

Pre-Feasibility Study

FRESH FRUIT PROCESSING UNIT (MANGO, CITRUS & APPLE)



Small and Medium Enterprises Development Authority

Ministry of Industries & Production

Government of Pakistan

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

The processing of fresh fruits on commercial basis is gaining popularity among the investors in Pakistan. The proposed unit is a medium size fresh fruit-processing unit, involves processing of fresh Mangoes, Citrus and Apple for local and export markets. The processing of fresh fruit would include undertaking the activities of fruits grading, waxing, polishing and packaging, which will increase the quality and shelf life of fruits.

Under the proposed project, fresh fruits will be purchased from the local market and after processing will be sold in both local and international markets. This business venture can be started in urban cities of South Punjab Region, Interior Sindh and in some parts of KPK and Baluchistan. According to the estimates of this pre-feasibility, the proposed fresh fruit processing unit will have a maximum capacity of processing 3 tons of Mango, Citrus or Apple per hour and 6,696 tons of fruit annually on seasonal basis. The seasonal processing of fruits will be, 1,776 tons of mangoes, 2,400 tons of apple and 2,520 tons of citrus.

The initial operational capacity is assumed at 70% (i.e. processing of 4,687 tons of fruits) where as maximum operational capacity utilization is considered as 90%. This production capacity is estimated to be economically viable and justifies the capital as well as operational costs of the project. However, complete adherence to best agronomic practices is critical to the success of this project. Therefore, technical knowledge & experience of the entrepreneur is absolutely necessary. The entrepreneur will establish the proposed unit on purchased land along with carrying out the necessary civil works.

The estimated cost for setting up the proposed fresh fruit processing unit is Rs. 96.99 million out of which Rs. 83.23 million is the capital cost and Rs. 13.76 million is for working capital. The project is to be financed through 50% debt and 50% equity. The project NPV is around Rs. 39.22 million, with an IRR of 27% and Payback Period of 4.84 years. The project will provide employment opportunities to 24 people including owner manager. The legal business status of this project is proposed as 'Sole Proprietorship'.

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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **Fresh Fruits (Mango, Citrus and Apple) Processing** business by providing them a general understanding of the business with 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 it's successful management.

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

5 BRIEF DESCRIPTON OF PROJECT

Nature has blessed Pakistan with an ideal climate for growing a large variety of fruits. Unfortunately, production of fruits in Pakistan has often not been accompanied by better post-harvest management and appropriate modernization of the processing techniques. It has been observed that in order to enter into the international markets with longer shelf life, good quality of fruits will require modern processing facilities. During recent years the processing of fresh fruits as a commercially viable business has gained popularity among the investors in Pakistan. However, there is still a great demand of initiating fruits processing business with introduction of modern processing techniques.

Especially, Pakistani Mangoes and Citrus have huge demand in the international market due to their rich flavor, aroma, and health value, i.e., nutrients and minerals contents.

This particular pre-feasibility provides the basic information about establishing a medium sized fresh fruit processing unit of mango, citrus and apple for both local and international markets. According to the proposed business model, fresh fruits will be purchased from local markets directly from farmers or distributors, which will be processed and sold both in local and international markets. The major scope of processing activities will include post harvest handling, pre-cooling, grading, ripening, packing and logistics. As the fruits are produced on seasonal basis, therefore the selected product mix has been identified in order to operate the processing plant round the year. It is assumed that 50% of the processed fruit will be sold in the high-end local market whereas rest of 50% will be sold to the exporters for international markets.

