



Pre-feasibility Study

VEGETABLES DEHYDRATION 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

Dehydration is a process by which shelf life of the vegetables or fruits can be extended by evaporating water while preserving the taste. The dehydration of fresh vegetables on commercial basis is gaining popularity among the investors in Pakistan. The proposed unit is a medium sized 'Vegetables Dehydration Unit', which entails to produce dehydrated Potatoes, Onions and Garlic. Under the proposed project, fresh potatoes, onions and garlic will be purchased from the local market and after dehydration will be sold as dried vegetables to food manufacturers, super stores and traders. The selected vegetables have significant demand and potential in the local market. However, other vegetables or fruits can also be dehydrated on order to order basis. This business venture can be started in urban cities of Pakistan.

According to the estimates of this pre-feasibility, the proposed Vegetables Dehydration Unit will have a maximum capacity of processing 240,000 kgs (60,000 kg Potato, 120,000 kg Onions and 60,000 kg Garlic) of fresh vegetables per annum. The processing of 240,000 kgs of vegetable will produce 38,340 kg (10,800 kg Potato, 12,240 kg Onion and 15,300 kg Garlic) of dehydrated vegetable annually on 10 hours single shift and 300 operational days basis. The dehydrated vegetables will be packed in one kg. bags of plastic for further storage and distribution. The initial operational capacity is assumed at 60%, whereas maximum operational capacity utilization is assumed 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 total project cost for setting up the proposed unit is estimated at Rs. 11.398 million out of which Rs. 10.550 million is capital cost and Rs. 0.848 million is working capital. Considering all the assumptions on which the pre-feasibility has been made, the project generates an IRR, Payback and Net Present Value of 23%, 5.42 years and Rs. 1.978 million respectively as an equity financed business. The project will provide employment opportunities to 16 people including the Owner. The legal business status of this project is assumed to be '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, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in **"Vegetables Dehydration 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, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

The process of removal or reduce the moisture from the fruit or vegetable in order to preserve the product for prolonged storage is called 'Dehydration'. Through dehydration the moisture level of any vegetable or fruit can be limited to a level where micro-organism may not be able to grow and spoil it. Reduction of the moisture content results in preservation of quality characteristics such as flavour and nutritive value. Another objective of dehydration is the significant reduction in volume, which promotes efficiency in both transportation and storage of the food

products. The dehydrated vegetables are used as an instant vegetable as well as to make noodles, soups, snacks and fast foods.

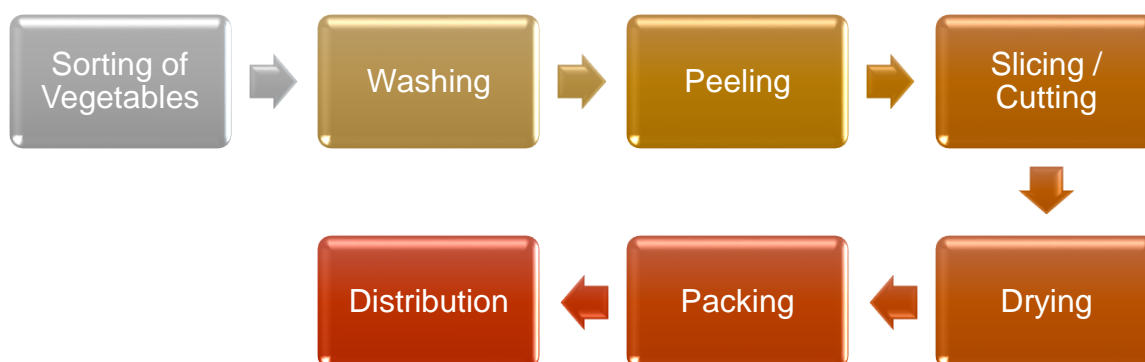
This particular pre-feasibility is about establishing a vegetable dehydration unit for Potato, Onion and Garlic. According to the proposed business model, fresh vegetables will be purchased from local markets or directly from farmers. After processing dehydrated vegetables are sold to super stores and local retails chains. The processing of the selected vegetables will be based on the seasonal availability. The proposed unit will be equipped with locally manufactured dehydration machines, mainly, Washer, Peeler, Slicer and Dryers. Heat and Dry Air will be used for dehydration of the vegetables. The Dryers are the main component of production process. The unit will comprises of 8 Dryers, with each having a capacity of drying 50 kg of vegetables in 5 hours. Around two batches of dried vegetables per dryer will be produced per day. After dehydration the vegetables will be packed in plastic bags for further storage and distribution.

