



Pre-feasibility Study

Raisins Production Unit

December 2023

“ The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions ”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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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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2. EXECUTIVE SUMMARY

The proposed project involves the establishment of a Raisins Production unit strategically located in close proximity to major urban centers or areas with high Grapes production. This endeavor is highly recommended, as it promises to yield significant economic advantages for the country while creating both direct and indirect employment opportunities. Additionally, the project's appeal is enhanced by its cost-effectiveness and relative simplicity in terms of installation.

During its initial phase, the project will focus on serving the needs of nearby communities, with the ultimate goal of transitioning to a mature domestic market. A key distinguishing feature of this initiative is the commitment to producing raisins in a hygienic manner, strictly adhering to international quality and safety standards.

The Raisins Production unit has the capacity to produce approximately 100,000 kgs annually and will operate for 330 days a year, 12 hours a day. Initially, the unit will run at 80% capacity utilization, increasing by 5% annually until reaching a maximum utilization of 100%.

The proposed business requires a total investment of Rs. 47.856 million. This includes capital investment of Rs. 42.540 million and working capital of Rs. 5.316 million. The project will be established using 100% equity financing. The Net Present Value (NPV) of project is Rs. 35.932 million with an Internal Rate of Return (IRR) of 39% and Payback period of 3.43 years. The proposed project may also be established using leveraged financing. At 50% financing at a cost of 28%, the proposed business provides Net Present Value (NPV) of Rs. 70.448 million, Internal Rate of Return (IRR) of 39% and Payback period of 3.55 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 **Raisins Production Unit** 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

5.1 Production Process Flow: There are four primary methods for producing raisins: the natural, dehydration, continuous tray, and dried-on-the-vine methods. The most popular and cost-effective method is the natural approach, with a smaller quantity of raisins made through mechanical dehydration (oven drying). The majority of raisins are produced through sun drying. Below, we outline the step-by-step process of sun-drying grapes for commercial raisin production.

5.1.1 Harvesting: The grape harvest typically occurs from late June to July, extending into September when the grapes are at their peak sweetness. Field workers handpick bunches of grapes and place them on paper trays spread out on the ground. The soil between the rows is leveled to provide a suitable surface for the raisin trays.

5.1.2 Drying: Depending on the weather conditions, the grapes are left to dry on the trays for two to four weeks. During this period, the grape's moisture content decreases from 75% to less than 15%, and the fruit's color transforms into a brownish-purple hue. To prevent the accumulation of sand and protect against raisin moth infestation, the trays are rolled up at night. The paper trays are treated with a certified compound to eliminate insects. Once the fruit is fully dried, the paper trays are rolled around the raisins to create a package. These rolls are then collected and stored in boxes or bins for transportation to a processing facility.

5.1.3 Inspection Upon arrival at the manufacturing plant, the rolls of dried fruit are emptied onto wire screens and shaken to remove dirt and unwanted debris. They undergo inspection to ensure they meet predetermined specifications, considering factors such as moisture content, color, and taste. Raisins are graded as either standard or substandard based on their quality. Only the standard-grade raisins are suitable for immediate use.

5.1.4 Storage Following a meticulous inspection, the standard-grade grapes are transferred to the production lines, while substandard-grade grapes are set aside for further drying. Substandard-grade raisins are stored outside the plant in temporary enclosures made with polyethylene sheeting attached to wooden frames. These enclosures are sealed to retain fumigation gases applied periodically to inhibit insect growth.

5.1.5 Mechanical Processing The dried grapes are transported from storage bins to the processing plant. Here, they are conveyed onto a production line for mechanical processing, which involves several steps:

1. Residual sand and other debris are removed by passing the raisins through a fine mesh screen while blowing air over them.

2. Suction devices are used to eliminate immature fruit.
3. Raisins are separated from the bunch stem by shaking.
4. Cap stems on individual raisins are removed by passing them between two rotating conical surfaces. If there are seeds in the raisins, they are mechanically removed.
5. Once these processing steps are completed, raisins are sorted by size using a series of mesh screens.
6. Flavor enhancement can be achieved through the addition of substances like Victoria oil.