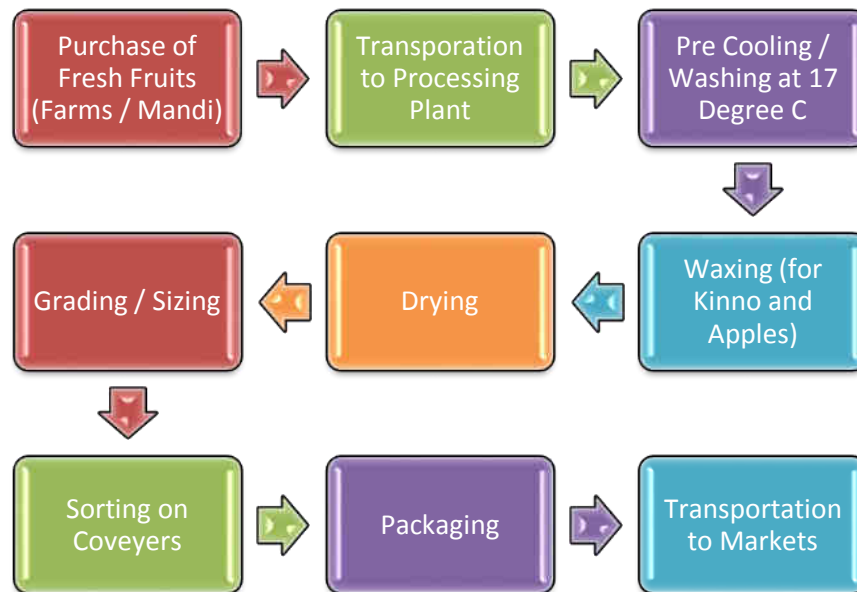
Proposed project is designed to produce a maximum of 03 tons of fruits (mango, citrus and apple) per hour and will provide employment opportunities to twenty four (24) individuals directly, while seasonal semi skilled wage labors for packing, sorting and etc., purposes would also be required. The project is to be established on a purchased land having a total area of around 1.5 acres (i.e. 12 Kanals), while construction of building will be comprised of a covered area of 43,000 sq. ft. The processing unit should be preferably located in the vicinity of urban areas for easy access to local market as well as to export internationally.

The total cost of project is assumed as Rs. 96.99 million. All the expenditures that are required to be incurred for setting up of fruit processing unit including land building and purchase of raw material (i.e. fresh fruits of mango, citrus and apple) for start-up are included in the capital cost of the project.



5.1 Production Process Flow

The production process flow of proposed fresh fruit-processing unit mainly includes the following steps:



5.2 Installed & Operational Capacities

The proposed Fresh Fruit Processing Unit has a maximum capacity of processing 6,696 tons of fruits annually. As the processing of fruits (i.e. mango, citrus and apple) is seasonal, therefore the proposed unit will process the fruits on seasonal basis. At maximum capacity utilization of 90%, the unit would be able to process and produce 1,598 tons of mangos, 2,268 tons of citrus and 2,160 tons of apples per season annually.

However, capacity utilization during first year of operation is assumed at 70%, which means 1,243 tons of mangos, 1,764 tons of citrus and 1,680 tons of apples will be processed and available for sale. Capacity utilization growth rate of 5% is considered for subsequently years, while maximum capacity utilization (i.e. 90%) will be achieved during the 6th year of operation. This production capacity is estimated to be economically viable and justifies the capital as well as operational costs of the project.

It is pertinent to mention that, the processing of above-mentioned quantities of fruits would entail wastage of 5%.

The details of operational and installed capacity according to product mix is provided in the table below:

Table 1: Installed and Operational Capacities

Description	Processing Season	Production Capacity Per hour (tons)	Total Production Capacity per Season (8 hour shift basis)	Operational Capacity 70% (Year 1)	Maximum Operational Capacity 90% (Year 6)
Mango	May ~ Aug (74 Days)	3	1,776	1,243	1,598
Citrus	Nov ~ Mar (105 Days)	3	2,520	1,764	2,268
Apple	Jul ~ Nov (100 Days)	3	2,400	1,680	2,160
Total	279 Days		6,696	4,687	6,026

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 in the field of horticulture and in fresh fruit processing business is absolutely necessary.
- ⇒ Selection of quality fruits on the basis of best analysis of cost and revenues for a given season; cost efficiency through better management.
- ⇒ Appropriate post harvest arrangement for transportation of product to the processing unit.
- ⇒ Appropriate storage arrangement and internal control for processed fruits; cold chain refer container arrangements for transportation of processed fruits to local and international markets.
- ⇒ Properly trained seed staff should be engaged and comprehensive staff training programs to be adopted for capacity building.
- ⇒ Careful selection of good location and purchase of land at competitive price.
- ⇒ Effective marketing and distribution of the product particularly to the wholesale buyers.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

As per the current agricultural practices, the main orchards of mango are in South Punjab and Rural Sind, while orchards of citrus are in Sargodha, Multan, Sahiwal, Bahawalpur and in few parts of Sindh. The apple is predominantly produced in Baluchistan. Keeping in view the varying geographical locations for different variety of fruits, it is recommended that the project may be preferably located in the vicinity of urban areas of South Punjab and Sindh for easy access and availability of the said fruits. Following areas could be the most appropriate locations for the proposed unit.