Financial analysis shows the unit shall be profitable from the very first year of operation. The ideal location for the proposed project is any major industrial city across Pakistan, however, it can also be established in other areas with availability of required infrastructural support, skilled labour and easy access to markets. The legal business status of this project is assumed to be 'Sole Proprietorship'.

5.1 Production Process Flow

The major activities involved in production processes includes, Vegetable Sorting, Washing, Peeling, Drying and Packing. Production process flow of the proposed vegetable dehydration is exhibited in the below diagram.

Figure 1: Production Process Flow



5.2 Product Mix

The proposed product mix mainly comprises of dehydrated Potato, Onion and Garlic. This product mix is selected due to high demand and market potential. However, other vegetables or fruits can also be dehydrated on order basis. Details of product mix is provided in the below table.

Table 1: Product Mix

Commodity	Percent of Total Production	Processing Days
Potato	28%	75
Onion	32%	150
Garlic	40%	75

5.3 Installed and Operational Capacities

The installed and operational capacity of the Vegetables Dehydration unit mainly depends upon the installed machinery.

This pre-feasibility study is based on 08 dryer machines that can dehydrate 240,000 kgs of fresh vegetables (50 kg in 5 hours at 1 dryer) per annum on 10 hours single shift basis. The unit is assumed to operate 300 days per annum. The dehydration of 240,000 kgs of vegetable will produce 38,340 kgs of dried vegetable as finished goods. The initial operational capacity of the project will be 60% with an annual growth of 5%. Maximum capacity utilization of the project is assumed at 90%.

Product mix wise installed and operational capacity is provide in the table below.

Table 2: Installed and Operational Capacity

Commodity	Total Processing Capacity of Fresh Vegetables (Kgs)	Total Capacity Finished Goods (Dehydrated Vegetables, Kgs)	Operationa l capacity Finished Goods Year 1, 60% (Kgs)	Maximum Operational Capacity Finished Goods 90% (Kgs)
Potato	60,000	10,800	6,480	9,720
Onion	120,000	12,240	7,344	11,016
Garlic	60,000	15,300	9,180	13,770

Total	240,000	38,340	23,004	34,506
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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 fruit and vegetable processing business is absolutely necessary.
- ⇒ Selection of good quality and fresh vegetables; cost efficiency through better management.
- ⇒ Appropriate arrangements for transportation of fresh vegetables to the processing facility.
- ⇒ Good storage arrangement and internal controls for processed vegetables; arrangements for transportation of processed product to local markets.
- ⇒ Properly trained 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 super stores and retail chains.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

As per the current agricultural practices, the suggested vegetable for this unit i.e. Potato, Onion and Garlic, are predominantly produced in Punjab and Sindh. Therefore, it is recommended that the project may be preferably located in the vicinity of areas of Punjab and Sindh for easy access and availability of the proposed as well as other vegetables. Following areas could be the most appropriate locations for the proposed unit. Okara, Sahiwal, Multan, Lahore, Rahim Yar Khan, Sargodha, Khairpur, Sakhar, Mirpur Khas, Karachi, Ghotki and etc.

8 POTENTIAL TARGET CUSTOMERS / MARKETS.

The dehydrated vegetables are widely used as instant vegetable as well as in manufacturing of different processed food items. Therefore, the potential target customers for the dehydrated vegetables are the food manufacturing industry, bakery and confectionary, super stores, traders and exporters.

