



Pre-Feasibility Study

(Rose Water)



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Ministry of Industries & 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 subject. 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. 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 **Rose Water Processing 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 the basis of any investment decision.

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 hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to 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. INTRODUCTION TO SCHEME

'Prime Minister's Youth Business Loan' scheme, for young entrepreneurs, with an allocated budget of Rs. 5.0 Billion for the year 2013-14, is designed to provide subsidised financing at 8% mark-up per annum for one hundred thousand (100,000) beneficiaries, through designated financial institutions, initially by the National Bank of Pakistan (NBP) and the First Women Bank Ltd. (FWBL).

Loans from Rs. 0.1 million to Rs. 2.0 million with tenure up to 8 years, inclusive of 1 year grace period, and a debt: equity of 90: 10 will be disbursed to SME beneficiaries across Pakistan, covering; Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan, Gilgit Baltistan, Azad Jammu & Kashmir and Federally Administered Tribal Areas (FATA).

5. EXECUTIVE SUMMARY

Cultivation of ornamental flowers including rose flower is concentrated around big cities such as Rawalpindi, Faisalabad, Lahore, Multan, Hyderabad and Karachi. Accordingly, these cities present an opportunity for establishment of Rose Water Processing Unit due to easy sourcing of rose petals.

The proposed project is a small sized simple steam distillation unit which would take approximately 8 hours to complete a production cycle, from rose petal input to rose water extraction.

The project will be producing rose water packed in pet bottles of 750 ml and 250 ml with a ratio of 60% and 40% respectively. Total installed production capacity of rose water is 90,000 liters from 9 ton rose petals and 180,000 liters of water.

The total project cost for setting up a Rose Water Processing Unit is estimated at Rs. 1.75 million out of which Rs. 1.32 million is capital cost and Rs. 0.43 million is working capital. The project is proposed to be financed through 90% debt and 10% equity. The NPV is projected around Rs. 6.05 million, with an IRR of 46% and a payback period of 2.99 years. The legal business status of this project is proposed as a 'Sole Proprietorship'.

6. BRIEF DESCRIPTION OF PROJECT & PRODUCT

This project is about processing rose petals to extract water and its packing in pet bottles of 750 ml and 250 ml.

The processing unit will have a capacity to process 9 tons of rose petals, extracting 90 thousand liters of rose water annually. The plant will operate on 65% capacity in the first year and achieve maximum capacity utilization of 80% in

the 4th year. The business will provide employment opportunity to 08 individuals directly.

Keeping in view the scope and volume of 'Prime Minister's Youth Business Loan' scheme, the proposed model for processing of rose water is based on purchase of rose petal from the market instead of self cultivation / harvest of rose plants.

All the expenditures that are required to be incurred for setting up of rose water processing unit and purchase of raw material for start-up are included in the capital cost of the project.

7. CRITICAL FACTORS

Following factors play a critical role in the successful execution of the business operations and impact profitability:

- Entrepreneur's background and technical know-how of the business.
- Contract sourcing of good quality rose-petals on reasonable prices.
- Ensure the quality of the finished product.
- Effective marketing and distribution of the product particularly to the wholesale buyers.

8. INSTALLED & OPERATIONAL CAPACITIES

Following table provides details of installed capacities and capacity utilization for the first year of operations @ of 65%:

Product	Unit	Installed Capacity	First Year Production
750 ml Packing	Bottles	72,000	46,800
250 ml Packing	Bottles	144,000	93,600