Multan, Bahawalpur, Dera Ghazi Khan, Rahim Yar Khan, Sahiwal, Sargodha, Sadiqabad, Khairpur, Sakhar, Mirpur Khas, Sanghar, Khanewal, Muzzafargar, Ghotki and etc.

8 POTENTIAL TARGET MARKETS

The potential local target market for the processed fresh fruits 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.

In export market, Pakistani fruits have a huge demand in Middle East, Europe, Iran, Russia, USA, Canada and etc.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Fruit Processing Unit. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

9.1 Project Economics

All the assumptions in this financial model are based upon total installed capacity of processing of 03 tons of fruits (either mango, citrus or apple) per hour on seasonal basis. Where as, during first year of operation capacity utilization is assumed as 70% with 1,243 tons of mangos, 1,764 tons of citrus and 1,680 tons of apples to be processed, out of total processed fruit 5% will be wastage and remaining 95% will be sold.



The following table shows internal rate of return, payback period and Net Present Value:

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	27%
Pay Back Period (Years)	4.84
Net Present Value (NPV)	39,226,619

Returns on the project and its profitability are highly dependent on the efficiency of the entrepreneur in hiring skilled persons and maintaining good quality in terms of fresh fruit, quality processing material and customers services.

9.2 Project Financing

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

Table 3: Project Financing

Description	Details
Total Equity (50%)	48,494,169
Bank Loan (50%)	48,494,169
Annual Markup to the Borrower – Long Term Loan	16%
Tenure of the Loan (Years)	5
Annual Markup to the Borrower – Short Term Debt	16%

9.3 Project Cost

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

Table 4: Project Investment

Capital Investment	Amount Rs.
Land	3,000,000
Building / Infrastructure	28,695,000
Plant Machinery & Equipment	44,575,750
Furniture & Fixtures	1,782,500
Office Vehicles	1,575,000
Office Equipment	726,000
Pre-operating costs	2,876,513
Total Capital Cost	83,230,763



Working Capital Requirements	
Equipment Spare Parts inventory	514,697
Raw Material Inventory	11,388,268
Cash	1,854,610
Total Working Capital	13,757,575
Total Investment	96,988,338

9.4 Plant Machinery and Equipment Requirement

Following table provides list of plant and machinery required for an average size Fresh Fruit Processing Unit:

Table 5: Machinery and Equipment Required

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Fruit Grading, Washing, Drying and Sorting Plant (Imported)	1	14,715,000	14,715,000
Custom and Excise Duty (5% of Plant Cost)			735,750
Cold Storage	1	21,000,000	21,000,000
Water Pump and Tank	1	25,000	25,000
Plastic Crates	2,000	100	200,000
Diesel Generator (300 KVA CAT) Including Installation, etc.	1	7,600,000	7,600,000
Weighting Scale	1	300,000	300,000
Total			44,575,750

9.5 Office Equipment Requirement

Following office equipment will be required for the proposed venture:

Table 6: Office Equipoment Required

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptops	2	75,000	150,000
Computers	8	25,000	200,000
Multipurpose Machines	1	55,000	55,000
Telephone exchange	1	10,000	10,000

Telephones	11	1,000	11,000
Computer Networking, etc.	1	200,000	200,000
Food Grade Equipment's (Gloves, Boots, Suits, Caps, Masks, etc.)	1	100,000	100,000
Total			726,000

9.6 Furniture and Fixture Requirements

The details of required furniture and fixture for the proposed Children Shoe Manufacturing unit are provided in the following table:

Table 7: Furniture and Fixture Required

Description	Quantity / Area	Unit Cost (Rs.)	Total Cost (Rs.)
CEO / Owner Manager Office Furniture	1	100,000	100,000
Supply Chain Office	3	50,000	150,000
Admin and Finance Office	4	35,000	140,000
Director Operations Office	1	65,000	65,000
Reception	1	75,000	75,000
Carpeting	500	35	17,500
Fixtures	Lump sum	150,000	150,000
Electric wiring & Lighting	Lump sum	300,000	300,000
Fire Extinguisher Set	1	500,000	500,000
Air conditioner (1.5 ton)	4	60,000	240,000
Air conditioner (1 ton)	1	45,000	45,000
Total			1,782,500

9.7 Space Requirement

Approximately 1.5 acres (12 kanals) of land would be required for establishment of proposed unit, it is recommended that required land should be procured in the nearby areas of identified potential cities and urban centers. The estimated cost of land is estimated at a rate of Rs. 2.00 million per acre; hence total cost of required land is Rs. 3.00 million.

The infrastructural requirements of the project mainly comprises of the construction of Management Building, Processing Hall, Cold Store and other facilities. The cost of construction of building for the proposed unit is provided in the table below:

Table 8: Building and Infrastructure Requirements

Description	Area Required Sq. ft.	Rate / Unit (Rs.)	Total Cost (Rs.)
Management Building	1,550	1,100	1,705,000
Processing Hall	12,000	1,000	12,000,000
Cold Storage	9,600	1,100	10,560,000
Store	1,000	1,000	1,000,000
Cafeteria	1,000	1,000	1,000,000
Masjid	800	1,500	1,200,000
Generator Room	200	800	160,000
Toilets	300	800	240,000
Storage Yard	9,600	50	480,000
Pavement / Driveway	7,000	50	350,000
Grounds / Open Space			
Total			28,695,000

9.8 Raw Material Requirements

Fresh fruits of mango, citrus and apple are the main raw material for the proposed business, which will be procured either directly from fruit farms or from distributors of local fruit mandi. After that, fresh fruit will be processed and marketed through distributors and retailers in local market and through exporters in international market.

According to the estimated installed and operational capacity of the proposed plant, following table provides the details of seasonal requirements of fresh fruits as a raw material:

Table 9: Raw Material Requirements (1st Year of Operation)

Description	Required Quantity (Tons)	Unit Cost (Rs.)	Total Cost (Rs.)
Mango	1,243	55,000	68,365,000
Citrus	1,764	40,000	70,560,000
Apple	1,680	60,000	100,800,000
Total	4,687		239,725,000

The raw material requirement in subsequent years will be determined according the capacity utilization of the unit. The purchasing cost of raw material is assumed to increase at 10% annually. However, it is only estimated, as the market price of fruits may vary due to Government pricing strategy and other seasonal fluctuations.

9.9 Human Resource Requirement

In order to run operations of Fresh Fruit Processing unit smoothly, details of human resources required along with number of employees and monthly salary are recommended as under:

Table 10: Human Resource Requirement

Description	No. Of Employees	Salary per Employee Per Month (Rs)
Chief Executive / Owner Manager	1	12,0000
Food Technologist	1	55,000
Procurement Officer	1	50,000
Processing Plant Operator	1	45,000
Accounts Officer	1	40,000
Personal Officer	1	30,000
Admin Officer	1	30,000
Skilled Machine Mechanic	1	25,000
Supervisor	1	25,000
Receptionist	1	25,000
Helper	2	20,000
Semi Skilled Laborers	5	18,000
Office Boys	2	12,000
Gardener	1	12,000
Security Guard	3	15,000
Driver	1	20,000

In addition to the above permanent staff, semi skilled wage labors for packing, sorting and etc., purposes would also be hired on seasonal production demand basis. 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.

9.10 Other Costs

An essential cost to be borne by the business is the cost of electricity; a three-phase commercial electricity connection is required. The transportation of fruits from fruit mandi to processing unit and than from factory to local market and international freight forwarders will be another major cost component, an amount of Rs. 35 million during year 1 is assumed as transportation expenses for both local and international markets.

Additionally, project will also require heavy marketing and promotional activities; for which approximately 2% of total revenues (i.e. Rs. 6,554,825) will be spent on marketing and promotion expenses annually. Similarly, during 1st year of operation communication and office vehicle running expenses are estimated at Rs. 180,000 and 315,000 respectively. The overall all operational growth rate is estimated at 10% annually.