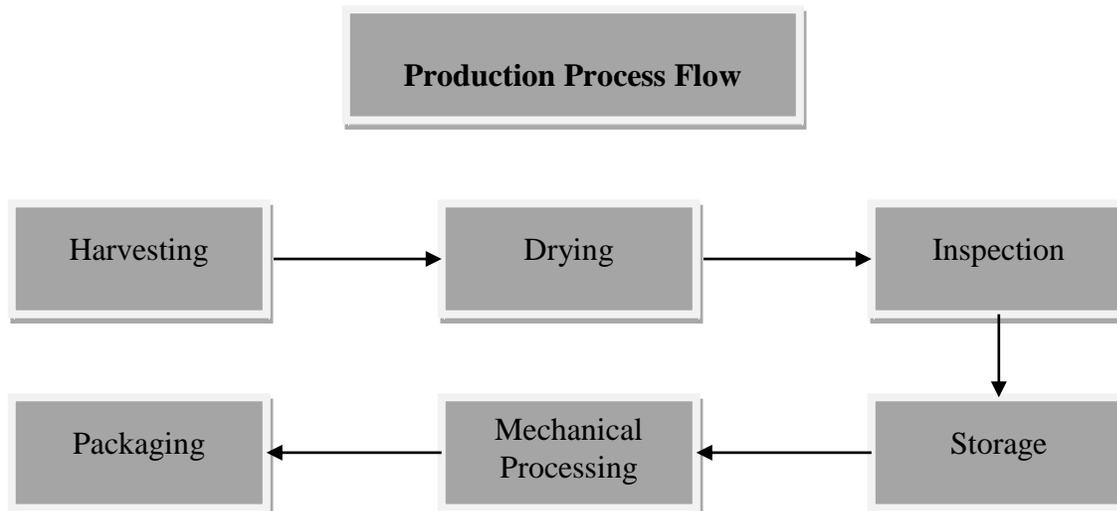
5.1.6 Packaging Following mechanical processing, the final product is carefully standardized and packaged. Raisins can be packaged in various container sizes, ranging from small 1, 2, and 5 kg cardboard boxes for individual consumption to 1,100 lb (499.4 kg) containers for industrial use.

5.1.7. Conversion from Fresh Grapes in to Raisin:

The process of making raisins from grapes involves drying the grapes to remove most of their moisture content. Here's a general guideline for the conversion of grapes to raisins
Fresh Grapes to Raisin Ratio: Approximately 4 to 5 kilograms of fresh grapes will yield about 1 kilogram of raisins.

This conversion ratio takes into account the fact that raisins are dried, resulting in a reduction in weight due to the removal of water content. Keep in mind that the actual yield may vary based on factors such as grape size, moisture content, and drying conditions.

6. PRODUCTION PROCESS FLOW



6.1 Installed and Operational Capacities:

The proposed raisin production unit will occupy a space of 19,000 sq.ft. The plant's installed capacity is set at 600,000 kg. However, during the first year of operation, it will operate at 80% of its capacity, producing 80,000 kgs. Subsequently, production will increase by 5 percent annually, reaching its maximum operational capacity of 95% in the following years.

6.2 Critical Factors: Several key factors are crucial for the success of this business endeavor. The commercial viability of the proposed project hinges on the following factors:

- Effective selection of the right location, equipment, and skilled staff is essential for the project's success.
- Continuous efforts must be made to upgrade the processing techniques.
- To attract a broader customer base, the product must adhere to international quality standards.

6.3: Opportunities: The project presents several opportunities:

- There is a diversified demand for the product from both the medical and food industries.
- Increasing demand due to a rapidly growing population.
- Availability of raw materials.
- Limited presence of certified producers.
- An established market with existing demand.

6.4: Threats: The proposed project may encounter certain threats:

- Fluctuations in prices and macroeconomic instability.
- Competition from imports originating from neighboring countries.

7. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Suitable areas for establishing the plant are Quetta, Pishin, Killi Abdullah, Mastung, Kalat, Loralai and Zhob districts. But mainly the famous grape producing areas are Pishin, Killa Abdullah and Mastung.

8. POTENTIAL TARGET CUSTOMERS / MARKETS

The target customer for processed raisin would primarily be individuals, dry fruit whole sellers & retailers and bakery business. Initially the project will have focused on local customers as well as national level retailers and whole sellers, depending upon its successful operation international market would also be targeted in future.

9. PROJECT COST SUMMARY

9.1 Project Economics(100% equity)

All the figures in this financial model have been calculated for estimated sales of Rs. 53.333 million in the year one. The capacity utilization during year one is 80,000 kgs worked out at 80% with 5 % increase in subsequent years up to the maximum capacity utilization of 100%. Number of kg produced will be 80,000 in the kgs first year.

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)	39%
Payback Period (yrs.)	3.43
Net Present Value (Rs.)	Rs. 35,932,594

Calculation of break-even analysis is as follows:

Table 2: Breakeven (100% Equity Based)

BREAKEVEN ANALYSIS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
Break Even Point (Sales)	10,759,266	13,202,169	12,928,219	12,790,999	12,771,324	12,624,034	12,643,667	12,725,714	12,867,194
Break Even Point (Unit)	13450	15003	13356	12013	10904	9799	8922	8163	7504
Margin of Safety	79.8%	82.2%	85.0%	87.2%	89.0%	90.2%	91.1%	91.8%	92.5%

However, for the purposes of further explanation the Project Economics based on Debt: Equity (i.e. 50:50) Model has also been computed. On the basis of Debt: Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provided in the table below:

Table 3: Project Economics Based on Debt (50%) : Equity (50%)

Description	Details
Internal Rate of Return (IRR)	39%
Payback Period (Yrs.)	3.55
Net Present Value (Rs.)	82,444,288

The financial assumptions for Debt:Equity are as follows:

Table 4: Financial Assumptions for Debt (50%) :Equity (50%) Model

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	28
Debt Tenure	10 Years

The projected Income Statement, Cash Flow Statement and Balance Sheet enclosed as annexures are based on 100% Equity Based Business Model.

10. PROJECT COST:**Table 5: Project Cost**

Capital Investment				Rs. in actuals
Land				9,500,000
Building/Infrastructure				15,650,000
Machinery & equipment				15,800,000
Furniture & fixtures				256,000
Office vehicles				-
Office equipment				745,000
Pre-operating costs				589,000
Training costs				-
Total Capital Costs				42,540,000
Working Capital				Rs. in actuals
Equipment spare part inventory				55,556
Raw material inventory				4,444,444
Upfront insurance payment				316,000
Cash				500,000
Total Working Capital				5,316,000
Total Investment				47,856,000

10.1 Space Requirement

The proposed Raisin Production Unit will be spread on 19,000 sqft. For the purpose of this pre-feasibility, average land cost is estimated at Rs. 500 sqft. The infrastructural requirements of the project mainly comprise of the construction of Management office, Warehouse and storage, processing hall shed, guard room and store. The cost of construction for the proposed infrastructure requirement is provided in the table below:

Table 6: Space Requirement

Description	Estimated Area (Sq.Ft)	Unit Cost (Rs.)	Total Cost (Rs.)
Management Office	2,000	1100	2200,000
Ware House & Storage	5,000	1100	5,500,000
Processing Hall Shed	5,000	1100	5,500,000
Guard Room	1,000	1100	1,100,000
Store	1,000	1100	1,100,000
Payment	5000	50	250,000
Total			15,650,000