As majority of the target customer belongs to business segments, therefore, the business clients operating in major big cities, such as Lahore, Karachi, Peshawar, Faisalabad, Sialkot, Rawalpindi, Islamabad, Multan and Hyderabad will be key potential markets for the proposed venture.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Vegetables Dehydration Unit. 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 annexures.

9.1 Project Economics

A detailed financial model has been developed to analyse the commercial viability of 'Vegetables Dehydration Unit'. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

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

In order to financially appraise the project, a 100% Equity Based Business Model has been assumed. The following tables show Internal Rate of Return, Payback Period Net Present Value and Breakeven of the proposed venture:

Table 3: Project Economics

Description	Details
Internal Rate of Return (IRR)	23%
Payback Period (Yrs.)	5.42
Net Present Value (Rs.)	1,978,488

Calculation of break-even analysis is as follows.

Table 4: Breakeven (100% Equity Based)

	Breakeven Revenue (Rs. Million)	Breakeven (Processing Kgs)	Margin of Safety (%)
Year 1	29.474	22,158	2%
Year 2	32.256	22,044	9%
Year 3	35.327	21,948	14%

Year 4	38.776	21,901	18%
Year 5	42.568	21,857	22%
Year 6	47.779	22,303	23%
Year 7	52.501	22,279	26%
Year 8	57.641	22,236	24%
Year 9	63.368	22,223	23%
Year 10	69.793	22,252	21%

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 provide in the table below.

Table 5: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	17%
Payback Period (Yrs.)	6.39
Net Present Value (Rs.)	- 3,314,315

The financial assumptions for Debt:Equity are as follows:

Table 6: Financial Assumptions for Debt:Equity Model

Description	Details
Debt (50%)	Rs. 5,698,958
Equity (50%)	Rs. 5,698,958
Interest Rate on Debt	26%
Debt Tenure	5
Debt Payment / Year	2

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

9.2 Project Cost

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

Table 7: Project Cost

Description	Amount Rs.
Capital Cost	
Machinery & Equipment	4,580,500
Office Vehicles	3,200,000
Furniture & Fixtures	1,625,000
Pre-operating Costs	210,000
Office Equipment	664,100
Building Security	270,000
Total Capital Cost	10,549,600
Raw material inventory	147,083
Cash	431,234
Upfront building rent	270,000
Total Working Capital	848,317
Total Project Cost	11,397,917

9.3 Space Requirement

Approximately 1 kanal (4,500 sq. ft.) of land would be required for establishment of proposed unit, it is recommended that required land should be acquired on rental basis in the nearby areas of identified potential cities and urban centers. The estimated monthly rent of the purpose-built building is assumed as Rs. 90,000 per month. The infrastructural requirement is estimated considering various facilities including management office, weighing station, raw material store, production area, and store - finished goods, etc. Details of space requirement are as follows.

Table 8: Space Requirements

Description	Estimated Area (Sqft)
Raw Material Store	700

Selection / Grading / Cutting	400
Production Area	900
Packing Room	360
Store - Finished Goods	360
Management Building	400
Kitchen	64
Pavement/driveway	625
Washrooms	108
Open Space	583
Total	4,500

9.4 Machinery & Equipment Requirement

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

Table 9: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Dryer Machine	8	385,000	3,080,000
Generator	1	980,000	980,000
Slicer	1	170,000	170,000
Peeler And Washer	1	75,000	75,000
Weighing Machine	1	18,000	18,000
Weighing Machine (Packing)	1	7,500	7,500
Misc. Laboratory Equipment	1	250,000	250,000
Total			4,580,500

9.5 Furniture & Fixtures Requirement

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

Table 10: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture	1	800,000	800,000
Renovation & Fixtures	1	600,000	600,000
Air conditioners (2 ton split)	1	225,000	225,000
Total			1,625,000

9.6 Office Equipment Requirement

Following office equipment will be required for the project are given below.