9.11 Revenue Generation

It is assumed that 50% of the processed fruit will be sold in the high-end local market whereas rest of 50% will be sold to the exporters for international markets. Following tables provide assumption for revenues and costs of the proposed Fresh Fruits Processing venture during first year of operation:

Table 11: Revenue Generation in First Year

Products	Total Fruit Processed in tons (@ 70% Capacity)	Finished Goods Inventory (15 days)	Wastage in tons (@ 5%)	Sale Market	*Quantity for Sale (tons)	Ave. Sale Price (Rs / ton)	Sales Revenue Rs.
Mango	1,243	51.72	59.57	Local	565.95	70,000	39,616,695
				International	565.95	84,000	47,540,034
Citrus	1,764	73.39	84.53	Local	803.04	60,000	48,182,467
				International	803.04	72,000	57,818,961
Apple	1,680	69.89	80.51	Local	764.80	80,000	61,184,086
				International	764.80	96,000	73,420,903
Total	4,687	195	224.61		4267.58		327,763,146

* Quantity for sale is calculated after deducting the Finished Goods Inventory and Wastage from Total Fruit Processed.

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 Machinery Suppliers

Name of Supplier	Address	Phone / Fax	E-mail / Website
Jaffer Brothers Pvt. Ltd.	3, Mall Mansion, 30-Shahrah-e-Quaid-eAzam Lahore	Ph: +92-42-373 20186	
Sigma Tech Imports	1-Mozang road, Behind High Court	Ph: +92-42-373 51422	

	Lahore		
S.T Associates	Office No. 10, 2 nd Floor, Mujahid Plaza, Blue Area Islamabad	Ph: +92-51-280 3154 0321-5155764	
Agfa Tech	C-10, Ground Floor, Ruqia square, Block No. 14, Federal Aea, Karachi	Ph: +92-300-8299892	
Kold Kraft	247-S Industrial Estate, Kot Lakhpat, Lahore	+92-42-351 16727-28	
Koldware Industries Pvt. Ltd.	Head Office: Office No. 427, 4th Floor, Bhayani Center, Block 'M', North Nazimabad, Karachi Lahore Office: Suite No. S-4, Second Floor, Fazal Apartment, Faiz Road, Old Muslim Town, Lahore	Ph: +92-21-366 77024 & 25 Ph: +92-42-358 41659	helpdesk@koldwareindustries.com www.koldwareindustries.com
Zalazar Engineering Works	Opp. Commerce College, Bhalwal	Ph: +92-300-960 3209	
Al-Aziz Enterprises	10-km, Lahore Road, Sargodha	Ph: +92-300-960 6642	

10.2 Raw Material Suppliers

Name of Supplier	Address	Phone / Fax	E-mail / Website
Wax (Polish) Al-Aziz Enterprises	10-km, Lahore Road, Sargodha	Ph: +92-300-960 6642	
Packaging Zahid Packages	4-km, Kot-Momin Bhalwal Road, Bhalwal	Ph: +92-0486-892 245-46 Fax: +92-0486-892 247	
Roshan Packages	71-A, Ahmad Block, New Garden Town	Ph: +92-42-585 5324 Fax: +92-42-585 5331	sales@roshanpackages.com.pk www.roshanpackages.com.pk

10.3 Technical Experts / Consultants

Name	Address	Phone / Fax	E-mail / Website
Dr. M. Aslam Parvez	Director Institute of Horticultural Sciences, Faculty of Agriculture, University of Agriculture, Faisalabad	Ph: +92-41-920 1281, +92-41-920 0161 Ext. 2952	