11. MACHINERY & EQUIPMENT REQUIREMENT

Plant, machinery and equipment for the proposed project are stated below

Table 7: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Fruit Washer & Dryer	1	4,420,000	4,420,000
Sorting & Grading Machine	1	2,720,000	2,720,000
Packaging Machine	1	2,380,000	2,380,000
Generator & Installation	1	500,000	500,000
Transformer with Installation	1	500,000	500,000
Misc.	1	650,000	650,000
Total			15,800,000

12. FURNITURE & FIXTURES REQUIREMENT

Details of the furniture and fixture required for the project are given below;

Table 8: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Office chairs	3	15,000	45,000

Office tables	3	15,000	45,000
Plastic chairs	8	6,000	48,000
Processing area Chairs	8	6,000	48,000
Processing area Table	2	35,000	70,000
Total			256,000/-

13. OFFICE EQUIPMENT REQUIREMENT

Following office equipment will be required for flour mill;

Table 9: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptops	2	125,000	250,000
Computer System	2	70,000	140,000
3 in 1 Printer+Scanner+Photocopy	1	45,000	45,000
Internal Modem connection	1	10,000	10,000
Telephone set	2	5000	10,000
UPS	1	160,000	160,000
Water Dispenser	1	45,000	45,000
CCTV Camera	1	85,000	85,000
Total			745,000/-

14. HUMAN RESOURCE REQUIREMENT

In order to run operations of flour mill 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	Monthly Salary per person (Rs.)
Owner	1	75,000
Machine Operator	2	50,000
Labour	5	40,000
Helper	1	32,000
Accountant	1	50,000
Guard	1	32,000
Total	11	

15. UTILITIES AND OTHER COSTS

An essential cost to be borne by the project is the cost of electricity, gas and water. The electricity expenses are estimated to be around Rs. 3,866,667/ year. Furthermore, promotional expense being essential for marketing of **Raisan production Unit** is estimated as 2% of revenue.

16. RAW MATERIAL REQUIREMENT

Fresh Grapes required	Price	Amount	Raisin Production
400,000 kg	80 rps/kg	32,000,000	100,000 kgs

17. REVENUE GENERATION

Based on the capacity utilization of **80%**, sales revenue during the first year of operations is estimated as under;

Table 11: Revenue Generation – Year 1

Description	Kgs Produced (No.)	Finished Goods Inventory (No.)	KGs available for Sale (No.)	Sale Price / Kg (Rs.)	Sales Revenue (Rs.)
All-purpose	80,000	13,333	66,667	800	53,333,600

18. CONTACT DETAILS

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

18.1 Machinery Suppliers

Name of Supplier	Address	Phone	Fax	E-mail	Website
DRYTECH (GUANGZHOU) TECHNOLOGY Co., Ltd	Room 921, , No 1 Green Port South Third Street, , Huadu Area, Guangzhou, Guangdong,		92-315- 6366456	-	www.arfmewebs.com.bloombiz.com
Anyang Best Complete Machinery Engineering Co., Ltd	19F, Suite B, Global Trade Mansion, Wenfeng Avenue, Anyang, Henan, China	0086- 372- 59651 48	0086-372- 5951936	info@abcmach.com	www.abcmach.com

19. 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 and Export Company (PHDEC)	www.phdec.org.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Readymade Garment Technical Training Institute	www.prgmea.org/prgtti/
Livestock & Dairy Development Department, Government of Punjab.	www.livestockpunjab.gov.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk

20. ANNEXURES

20.1 Income Statement:

Statement Summaries										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	Rs. in actuals									
Revenue	53,333,333	74,066,667	86,313,333	100,268,667	116,151,933	128,840,800	141,724,880	155,897,368	171,487,105	188,635,815
Cost of goods sold	34,950,000	46,299,093	51,516,398	57,190,552	63,360,166	67,538,039	71,410,040	75,524,309	79,897,769	84,548,661
Gross Profit	18,383,333	27,767,574	34,796,935	43,078,114	52,791,768	61,302,761	70,314,840	80,373,059	91,589,336	104,087,154
<i>General administration & selling expenses</i>										
Administration expense	1,409,040	1,479,492	1,553,467	1,631,140	1,712,697	1,798,332	1,888,248	1,982,661	2,081,794	2,185,884
Rental expense	-	-	-	-	-	-	-	-	-	-
Utilities expense	-	-	-	-	-	-	-	-	-	-
Travelling & Comm. expense (phone, fax, etc.)	136,800	143,640	150,822	158,363	166,281	174,595	183,325	192,491	202,116	212,222
Office vehicles running expense	-	-	-	-	-	-	-	-	-	-
Office expenses (stationary, etc.)	112,176	117,785	123,674	129,858	136,351	143,168	150,327	157,843	165,735	174,022
Promotional expense	1,066,667	1,481,333	1,726,267	2,005,373	2,323,039	2,576,816	2,834,498	3,117,947	3,429,742	3,772,716
Insurance expense	316,000	284,400	252,800	221,200	189,600	158,000	126,400	94,800	63,200	31,600
Professional fees (legal, audit, etc.)	266,667	370,333	431,567	501,343	580,760	644,204	708,624	779,487	857,436	943,179
Depreciation expense	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600
Amortization expense	117,800	117,800	117,800	117,800	117,800	-	-	-	-	-
Property tax expense	-	-	-	-	-	-	-	-	-	-
Miscellaneous expense	533,333	740,667	863,133	1,002,687	1,161,519	1,288,408	1,417,249	1,558,974	1,714,871	1,886,358
Subtotal	6,421,083	7,198,050	7,682,129	8,230,364	8,850,646	9,246,123	9,771,271	10,346,803	10,977,493	11,668,581
Operating Income	11,962,251	20,569,523	27,114,806	34,847,750	43,941,121	52,056,637	60,543,569	70,026,256	80,611,843	92,418,573
Other income	217,111	679,194	1,229,350	1,739,840	2,285,687	2,838,165	3,355,118	3,871,161	4,405,994	5,978,305
Gain / (loss) on sale of assets	-	-	-	-	-	-	-	-	-	-
Earnings Before Interest & Taxes	12,179,362	21,248,717	28,344,156	36,587,590	46,226,808	54,894,802	63,898,687	73,897,416	85,017,837	98,396,878
Interest expense	-	-	-	-	-	-	-	-	-	-
Earnings Before Tax	12,179,362	21,248,717	28,344,156	36,587,590	46,226,808	54,894,802	63,898,687	73,897,416	85,017,837	98,396,878
Tax	4,993,538	8,711,974	11,621,104	15,000,912	18,952,991	22,506,869	26,198,462	30,297,941	34,857,313	40,342,720
NET PROFIT/(LOSS) AFTER TAX	7,185,823	12,536,743	16,723,052	21,586,678	27,273,817	32,387,933	37,700,225	43,599,476	50,160,524	58,054,158
Balance brought forward		3,592,912	8,064,827	12,393,940	16,990,309	22,132,063	27,259,998	32,480,112	38,039,794	44,100,159
Total profit available for appropriation	7,185,823	16,129,655	24,787,880	33,980,618	44,264,126	54,519,996	64,960,223	76,079,587	88,200,318	102,154,317
Dividend	3,592,912	8,064,827	12,393,940	16,990,309	22,132,063	27,259,998	32,480,112	38,039,794	44,100,159	51,077,158
Balance carried forward	3,592,912	8,064,827	12,393,940	16,990,309	22,132,063	27,259,998	32,480,112	38,039,794	44,100,159	51,077,158

