Higher Education	http://moptt.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Pakistan Horticulture Development Export Company (PHDEC)	www.phdec.org
Ministry of National Food Security and Research (MNFSR)	www.mnsfr.gov.pk
Pakistan Agriculture Research Council (PARC)	www.parc.gov.pk
National Agriculture Research Council (NARC)	www.narc.gov.pk
Agriculture University of Faisalabad (UAF)	www.uaf.edu.pk
Agriculture Department Government of Punjab	www.punjabagri.gov.pk

Agriculture Department Government of Sindh

www.sindhagri.gov.pk

Agriculture Department Government of KPK

www.khyberpakhtunkhwa.gov.pk

12 ANNEXURES

12.1 Income Statement

Calculations											SMEDA
Income Statement											
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Revenue	1,560,000	2,552,550	2,972,970	3,451,949	3,797,143	4,176,858	4,594,543	5,053,998	5,559,398	6,115,337	
<i>Cost of sales</i>											
Fertilizers, Spray, Irrigation, Green Manures, etc.	390,753	429,828	472,811	520,092	572,101	629,312	692,243	761,467	837,614	921,375	
Packaging Cost	60,000	98,175	114,345	132,767	146,044	160,648	176,713	194,385	213,823	235,205	
Operation costs 1 (direct labor)	432,000	475,200	522,720	574,992	632,491	695,740	765,314	841,846	926,030	1,018,633	
Total cost of sales	882,753	1,003,203	1,109,876	1,227,851	1,350,637	1,485,700	1,634,270	1,797,697	1,977,467	2,175,214	
Gross Profit	677,247	1,549,347	1,863,094	2,224,097	2,446,507	2,691,157	2,960,273	3,256,300	3,581,930	3,940,124	
<i>General administration & selling expenses</i>											
Land lease rental expense	301,309	331,439	364,583	401,042	441,146	485,260	533,786	587,165	645,882	710,470	
Electricity expense	60,000	66,000	72,600	79,860	87,846	96,631	106,294	116,923	128,615	141,477	
Communications expense (phone, fax, mail, internet, etc.)	36,000	39,600	43,560	47,916	52,708	57,978	63,776	70,154	77,169	84,886	
Office expenses (stationary, entertainment, janitorial services, etc)	10,000	11,000	12,100	13,310	14,641	16,105	17,716	19,487	21,436	23,579	
Depreciation expense	156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265	
Amortization of pre-operating costs	52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805	
Subtotal	616,378	657,109	701,913	751,198	805,410	865,044	930,642	1,002,799	1,082,172	1,169,482	
Operating Income	60,869	892,237	1,161,181	1,472,899	1,641,096	1,826,113	2,029,631	2,253,501	2,499,759	2,770,641	
Earnings Before Interest & Taxes	60,869	892,237	1,161,181	1,472,899	1,641,096	1,826,113	2,029,631	2,253,501	2,499,759	2,770,641	
Interest expense on long term debt (Project Loan)	161,243	134,465	103,737	68,476	28,014	-	-	-	-	-	
Interest expense on long term debt (Working Capital Loan)	43,903	36,612	28,245	18,645	7,627	-	-	-	-	-	
Subtotal	205,145	171,077	131,982	87,121	35,641	-	-	-	-	-	
Earnings Before Tax	(144,277)	721,161	1,029,198	1,385,779	1,605,455	1,826,113	2,029,631	2,253,501	2,499,759	2,770,641	
Tax	-	85,674	131,879	185,366	218,318	251,417	281,944	315,525	352,463	393,096	
NET PROFIT/(LOSS) AFTER TAX	(144,277)	635,487	897,319	1,200,412	1,387,137	1,574,696	1,747,687	1,937,976	2,147,295	2,377,545	

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	325,095	75,927	595,548	1,323,137	2,314,061	3,434,869	5,138,089	7,004,037	9,048,521	11,288,835	14,773,360
Accounts receivable		64,110	84,504	113,538	132,019	148,954	163,849	180,234	198,258	218,083	239,892
Raw material inventory	36,781	45,980	55,956	68,095	82,394	99,697	120,634	145,967	176,620	213,710	-
Pre-paid annual land lease	301,309	331,439	364,583	401,042	441,146	485,260	533,786	587,165	645,882	710,470	-
Total Current Assets	663,185	517,456	1,100,592	1,905,811	2,969,620	4,168,781	5,956,359	7,917,403	10,069,280	12,431,098	15,013,252
<i>Fixed assets</i>											
Building/Infrastructure	690,000	655,500	621,000	586,500	552,000	517,500	483,000	448,500	414,000	379,500	345,000
Furniture & fixtures	25,900	23,310	20,720	18,130	15,540	12,950	10,360	7,770	5,180	2,590	-
Total Fixed Assets	1,907,650	1,751,385	1,595,120	1,438,855	1,282,590	1,126,325	970,060	813,795	657,530	501,265	345,000
<i>Intangible assets</i>											
Pre-operation costs	528,049	475,244	422,439	369,634	316,830	264,025	211,220	158,415	105,610	52,805	0
Total Intangible Assets	528,049	475,244	422,439	369,634	316,830	264,025	211,220	158,415	105,610	52,805	0
TOTAL ASSETS	3,098,885	2,744,085	3,118,152	3,714,301	4,569,040	5,559,131	7,137,639	8,889,613	10,832,420	12,985,168	15,358,252
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		20,414	23,998	26,928	30,216	33,610	37,422	41,709	46,540	51,992	47,531
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	20,414	23,998	26,928	30,216	33,610	37,422	41,709	46,540	51,992	47,531
<i>Other liabilities</i>											
Long term debt (Project Loan)	1,217,850	1,036,335	828,044	589,024	314,743	-	-	-	-	-	-
Long term debt (Working Capital Loan)	331,593	282,170	225,457	160,378	85,697	-	-	-	-	-	-
Total Long Term Liabilities	1,549,442	1,318,506	1,053,501	749,402	400,441	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442	1,549,442
Retained earnings		(144,277)	491,210	1,388,529	2,588,941	3,976,078	5,550,775	7,298,462	9,236,438	11,383,733	13,761,279
Total Equity	1,549,442	1,405,166	2,040,652	2,937,971	4,138,383	5,525,521	7,100,217	8,847,904	10,785,880	12,933,175	15,310,721
TOTAL CAPITAL AND LIABILITIES	3,098,885	2,744,085	3,118,152	3,714,301	4,569,040	5,559,131	7,137,639	8,889,613	10,832,420	12,985,168	15,358,252