Table 11: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Industrial Fans	2	65,000	130,000
Fridge	1	115,000	115,000
Computer	1	75,000	75,000
LED TVs	1	60,000	60,000
Ceiling/Bracket Fans	7	7,500	52,500
Water Dispenser	1	25,000	25,000
LED Lights	28	450	12,600
Exhaust Fans	3	8,000	24,000
Computers	2	65,000	130,000
Computer printer (s)	1	35,000	35,000
Telephones	2	2,500	5,000
Total			664,100

9.7 Office Vehicle

Following office vehicle will be required for the project are given below.

Table 12: Office Vehicle

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Mini Truck	1	3,200,000	3,200,000
Total			3,200,000

9.8 Raw Material Requirements

Fresh vegetables including potatoes, onions and garlic are the main raw material for the proposed business, which will be procurement either directly form the farms or from distributors or local vegetable markets. Following table provides the details of annual requirements of fresh vegetables as raw material.

Table 13: Raw Material Requirements

Description	Input Requirement at 100% Capacity (Kgs.)	Requirements for Year 1 at 60% Capacity (Kgs)*	Average Cost Per kgs (Rs.)	Total Cost (Rs.)
Potatoes	60,000	35,300	40	1,412,000
Onions	120,000	70,600	55	3,883,000
Garlic	60,000	35,300	350	12,355,000
Total				17,650,000

* Excluding 7 days Finished Goods Inventory.

9.9 Human Resource Requirement

In order to run operations of dehydration plant smoothly, details of human resources required along with number of employees and monthly salaries are recommended as under.

Table 14: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner/Manager	1	70,000
Accounts Officer	1	45,000
Packing workers	2	35,000

Mechanic-cum electrician	1	40,000
Plant Operator	1	35,000
Helpers	4	35,000
Security Guard	2	35,000
Sweepers	1	30,000
Driver	1	40,000
Purchase Officer	1	60,000
Laboratory Technician	1	50,000
Total	16	

9.10 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity and gas. The electricity and gas expenses are estimated to be around Rs. 120,636 (Direct & indirect) per month. Furthermore, promotional expense being essential for marketing of Dehydration Plant is estimated as 0.2% of revenue.

9.11 Revenue Generation

Based on the capacity utilization of 60%, sales revenue during the first year of operations is provided in the table below.

Table 15: Revenue Generation – Year 1

Description	Dried Vegetables Available for Sale Year 1 (Kgs)	Finish Good Inventory. (Kgs)	Weighted Average Sale Price/Kg. (Rs.)	Sales Revenue (Rs.)*
Potato	6,354	126	378	2,400,400
Onion	7,201	143	917	6,600,917
Garlic	9,002	178	2,333	21,004,667
Total Revenue	23,004	447		30,005,983

* Difference is due to rounding off.

10 CONTACT DETAILS

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

Table 16: Machinery Suppliers

Name of Supplier	Address	Phone
Rasheed Engineering	Factory Area, Faisalabad, Punjab	+92 300-8656451
The Generator Store (Umer Khalid Rao)	Sharif Garden Lahore, Punjab	0332-8738290

11 USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Baluchistan	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
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
Punjab Vocational Training Council (PVTC)	www.pvtc.gov.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gov.pk
Sindh Small Industries Corporation	www.ssic.gov.pk

Ministry of National Food Security and Research(MNFSR)	www.mnsfr.gov.pk
Pakistan Agriculture Research Council (PARC)	www.parc.gov.pk
National Agriculture Research Council (NARC)	www.narc.gov.pk
Agriculture University of Faisalabad (UAF)	www.uaf.edu.pk
Agriculture Marketing Information Service	www.amis.pk
Ayub Agricultural Research Institute (AARI),	www.aari.punjab.gov.pk