20.2 Balance Sheet

Statement Summaries											SMEDA
Balance Sheet											Rs. in actuals
	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	500,000	3,842,223	9,741,656	14,845,349	19,951,448	25,762,284	31,001,015	36,101,339	41,321,876	46,798,014	72,768,078
Accounts receivable	-	-	-	-	-	-	-	-	-	-	-
Finished goods inventory	-	6,990,000	7,792,917	8,666,310	9,616,111	10,648,767	11,256,340	11,901,673	12,587,385	13,316,295	14,091,444
Equipment spare part inventory	55,556	78,801	93,792	111,285	131,667	149,171	167,594	188,291	211,545	237,671	-
Raw material inventory	4,444,444	6,304,083	7,503,388	8,902,770	10,533,356	11,933,673	13,407,481	15,063,305	16,923,623	19,013,691	-
Pre-paid annual land lease	-	-	-	-	-	-	-	-	-	-	-
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Pre-paid insurance	316,000	284,400	252,800	221,200	189,600	158,000	126,400	94,800	63,200	31,600	-
Total Current Assets	5,316,000	17,499,508	25,384,553	32,746,914	40,422,181	48,651,895	55,958,830	63,349,409	71,107,629	79,397,271	86,859,522
<i>Fixed assets</i>											
Land	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000	9,500,000
Building/Infrastructure	15,650,000	14,867,500	14,085,000	13,302,500	12,520,000	11,737,500	10,955,000	10,172,500	9,390,000	8,607,500	7,825,000
Machinery & equipment	15,800,000	14,220,000	12,640,000	11,060,000	9,480,000	7,900,000	6,320,000	4,740,000	3,160,000	1,580,000	-
Furniture & fixtures	256,000	230,400	204,800	179,200	153,600	128,000	102,400	76,800	51,200	25,600	-
Office vehicles	-	-	-	-	-	-	-	-	-	-	-
Office equipment	745,000	670,500	596,000	521,500	447,000	372,500	298,000	223,500	149,000	74,500	-
Total Fixed Assets	41,951,000	39,483,400	37,025,800	34,563,200	32,100,600	29,638,000	27,175,400	24,712,800	22,250,200	19,787,600	17,325,000
<i>Intangible assets</i>											
Pre-operation costs	589,000	471,200	353,400	235,600	117,800	-	-	-	-	-	-
Legal, licensing, & training costs	-	-	-	-	-	-	-	-	-	-	-
Total Intangible Assets	589,000	471,200	353,400	235,600	117,800	-	-	-	-	-	-
TOTAL ASSETS	47,856,000	57,459,108	62,763,753	67,545,714	72,640,581	78,289,895	83,134,230	88,062,209	93,357,829	99,184,871	104,184,522
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable	-	2,771,196	3,603,926	4,056,775	4,555,272	5,062,833	5,427,032	5,782,697	6,166,436	6,580,912	5,251,363
Export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Short term debt	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	2,771,196	3,603,926	4,056,775	4,555,272	5,062,833	5,427,032	5,782,697	6,166,436	6,580,912	5,251,363
<i>Other liabilities</i>											
Lease payable	-	-	-	-	-	-	-	-	-	-	-
Deferred tax	-	3,239,000	3,239,000	3,239,000	3,239,000	3,239,000	2,591,200	1,943,400	1,295,600	647,800	-
Long term debt	-	-	-	-	-	-	-	-	-	-	-
Total Long Term Liabilities	-	3,239,000	3,239,000	3,239,000	3,239,000	3,239,000	2,591,200	1,943,400	1,295,600	647,800	-
<i>Shareholders' equity</i>											
Paid-up capital	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000	47,856,000
Retained earnings	-	3,592,912	8,064,827	12,393,940	16,990,309	22,132,063	27,259,998	32,480,112	38,039,794	44,100,159	51,077,158
Total Equity	47,856,000	51,448,912	55,920,827	60,249,940	64,846,309	69,988,063	75,115,998	80,336,112	85,895,794	91,956,159	98,933,158
TOTAL CAPITAL AND LIABILITY	47,856,000	57,459,108	62,763,753	67,545,714	72,640,581	78,289,895	83,134,230	88,062,209	93,357,829	99,184,871	104,184,522
<i>Note: Total assets value will differ from project cost due to first installment of leases paid at the start of year 0</i>											