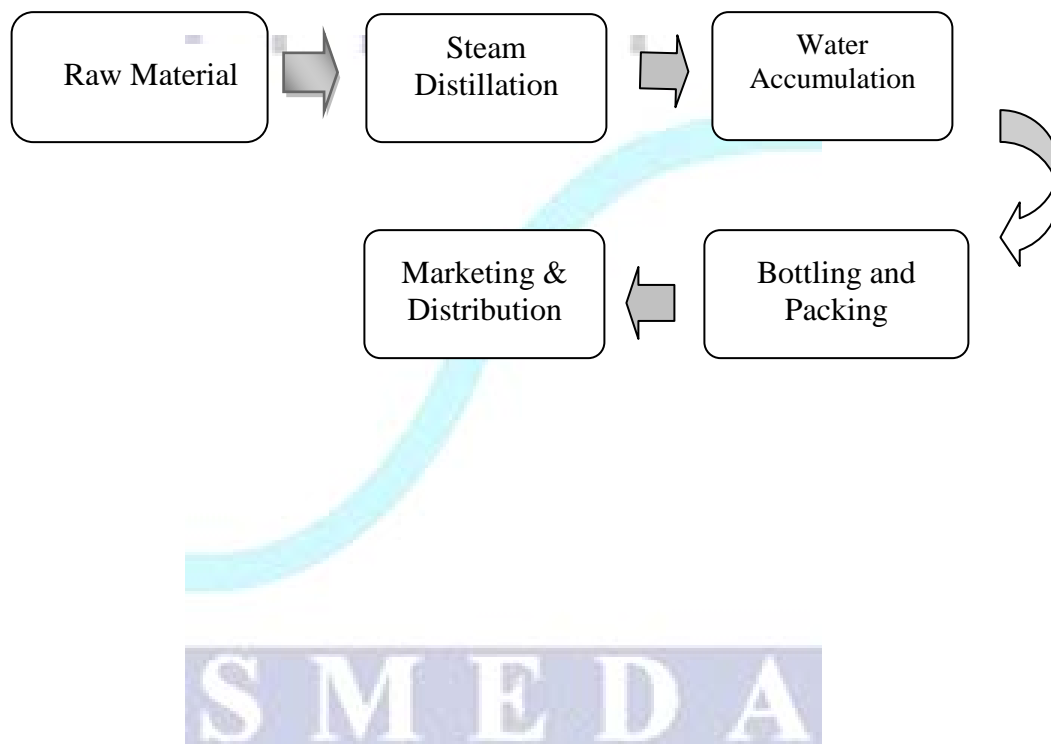
9. GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The industry of growing flowers and other ornamental crops is mainly concentrated around big cities like Karachi, Hyderabad, Lahore, Rawalpindi, Islamabad, Multan, Faisalabad, and Quetta along with Pattoki, Sahiwal and Hyderabad.

10. POTENTIAL TARGET MARKETS / CITIES

Rose water is used in many medical, cosmetic and culinary products. Large herbal medicine companies and pharmaceutical businesses are major buyers of rose water. Additionally, due to traditional consumption of rose water for household use, there is also a significant consumer market all across Pakistan.

11. PRODUCTION PROCESS FLOW



12. PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Rose Water Processing Unit under the 'Prime Minister's Youth Business Loan' scheme. Various cost 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 attached as appendix.

12.1. Project Economics

All the figures in this financial model have been calculated for a target production of 90,000 liters, whereby, 58,500 liters of rose water will be produced in year one at 65% of capacity.

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

Table 1: Project Economics

Description	Details
Internal Rate of Return (IRR)	46%
Payback Period (yrs)	2.99
Net Present Value (NPV)	Rs. 6,050,415

Returns on the business and its profitability are highly dependent on the efficiency in sourcing of good quality rose petal for extraction of fine rose water. Rose water distribution is also very important in this regard, adequate marketing with strong distribution network is required for its sale.

12.2. Project Financing

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

Table 2: Project Financing

Description	Details
Total Equity (10%)	Rs. 174,802
Bank Loan (90 %.)	Rs. 1,573,221
Markup to the Borrower (%age/annum)	8%
Tenure of the Loan (Years)	8
Grace Period (Year)	1

12.3. Project Cost

Following requirements have been identified for operations of the proposed business:

Table 3: Capital Investment for the Project

Capital Investment	Amount (Rs.)
Plant and Machinery	426,000
Furniture & Fixture	65,000
Office Equipment	57,000
Suzuki Pickup (Used)	550,000
Pre-operating Cost	167,281
Legal and Training Cost	50,000
Total Capital Costs	1,315,281
Initial Working Capital	432,742
Total Project Cost	1,748,024

12.4. Space Requirement

A total of 1,000 square feet area is required to start this business. Space for the processing unit has been calculated on the basis of space required for production area, management building, and store. However, the units operating in the industry do not follow any set pattern. Following table shows calculations for project space requirement.

Table 4: Space Requirement

Space Requirement	Sq. ft
Management building	100
Production Hall	600
Store	300
Total Area	1,000

Rental expense for the space required is assumed at Rs. 40,000 per month.