11 USEFUL 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

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	327,741,260	386,266,485	453,219,342	529,700,106	616,944,830	678,639,313	746,503,244	821,153,569	903,268,925	993,595,818	
<i>Cost of sales</i>	23,582,475	27,793,631	32,611,194	38,114,333	44,391,988	48,831,187	53,714,305	59,085,736	64,994,309	71,493,740	
Cost of goods sold	229,747,000	270,773,250	317,707,280	371,320,384	432,479,035	475,726,938	523,299,632	575,629,595	633,192,555	696,511,810	
Processing Costs (Labor, Electricity, Chemicals, Packing, etc.)	7,636,230	8,999,843	10,559,815	12,341,784	14,374,548	15,812,003	17,393,204	19,132,524	21,045,776	23,150,354	
Transportation Expense (Local)	12,352,725	14,558,569	17,082,054	19,964,651	23,252,946	25,578,241	28,136,065	30,949,671	34,044,638	37,449,102	
Transportation Expense (International)	23,582,475	27,793,631	32,611,194	38,114,333	44,391,988	48,831,187	53,714,305	59,085,736	64,994,309	71,493,740	
Total cost of sales	273,318,430	322,125,293	377,960,343	441,741,151	514,498,517	565,948,369	622,543,206	684,797,526	753,277,279	828,605,007	
Gross Profit	54,422,830	64,141,192	75,258,999	87,958,955	102,446,313	112,690,944	123,960,038	136,356,042	149,991,646	164,990,811	
<i>General administration & selling expenses</i>											
Administration expense	8,112,000	8,901,796	9,768,487	10,719,561	11,763,233	12,908,517	14,165,309	15,544,463	17,057,894	18,718,675	
Administration benefits expense	405,600	445,090	488,424	535,978	588,162	645,426	708,265	777,223	852,895	935,934	
Electricity expense	840,000	924,000	1,016,400	1,118,040	1,229,844	1,352,828	1,488,111	1,636,922	1,800,615	1,980,676	
Travelling expense	811,200	890,180	976,849	1,071,956	1,176,323	1,290,852	1,416,531	1,554,446	1,705,789	1,871,868	
Communications expense (phone, fax, mail, internet, etc.)	180,000	198,000	217,800	239,580	263,538	289,892	318,881	350,769	385,846	424,431	
Office vehicles running expense	315,000	346,500	381,150	419,265	461,192	507,311	558,042	613,846	675,230	742,754	
Office expenses (stationary, entertainment, janitorial services, etc)	15,000	16,500	18,150	19,965	21,962	24,158	26,573	29,231	32,154	35,369	
Promotional expense	6,554,825	7,725,330	9,064,387	10,594,002	12,338,897	13,572,786	14,930,065	16,423,071	18,065,379	19,871,916	
Depreciation expense	6,530,775	6,530,775	6,530,775	6,530,775	6,530,775	6,811,732	6,811,732	6,811,732	6,811,732	6,811,732	
Amortization of pre-operating costs	575,303	575,303	575,303	575,303	575,303	-	-	-	-	-	
Subtotal	24,339,703	26,553,472	29,037,725	31,824,425	34,949,227	37,403,502	40,423,509	43,741,704	47,387,534	51,393,354	
Operating Income	30,083,127	37,587,720	46,221,274	56,134,531	67,497,086	75,287,442	83,536,529	92,614,338	102,604,113	113,597,457	
Other income (interest on cash)	-	-	-	-	-	-	-	-	-	-	
Earnings Before Interest & Taxes	30,083,127	37,587,720	46,221,274	56,134,531	68,417,486	75,287,442	83,536,529	92,614,338	102,604,113	113,597,457	
Interest on short term debt	1,354,425	1,673,666	319,241	-	-	-	-	-	-	-	
Interest expense on long term debt (Project Loan)	6,314,023	5,305,996	4,126,748	2,747,193	1,133,310	-	-	-	-	-	
Interest expense on long term debt (Working Capital Loan)	1,043,672	877,051	682,128	454,096	187,330	-	-	-	-	-	
Subtotal	8,712,121	7,856,713	5,128,117	3,201,289	1,320,640	-	-	-	-	-	
Earnings Before Tax	21,371,007	29,731,007	41,093,158	52,933,242	67,096,846	75,287,442	83,536,529	92,614,338	102,604,113	113,597,457	
Tax	6,702,352	9,628,352	13,605,105	17,749,134	22,706,396	25,573,104	28,460,284	31,637,518	35,133,939	38,981,609	
NET PROFIT/(LOSS) AFTER TAX	14,668,655	20,102,655	27,488,053	35,184,108	44,390,451	49,714,338	55,076,245	60,976,820	67,470,174	74,615,848	