12 ANNEXURES

12.1 Income Statement

Calculations	SMEDA									
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	30,005,000	35,582,948	41,198,513	47,456,258	54,420,924	62,163,348	70,761,018	76,150,356	81,861,632	88,001,255
Cost of sales										
Raw Material Cost	17,650,000	20,931,146	24,234,419	27,915,446	32,012,308	36,566,675	41,624,128	44,794,327	48,153,901	51,765,444
Operation costs 1 (direct labor)	2,012,100	2,441,643	2,892,717	3,409,589	4,000,909	4,676,398	5,446,974	5,998,151	6,597,966	7,257,763
Operating costs 2 (machinery maintenance)	45,113	52,256	56,282	60,307	64,333	68,359	72,384	72,463	72,463	72,463
Operating costs 3 (direct electricity)	1,147,250	1,392,165	1,649,356	1,944,064	2,281,220	2,666,367	3,105,731	3,419,999	3,761,998	4,138,198
Operating costs 5 (direct gas)	67,670	78,384	88,643	99,733	111,710	124,635	138,574	145,660	152,943	160,590
Total cost of sales	20,922,134	24,895,592	28,921,417	33,429,140	38,470,481	44,102,434	50,387,792	54,430,599	58,739,272	63,394,458
Gross Profit	9,082,867	10,687,355	12,277,096	14,027,118	15,950,443	18,060,914	20,373,226	21,719,756	23,122,360	24,606,797
General administration & selling expenses										
Administration expense	4,380,000	4,818,000	5,299,800	5,829,780	6,412,758	7,054,034	7,759,437	8,535,381	9,388,919	10,327,811
Building rental expense	1,080,000	1,188,000	1,306,800	1,437,480	1,581,228	1,739,351	1,913,286	2,104,614	2,315,076	2,546,584
Electricity expense	232,709	255,980	281,578	309,735	340,709	374,780	412,258	453,484	498,832	548,715
Water expense	131,400	144,540	158,994	174,893	192,383	211,621	232,783	256,061	281,668	309,834
Travelling expense	657,000	722,700	794,970	874,467	961,914	1,058,105	1,163,916	1,280,307	1,408,338	1,549,172
Communications expense (phone, fax, mail, internet, etc.)	219,000	240,900	264,990	291,489	320,638	352,702	387,972	426,769	469,446	516,391
Office vehicles running expense	256,000	281,600	309,760	340,736	374,810	412,291	453,520	498,872	548,759	603,635
Office expenses (stationary, entertainment, janitorial services, etc)	175,200	192,720	211,992	233,191	256,510	282,161	310,377	341,415	375,557	413,112
Promotional expense Year 1-5	60,010	71,166	82,397	94,913	108,842	-	-	-	-	-
Professional fees (legal, audit, consultants, etc.)	75,013	88,957	102,996	118,641	136,052	155,408	176,903	190,376	204,654	220,003
Depreciation expense	1,364,910	1,364,910	1,364,910	1,375,143	1,373,493	1,764,219	1,776,065	1,774,155	1,774,155	1,787,867
Amortization of pre-operating costs	42,000	42,000	42,000	42,000	42,000	-	-	-	-	-
Bad debt expense	30,005	35,583	41,199	47,456	54,421	62,163	70,761	76,150	81,862	88,001
Miscellaneous expense 1	219,000	240,900	264,990	291,489	320,638	352,702	387,972	426,769	469,446	516,391
Subtotal	8,922,246	9,687,956	10,527,375	11,461,413	12,476,395	13,881,700	15,116,010	16,440,504	17,898,572	19,515,517
Operating Income	160,620	999,400	1,749,720	2,565,705	3,474,048	4,179,214	5,257,216	5,279,253	5,223,789	5,091,280
Other income (interest on cash)	21,847	62,086	125,050	203,268	246,369	305,868	439,447	586,273	733,798	901,670
Gain / (loss) on sale of computer equipment	-	-	41,250	-	-	89,002	-	-	144,281	115,186
Gain / (loss) on sale of office vehicles	-	-	-	-	1,280,000	-	-	-	-	-
Earnings Before Interest & Taxes	182,468	1,061,486	1,916,020	2,768,973	5,000,417	4,574,084	5,696,663	5,865,526	6,101,867	6,108,136
Earnings Before Tax	182,468	1,061,486	1,916,020	2,768,973	5,000,417	4,574,084	5,696,663	5,865,526	6,101,867	6,108,136
Tax	-	54,223	218,204	407,243	1,115,145	965,929	1,358,831	1,417,933	1,500,653	1,502,847
NET PROFIT/(LOSS) AFTER TAX	182,468	1,007,263	1,697,816	2,361,730	3,885,272	3,608,155	4,337,832	4,447,593	4,601,215	4,605,289