12.5. Machinery and Equipment

Following table provides list of machinery and equipment required for an average 300 liters / shift of rose water.

Table 5: List of Machinery and Equipment

Description	Capacity Units/8 Hr	Quantity	Cost Rs/unit	Total Rs.
Plant	150 Liter	2	120,000	240,000

Extraction Pot	150 Liter	2	35,000	70,000
Burner and Other Accessories	-	2	18,000	36,000
Packing Cone 150 Liter	150 Liter	1	80,000	80,000
Total				426,000

Main equipment for this project is its extraction plant along with its accessories. This Pre-feasibility study proposes 2 plants, each with a capacity to produce 150 liters of rose water per shift, from 300 liters of water and 15 kg rose petals input. Extraction plant is locally manufactured and available in the market.

12.6. Furniture, Fixture and Equipment

Following Furniture, Fixture and Office Equipment are proposed to be required to establish a proper set-up:

Table 6: Furniture and Fixture

	Quantity	Cost	Amount (Rs.)
Furniture set for Office	1	30,000	30,000
UPS (1500 Watts)	1	35,000	35,000
Total			65,000

Table 7: Office Equipment Costs

	Quantity	Cost	Amount (Rs.)
Laptop (Used / New)	1	40,000	40,000
Printer	1	15,000	15,000
Telephone and Connection	1	2,000	2,000
Total			57,000

Office vehicle required for the project is as follows:

Table 8: Office Vehicles

	Number	Cost	Amount (Rs.)
Suzuki Pickup (Used)	1	550,000	550,000

It is assumed that a used vehicle will be purchased from the market. One Suzuki pickup is sufficient for distribution of rose water bottles.

12.7. Raw Material Requirements

Following table shows raw material cost per bottle.

Table 9: Cost per Bottle

	Unit	Unit Cost (Rs.)	Qty	Cost (Rs.)
750 ml Bottle				
Rose Petals	Kg	45	0.075	3.375
Pet Bottle	No.	10.50	1	10.500
Total				13.875
250 ml Bottle				
Rose Petals	Kg	45	0.025	1.125
Pet Bottle	No.	7.30	1	7.300
Total				8.425

Table 10: Cost of Material

Product	Bottles	Cost (Rs. / Unit)	First Year Production @ 65% capacity excl. Finished Goods inventory	First Year Cost (Rs.)
750 ml Packing	72,000	13.875	44,850	622,294
250 ml Packing	144,000	8.425	89,700	755,723
Total				1,378,017

12.8. Human Resource Requirement

Table 11: Human Resource Requirement

Description	No. of Employees	Salary per Employee per month
Owner / Manager	1	35,000
Production Supervisor	1	22,000
Production Helper / Worker	2	10,000
Sales Men	2	14,000
Driver	1	11,000

Security Guard	1	10,000
Total	8	

The above table provides details of human resource required to run the proposed unit. Owner / Manager will look after the financial, marketing and distribution matters. Production Supervisor will ensure quality of extracted rose water from fresh rose petals and also procure good quality of raw material. Salesmen will distribute rose water in the market under the supervision of the owner. Salaries of all employees are estimated to increase at 10% annually.

12.9. Revenue Generation

■ ■ Table 12: First Year Revenue ■ ■

Product	Bottles	Sales Price (Rs./Unit)	First Year Production @ 65% capacity excl. Finished Goods inventory	First Year Sales Revenue (Rs)
750 ml Packing	72,000	58	44,850	2,601,300
250 ml Packing	144,000	30	89,700	2,691,000
Total Sales Revenue				5,292,300

12.10. Other Costs

An essential cost to be borne by the unit is the Marketing and Traveling & Conveyance expenses which are 10% and 5% of sales respectively.