12.3 Cash Flow Statement

Calculations											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		(144,277)	635,487	897,319	1,200,412	1,387,137	1,574,696	1,747,687	1,937,976	2,147,295	2,377,545
Add: depreciation expense		156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265	156,265
amortization of pre-operating costs		52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805	52,805
Accounts receivable		(64,110)	(20,395)	(29,034)	(18,481)	(16,935)	(14,895)	(16,385)	(18,023)	(19,826)	(21,808)
Raw material inventory	(36,781)	(9,199)	(9,976)	(12,138)	(14,300)	(17,303)	(20,936)	(25,333)	(30,653)	(37,090)	213,710
Accounts payable		20,414	3,585	2,930	3,288	3,394	3,812	4,287	4,831	5,452	(4,462)
Cash provided by operations	(36,781)	11,899	817,770	1,068,146	1,379,989	1,565,363	1,751,746	1,919,326	2,103,201	2,304,901	2,774,055
<i>Financing activities</i>											
Project Loan - principal repayment		(181,514)	(208,292)	(239,020)	(274,281)	(314,743)	-	-	-	-	-
Working Capital Loan - principal repayment		(49,422)	(56,713)	(65,080)	(74,680)	(85,697)	-	-	-	-	-
Add: land lease expense		301,309	331,439	364,583	401,042	441,146	485,260	533,786	587,165	645,882	710,470
Land lease payment	(301,309)	(331,439)	(364,583)	(401,042)	(441,146)	(485,260)	(533,786)	(587,165)	(645,882)	(710,470)	-
Short term debt principal repayment		-	-	-	-	-	-	-	-	-	-
Additions to Project Loan	1,217,850	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	331,593	-	-	-	-	-	-	-	-	-	-
Issuance of shares	1,549,442	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	2,797,576	(261,067)	(298,149)	(340,558)	(389,065)	(444,555)	(48,526)	(53,379)	(58,717)	(64,588)	710,470
<i>Investing activities</i>											
Capital expenditure	(2,435,699)	-	-	-	-	-	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(2,435,699)	-	-	-	-	-	-	-	-	-	-
NET CASH	325,095	(249,169)	519,622	727,589	990,924	1,120,808	1,703,220	1,865,948	2,044,484	2,240,313	3,484,525

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Communication Expenses	3,000 Per Month
Office Expenses (Stationary, Entertainment, Janitorial Services, etc.)	10,000 Per Year
Depreciation Method	Straight Line
Depreciation Rate	10% on Furniture & Fixtures 10% on Office Equipment
Operating Cost Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details
No of Grapes Plant Per Acre	600
Costs Before Fruiting	
Green Manure before Sowing (2 Tons Per Acre)	Rs. 10,000 Per Tons (1 Month Before Sowing)
NPK Required (2 Grams / Plant)	Rs. 480 (1 Month Before Sowing)
Water Before Sowing (1 Time)	Rs. 600 Per Acre
Water After Sowing (26 Times, After Every 15 Days)	Rs. 78,000
Cost of Fungal Spray (6 Months After Sowing)	Rs. 550 Per Acre
Cost After Fruiting Grapes	
NPK Required (2 Grams / Plant)	Rs. 528 Price of NPK for Year
Green Manure (2 Tons Per Acre)	Rs. 11,000 Per Tons
Cost of Fungal Spray	Rs. 605 Per Acre
Irrigation (84 Times Per Year; After every 5 Day for 9 Months, and 3 Days for 3 Months, Apr-May-Jun)	Rs. 660 Per Acre
Fruit Wastage	10%
Packaging Cost	Rs. 5 Per Kg
Production Cost Growth Rate	10%

13.3 Revenue Assumptions

Description	Details
Sale Price Per Kg	Rs. 130
Growth in Sales Price	10%
Maximum Grapes Produced Per Plant	7 Kg
Grapes Production Per Plant in Year 1	5 Kg

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	14%
Debt Tenure	5 Years
Debt Payment / Year (Quarterly)	4