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	1,854,610	-	-	10,383,809	28,343,502	49,267,815	91,412,446	138,047,819	188,040,207	241,514,189	393,056,384
Accounts receivable		26,937,638	29,342,784	34,499,418	40,393,950	47,122,395	53,243,184	58,567,502	64,424,253	70,866,678	77,953,346
Finished goods inventory		23,766,820	28,010,895	32,866,117	38,412,274	44,739,001	49,212,902	54,134,192	59,547,611	65,502,372	72,052,609
Equipment spare part inventory	514,697	667,268	861,220	1,107,206	1,418,527	1,716,417	2,076,865	2,513,006	3,040,738	3,679,293	-
Raw material inventory	11,388,268	14,764,076	19,055,501	24,498,228	31,386,553	37,977,729	45,953,053	55,603,194	67,279,864	81,408,636	-
Total Current Assets	13,757,575	66,135,801	77,270,400	103,354,778	139,954,806	180,823,358	241,898,449	308,865,713	382,332,673	462,971,168	543,062,339
<i>Fixed assets</i>											
Land	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Building/Infrastructure	28,695,000	27,260,250	25,825,500	24,390,750	22,956,000	21,521,250	20,086,500	18,651,750	17,217,000	15,782,250	14,347,500
Machinery & equipment	44,575,750	40,118,175	35,660,600	31,203,025	26,745,450	22,287,875	17,830,300	13,372,725	8,915,150	4,457,575	-
Furniture & fixtures	1,782,500	1,604,250	1,426,000	1,247,750	1,069,500	891,250	713,000	534,750	356,500	178,250	-
Office vehicles	1,575,000	1,260,000	945,000	630,000	315,000	2,536,553	2,029,243	1,521,932	1,014,621	507,311	-
Office equipment	726,000	580,800	435,600	290,400	145,200	1,169,230	935,384	701,538	467,692	233,846	-
Total Fixed Assets	80,354,250	73,823,475	67,292,700	60,761,925	54,231,150	51,406,159	44,594,427	37,782,695	30,970,963	24,159,232	17,347,500
<i>Intangible assets</i>											
Pre-operation costs	2,876,513	2,301,210	1,725,908	1,150,605	575,303	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	2,876,513	2,301,210	1,725,908	1,150,605	575,303	-	-	-	-	-	-
TOTAL ASSETS	96,988,338	142,260,487	146,289,008	165,267,308	194,761,259	232,229,516	286,492,876	346,648,408	413,303,636	487,130,399	560,409,839
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		21,794,572	25,828,634	30,489,418	35,871,115	41,901,425	46,450,447	51,529,734	57,208,142	63,564,731	62,228,323
Short term debt		15,724,369	3,706,269	-	-	-	-	-	-	-	-
Total Current Liabilities	-	37,518,942	29,534,903	30,489,418	35,871,115	41,901,425	46,450,447	51,529,734	57,208,142	63,564,731	62,228,323
<i>Other liabilities</i>											
Long term debt (Project Loan)	41,615,382	35,680,874	28,738,340	20,616,558	11,115,221	-	-	-	-	-	-
Long term debt (Working Capital Loan)	6,878,787	5,897,847	4,750,285	3,407,800	1,837,283	-	-	-	-	-	-
Total Long Term Liabilities	48,494,169	41,578,721	33,488,626	24,024,358	12,952,504	-	-	-	-	-	-
<i>Shareholders' equity</i>											
Paid-up capital	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169	48,494,169
Retained earnings		14,668,655	34,771,310	62,259,363	97,443,471	141,833,922	191,548,260	246,624,505	307,601,325	375,071,499	449,687,347
Total Equity	48,494,169	63,162,824	83,265,479	110,753,532	145,937,640	190,328,091	240,042,429	295,118,674	356,095,494	423,565,668	498,181,516
TOTAL CAPITAL AND LIABILITIES	96,988,338	142,260,487	146,289,008	165,267,308	194,761,259	232,229,516	286,492,876	346,648,408	413,303,636	487,130,399	560,409,839