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13. CONTACT DETAILS OF SUPPLIERS, EXPERTS/CONSULTANTS DEV. INSTITUTIONS

University of Agriculture, Horticulture Department, Faisalabad www.uaf.edu.pk Tel: +92-41-9200161-70 Fax: +92-41-9200764	Hanif & Sons, 384 D, Salamat Pura, GT Road, Lahore. Telephone: 042-3654006, Fax: 042-36543084
PAMICO Technologies, P-124, Street No. 2, Shahad Colony, Jhang Road, Faisalabad. Tel: 041-2551911 Web: www.pamicotechnologies.com	

14. ANNEXURE

14.1. Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	5,292,300	6,522,450	7,688,703	9,022,982	9,951,195	10,946,314	12,040,946	13,245,040	14,569,544	16,026,499
<i>Cost of sales</i>										
Cost of goods Sold	1,378,016	1,698,324	2,001,995	2,349,416	2,591,106	2,850,216	3,135,238	3,448,762	3,793,638	4,173,002
Operation costs 1 (direct labor)	504,000	554,400	609,840	670,824	737,906	811,697	892,867	982,153	1,080,369	1,188,406
Operating costs 2 (machinery maintenance)	21,300	23,430	25,773	28,350	31,185	34,304	37,734	41,508	45,658	50,224
Operating costs 3 (Electricity, Gas and Water Expense)	647,400	766,920	903,870	1,060,541	1,166,595	1,283,254	1,411,580	1,552,738	1,708,012	1,878,813
Total cost of sales	2,550,716	3,043,074	3,541,478	4,109,131	4,526,792	4,979,471	5,477,419	6,025,160	6,627,676	7,290,444
Gross Profit	2,741,584	3,479,376	4,147,225	4,913,851	5,424,403	5,966,843	6,563,527	7,219,880	7,941,868	8,736,055
<i>General administration & selling expenses</i>										
Administration expense	1,008,000	1,108,800	1,219,680	1,341,648	1,475,813	1,623,394	1,785,733	1,964,307	2,160,738	2,376,811
Building rental expense	480,000	528,000	580,800	638,880	702,768	773,045	850,349	935,384	1,028,923	1,131,815
Office Vehicle Running Expenses	264,615	326,123	384,435	451,149	497,560	547,316	602,047	662,252	728,477	801,325
Communications expense (phone, fax, mail, internet, etc.)	30,240	33,264	36,590	40,249	44,274	48,702	53,572	58,929	64,822	71,304
Legal & Professional Charges	50,000	55,000	60,500	66,550	73,205	80,526	88,578	97,436	107,179	117,897
Office expenses (stationary, entertainment, janitorial services, etc.)	30,240	33,264	36,590	40,249	44,274	48,702	53,572	58,929	64,822	71,304
Marketing Expenses	529,230	652,245	768,870	902,298	995,119	1,094,631	1,204,095	1,324,504	1,456,954	1,602,650
Depreciation expense	115,500	115,500	115,500	115,500	115,500	118,650	118,650	118,650	118,650	118,650
Amortization of pre-operating costs	16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728
Amortization of legal, licensing, and training costs	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Bad debt expense	26,462	32,612	38,444	45,115	49,756	54,732	60,205	66,225	72,848	80,132
Subtotal	2,556,015	2,906,536	3,263,138	3,663,367	4,019,998	4,411,424	4,838,529	5,308,344	5,825,141	6,393,617
Operating Income	185,569	572,840	884,087	1,250,483	1,404,405	1,555,418	1,724,998	1,911,536	2,116,727	2,342,437
Gain / (loss) on sale of office equipment	-	-	-	-	22,800	-	-	-	-	-
Earnings Before Interest & Taxes	185,569	572,840	884,087	1,250,483	1,427,205	1,555,418	1,724,998	1,911,536	2,116,727	2,342,437
Interest expense on long term debt (Project Loan)	130,577	119,544	105,044	89,340	72,333	53,914	33,967	12,364	-	-
Subtotal	130,577	119,544	105,044	89,340	72,333	53,914	33,967	12,364	-	-
Earnings Before Tax	54,993	453,296	779,043	1,161,143	1,354,872	1,501,504	1,691,031	1,899,172	2,116,727	2,342,437
Tax	-	5,330	39,356	96,671	125,731	147,801	185,706	227,334	270,845	315,987
NET PROFIT/(LOSS) AFTER TAX	54,993	447,966	739,687	1,064,472	1,229,141	1,353,704	1,505,325	1,671,838	1,845,882	2,026,450