20.3 Cash Flow Statement

Statement Summaries											SMEDA
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Rs. in actuals Year 10
<i>Operating activities</i>											
Net profit	-	7,185,823	12,536,743	16,723,052	21,586,678	27,273,817	32,387,933	37,700,225	43,599,476	50,160,524	58,054,158
Add: depreciation expense	-	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600	2,462,600
amortization expense	-	117,800	117,800	117,800	117,800	117,800	-	-	-	-	-
Deferred income tax	-	3,239,000	-	-	-	-	(647,800)	(647,800)	(647,800)	(647,800)	(647,800)
Accounts receivable	-	-	-	-	-	-	-	-	-	-	-
Finished good inventory	-	(6,990,000)	(802,917)	(873,393)	(949,801)	(1,032,657)	(607,573)	(645,333)	(685,712)	(728,910)	(775,149)
Equipment inventory	(55,556)	(23,245)	(14,991)	(17,492)	(20,382)	(17,504)	(18,423)	(20,698)	(23,254)	(26,126)	237,671
Raw material inventory	(4,444,444)	(1,859,639)	(1,199,305)	(1,399,382)	(1,630,586)	(1,400,317)	(1,473,809)	(1,655,824)	(1,860,318)	(2,090,068)	19,013,691
Pre-paid building rent	-	-	-	-	-	-	-	-	-	-	-
Pre-paid lease interest	-	-	-	-	-	-	-	-	-	-	-
Advance insurance premium	(316,000)	31,600	31,600	31,600	31,600	31,600	31,600	31,600	31,600	31,600	31,600
Accounts payable	-	2,771,196	832,730	452,849	498,498	507,560	364,199	355,665	383,738	414,477	(1,329,549)
Other liabilities	-	-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(4,816,000)	6,935,135	13,964,260	17,497,633	22,096,407	27,942,899	32,498,729	37,580,435	43,260,330	49,576,297	77,047,222
<i>Financing activities</i>											
Change in long term debt	-	-	-	-	-	-	-	-	-	-	-
Change in short term debt	-	-	-	-	-	-	-	-	-	-	-
Change in export re-finance facility	-	-	-	-	-	-	-	-	-	-	-
Add: land lease expense	-	-	-	-	-	-	-	-	-	-	-
Land lease payment	-	-	-	-	-	-	-	-	-	-	-
Change in lease financing	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	47,856,000	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares	-	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financ	47,856,000	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(42,540,000)	-	-	-	-	-	-	-	-	-	-
Acquisitions	-	-	-	-	-	-	-	-	-	-	-
Cash (used for) / provided by invest	(42,540,000)	-	-	-	-	-	-	-	-	-	-
NET CASH	500,000	6,935,135	13,964,260	17,497,633	22,096,407	27,942,899	32,498,729	37,580,435	43,260,330	49,576,297	77,047,222
Cash balance brought forward	-	500,000	3,842,223	9,741,656	14,845,349	19,951,448	25,762,284	31,001,015	36,101,339	41,321,876	46,798,014
Cash available for appropriation	500,000	7,435,135	17,806,483	27,239,289	36,941,757	47,894,347	58,261,013	68,581,451	79,361,669	90,898,173	123,845,237
Dividend	-	3,592,912	8,064,827	12,393,940	16,990,309	22,132,063	27,259,998	32,480,112	38,039,794	44,100,159	51,077,158
Cash carried forward	500,000	3,842,223	9,741,656	14,845,349	19,951,448	25,762,284	31,001,015	36,101,339	41,321,876	46,798,014	72,768,078

21. KEY ASSUMPTIONS

21.1 Operating Cost Assumptions

Description	Details
Operational Days/ year	330
Hours operational/ days	12
Shift Length (Hours)	12

21.2 Production Cost Assumptions

Description	Details
Initial Capital utilization	80%
Annual Capital Utilization Growth	5%
Maximum Capital Utilization	100%

21.3 Revenue Assumptions

Description	Details
Revenue	53,333,333
Cost of goods sold in kg	26,666,667
Sale Price/kg	800
Production per year (Kg)	80,000
Production Quantity sold (Kg)	66,667