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		14,668,655	20,102,655	27,488,053	35,184,108	44,390,451	49,714,338	55,076,245	60,976,820	67,470,174	74,615,848
Add: depreciation expense		6,530,775	6,530,775	6,530,775	6,530,775	6,530,775	6,811,732	6,811,732	6,811,732	6,811,732	6,811,732
amortization of pre-operating costs		575,303	575,303	575,303	575,303	575,303	-	-	-	-	-
amortization of training costs		-	-	-	-	-	-	-	-	-	-
Deferred income tax		-	-	-	-	-	-	-	-	-	-
Accounts receivable		(26,937,638)	(2,405,146)	(5,156,634)	(5,894,532)	(6,728,445)	(6,120,789)	(5,324,318)	(5,856,750)	(6,442,425)	(7,086,668)
Finished goods inventory		(23,766,820)	(4,244,075)	(4,855,222)	(5,546,157)	(6,326,727)	(4,473,900)	(4,921,290)	(5,413,419)	(5,954,761)	(6,550,237)
Equipment inventory	(514,697)	(152,571)	(193,952)	(245,986)	(311,320)	(297,891)	(360,448)	(436,142)	(527,731)	(638,555)	3,679,293
Raw material inventory	(11,388,268)	(3,375,808)	(4,291,425)	(5,442,727)	(6,888,325)	(6,591,176)	(7,975,323)	(9,650,141)	(11,676,671)	(14,128,772)	81,408,636
Accounts payable		21,794,572	4,034,062	4,660,784	5,381,697	6,030,311	4,549,021	5,079,288	5,678,408	6,356,589	(1,336,408)
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(11,902,965)	(10,663,532)	20,108,196	23,554,346	29,031,547	37,582,600	42,144,631	46,635,373	49,992,388	53,473,982	151,542,195
<i>Financing activities</i>											
Project Loan - principal repayment		(5,934,507)	(6,942,534)	(8,121,783)	(9,501,337)	(11,115,221)	-	-	-	-	-
Working Capital Loan - principal repayment		(980,940)	(1,147,562)	(1,342,485)	(1,570,517)	(1,837,283)	-	-	-	-	-
Short term debt principal repayment		-	(15,724,369)	(3,706,269)	-	-	-	-	-	-	-
Additions to Project Loan	41,615,382	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	6,878,787	-	-	-	-	-	-	-	-	-	-
Issuance of shares	48,494,169	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares		-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	96,988,338	(6,915,448)	(23,814,465)	(13,170,537)	(11,071,854)	(12,952,504)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(83,230,763)	-	-	-	-	(3,705,784)	-	-	-	-	-
Acquisitions		-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by investing activities	(83,230,763)	-	-	-	-	(3,705,784)	-	-	-	-	-
NET CASH	1,854,610	(17,578,979)	(3,706,269)	10,383,809	17,959,693	20,924,313	42,144,631	46,635,373	49,992,388	53,473,982	151,542,195

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Administration Benefit Expenses	5% of Administration Cost
Traveling Expenses	5% of Administration Cost
Communication Expenses	Rs. 15,000 per Month
Office Expenses (Stationary, Entertainment, Janitorial Services, etc.)	Rs. 15,000 per Month
Office Vehicles Running Expense	20% of Vehicle Cost
Promotional Expenses	2% of Revenues
Professional Fee	1% of Revenue
Depreciation Method	Straight Line
Depreciation Rate	10% on Furniture & Fixtures 20% on Office Equipment
Operating Cost Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details
Fruit Price per Ton	Rs. 51,147 Weighted Avg. Price
Mangoes Price Per Ton	Rs. 55,000
Apple Price Per Ton	Rs. 60,000
Citrus Price Per Ton	Rs. 40,000
Fruit Wastage	5%
Processing Costs Per Ton	Rs. 1,700 (Direct Labor, Electricity, Chemicals, Packing, etc.)
Transportation Expenses	Rs. 5,500 One Side
Production Cost Growth Rate	10%

13.3 Revenue Assumptions

Description	Details
Growth in Sales Price	10%
Days Operational / Year	330
Days Operational / Year for Plant	279
Mangos Availability / Year for Processing	74 Days
Apples Availability / Year for Processing	100 Days
Citrus Availability / Year for Processing	105 Days
Per Day Production Capacity	24 Tons (3 Tons per Hour)
Production Capacity in First Year	70%
Percentage Increase in Production Capacity every Year	5%
Maximum Production Capacity	90%
Domestic Sales	50%
Export	50%

13.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	16%
Debt Tenure	5 Years
Debt Payment / Year	4