14.2. Statement of Cash Flow

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		54,993	447,966	739,687	1,064,472	1,229,141	1,353,704	1,505,325	1,671,838	1,845,882	2,026,450
Add: depreciation expense		115,500	115,500	115,500	115,500	115,500	118,650	118,650	118,650	118,650	118,650
amortization of pre-operating costs		16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728	16,728
amortization of training costs		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Deferred income tax		-	5,330	39,356	96,671	125,731	147,801	185,706	227,334	270,845	315,987
Accounts receivable		(43,498)	(5,055)	(9,848)	(10,276)	(9,298)	(7,904)	(8,588)	(9,447)	(10,392)	(11,431)
Finished goods inventory		(110,901)	(16,273)	(20,799)	(23,688)	(16,956)	(18,862)	(20,748)	(22,823)	(25,105)	(27,615)
Equipment inventory	(5,325)	(825)	(953)	(1,101)	(1,272)	(1,469)	(1,697)	(1,959)	(2,263)	(2,614)	19,479
Raw material inventory	(57,417)	(20,423)	(23,094)	(29,361)	(27,774)	(33,194)	(40,165)	(48,600)	(58,806)	(71,155)	409,988
Pre-paid building rent	(120,000)	(12,000)	(13,200)	(14,520)	(15,972)	(17,569)	(19,326)	(21,259)	(23,385)	(25,723)	282,954
Accounts payable		20,319	4,746	4,609	5,192	3,824	4,166	4,644	5,183	5,792	(624)
Cash provided by operations	(182,742)	24,893	536,695	845,251	1,224,582	1,417,439	1,558,094	1,734,899	1,928,010	2,127,908	3,155,566
<i>Financing activities</i>											
Project Loan - principal repayment		-	(174,703)	(189,203)	(204,907)	(221,914)	(240,332)	(260,280)	(281,883)	-	-
Additions to Project Loan	1,573,221	-	-	-	-	-	-	-	-	-	-
Issuance of shares	174,802	-	-	-	-	72,748	-	-	-	-	-
Cash provided by / (used for) financing activities	1,748,024	-	(174,703)	(189,203)	(204,907)	(149,166)	(240,332)	(260,280)	(281,883)	-	-
<i>Investing activities</i>											
Capital expenditure	(1,315,281)	-	-	-	-	(72,748)	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(1,315,281)	-	-	-	-	(72,748)	-	-	-	-	-
NET CASH	250,000	24,893	361,992	656,048	1,019,676	1,195,525	1,317,761	1,474,619	1,646,127	2,127,908	3,155,566



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14.3. Balance Sheet

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	250,000	274,893	636,885	1,292,933	2,312,609	3,508,134	4,825,895	6,300,514	7,946,641	10,074,549	13,230,115
Accounts receivable		43,498	48,554	58,402	68,678	77,976	85,880	94,468	103,915	114,307	125,737
Finished goods inventory		110,901	127,173	147,973	171,661	188,616	207,478	228,226	251,048	276,153	303,769
Equipment spare part inventory	5,325	6,150	7,104	8,205	9,476	10,945	12,642	14,601	16,865	19,479	-
Raw material inventory	57,417	77,840	100,934	130,295	158,068	191,263	231,428	280,028	338,833	409,988	-
Pre-paid building rent	120,000	132,000	145,200	159,720	175,692	193,261	212,587	233,846	257,231	282,954	-
Total Current Assets	432,742	645,282	1,065,850	1,797,528	2,896,185	4,170,195	5,575,910	7,151,683	8,914,533	11,177,429	13,659,621
<i>Fixed assets</i>											
Machinery & equipment	426,000	383,400	340,800	298,200	255,600	213,000	170,400	127,800	85,200	42,600	-
Furniture & fixtures	65,000	58,500	52,000	45,500	39,000	32,500	26,000	19,500	13,000	6,500	-
Office vehicles	550,000	495,000	440,000	385,000	330,000	275,000	220,000	165,000	110,000	55,000	-
Office equipment	57,000	45,600	34,200	22,800	11,400	72,748	58,198	43,649	29,099	14,550	-
Total Fixed Assets	1,098,000	982,500	867,000	751,500	636,000	593,248	474,598	355,949	237,299	118,650	-
<i>Intangible assets</i>											
Pre-operation costs	167,281	150,553	133,825	117,097	100,369	83,641	66,913	50,184	33,456	16,728	-
Legal, licensing, & training costs	50,000	45,000	40,000	35,000	30,000	25,000	20,000	15,000	10,000	5,000	-
Total Intangible Assets	217,281	195,553	173,825	152,097	130,369	108,641	86,913	65,184	43,456	21,728	-
TOTAL ASSETS	1,748,024	1,823,335	2,106,675	2,701,124	3,662,554	4,872,084	6,137,421	7,572,817	9,195,289	11,317,807	13,659,621
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		20,319	25,066	29,675	34,867	38,692	42,857	47,501	52,684	58,476	57,852
Total Current Liabilities	-	20,319	25,066	29,675	34,867	38,692	42,857	47,501	52,684	58,476	57,852
<i>Other liabilities</i>											
Deferred tax		-	5,330	44,686	141,357	267,088	414,888	600,595	827,929	1,098,774	1,414,761
Long term debt (Project Loan)	1,573,221	1,573,221	1,398,519	1,209,316	1,004,409	782,495	542,163	281,883	-	-	-
Total Long Term Liabilities	1,573,221	1,573,221	1,403,848	1,254,002	1,145,766	1,049,583	957,051	882,478	827,929	1,098,774	1,414,761
<i>Shareholders' equity</i>											
Paid-up capital	174,802	174,802	174,802	174,802	174,802	247,550	247,550	247,550	247,550	247,550	247,550
Retained earnings		54,993	502,959	1,242,645	2,307,117	3,536,259	4,889,962	6,395,287	8,067,125	9,913,007	11,939,457
Total Equity	174,802	229,795	677,761	1,417,448	2,481,920	3,783,809	5,137,512	6,642,838	8,314,675	10,160,557	12,187,007
TOTAL CAPITAL AND LIABILITIES	1,748,024	1,823,335	2,106,675	2,701,124	3,662,554	4,872,084	6,137,421	7,572,817	9,195,289	11,317,807	13,659,621

14.4. Useful Project Management Tips

Technology

- **Required Spare Parts & Consumables:** Suppliers credit agreements and availability as per schedule of maintenance be ensured before start of operations.
- **Energy Requirement:** Should not be overestimated or installed in excess and alternate source of energy for critical operations are arranged in advance.
- **Machinery Suppliers:** Training and after sales services should be sought under the contract with the machinery suppliers.
- **Quality Assurance Equipment & Standards:** Products quality standards need to be defined on the packaging and a system to check them instituted. This improves credibility.

Marketing

- **Product Development & Packaging:** Expert's help may be engaged for product/service and packaging design & development.
- **Ads & P.O.S. Promotion:** Business promotion and dissemination through banners and launch events is highly recommended. Product brochures from good quality service providers
- **Sales & Distribution Network:** Expert's advice and distribution agreements are required with the distribution.
- **Price - Bulk Discounts, Cost plus Introductory Discounts:** Price should never be allowed to compromise quality. Price during introductory phase may be lower and used as a promotional tool. Product cost estimates should be carefully documented before price setting. Government controlled prices should be displayed, where applicable.

Human Resources

- **Adequacy & Competencies:** Recruitment of skilled and experienced staff.
- **Performance Based Remuneration:** Attempt to manage human resource cost should be focused through performance measurement and performance based compensation.

14.5. Useful Links

- Prime Minister's Office, www.pmo.gov.pk
- Small and Medium Enterprise Development Authority, www.smeda.org.pk
- National Bank of Pakistan (NBP), www.nbp.com.pk
- First Women Bank Limited (FWBL), www.fwbl.com.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 Jammu & Kashmir, www.ajk.gov.pk
- Trade Development Authority of Pakistan (TDAP), www.tdap.gov.pk
- Securities and Exchange 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
- University of Agriculture Faisalabad www.uaf.edu.pk
- Barani Agriculture Research Institute, Chakwal, www.barichakwal.org
- Pakistan Agricultural Research Council (PARC) www.parc.gov.pk

15. KEY ASSUMPTIONS

Table 13: Operating Assumptions

Days Operational per Year (Days)	300
Accounts Payable (Days)	5
Accounts Receivable (Days)	3
Raw Material Inventory (Days)	15
Finished Goods Inventory (Days)	15

Table 14: Expense Assumptions

Marketing Expenses	10% of Sales
Vehicle Running Expenses	5% of Sales
Bad Debt Expenses	0.50% of Sales
Electricity Expenses @65% capacity (Year 1)	Rs. 8,450 per month
Gas Expenses @65% capacity (Year 1)	Rs. 39,000 per month
Water Expenses (Year 1)	Rs. 6,500 per month



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