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	431,234	1,316,554	3,650,353	6,353,640	9,907,807	9,801,689	14,667,722	20,488,009	26,413,857	32,289,965	39,843,616
Accounts receivable		1,233,082	1,347,698	1,577,701	1,821,673	2,093,367	2,395,567	2,731,323	3,018,727	3,246,822	3,490,333
Finished goods inventory		414,887	484,806	563,143	650,855	748,947	858,529	980,822	1,058,373	1,142,153	1,232,670
Raw material inventory	147,083	183,148	222,654	269,297	324,260	388,911	464,836	525,251	592,877	669,210	-
Pre-paid building rent	270,000	297,000	326,700	359,370	395,307	434,838	478,321	526,154	578,769	636,646	-
Total Current Assets	848,317	3,444,670	6,032,211	9,123,151	13,099,902	13,467,753	18,864,976	25,251,558	31,662,603	37,984,795	44,566,619
<i>Fixed assets</i>											
Building Security	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000	270,000
Machinery & equipment	4,580,500	4,122,450	3,664,400	3,206,350	2,748,300	2,290,250	1,832,200	1,374,150	916,100	458,050	-
Furniture & fixtures	1,625,000	1,462,500	1,300,000	1,137,500	975,000	812,500	650,000	487,500	325,000	162,500	-
Office vehicles	3,200,000	2,560,000	1,920,000	1,280,000	640,000	5,153,632	4,122,906	3,092,179	2,061,453	1,030,726	-
Computer equipment	165,000	110,550	56,100	192,658	127,975	64,943	223,026	148,148	75,179	258,180	171,499
Office equipment	499,100	449,190	399,280	349,370	299,460	249,550	199,640	149,730	99,820	49,910	-
Total Fixed Assets	10,339,600	8,974,690	7,609,780	6,435,878	5,060,735	8,840,875	7,297,771	5,521,707	3,747,552	2,229,367	441,499
<i>Intangible assets</i>											
Pre-operation costs	210,000	168,000	126,000	84,000	42,000	-	-	-	-	-	-
Total Intangible Assets	210,000	168,000	126,000	84,000	42,000	-	-	-	-	-	-
TOTAL ASSETS	11,397,917	12,587,360	13,767,991	15,643,029	18,202,637	22,308,627	26,162,748	30,773,265	35,410,155	40,214,162	45,008,118
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		1,006,975	1,180,343	1,357,565	1,555,443	1,776,161	2,022,127	2,294,812	2,484,110	2,686,902	2,875,570
Total Current Liabilities	-	1,006,975	1,180,343	1,357,565	1,555,443	1,776,161	2,022,127	2,294,812	2,484,110	2,686,902	2,875,570
<i>Other liabilities</i>											
<i>Shareholders' equity</i>											
Paid-up capital	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917	11,397,917
Retained earnings		182,468	1,189,731	2,887,547	5,249,277	9,134,549	12,742,704	17,080,536	21,528,128	26,129,343	30,734,632
Total Equity	11,397,917	11,580,384	12,587,648	14,285,464	16,647,194	20,532,466	24,140,621	28,478,453	32,926,045	37,527,260	42,132,549
TOTAL CAPITAL AND LIABILITIES	11,397,917	12,587,360	13,767,991	15,643,029	18,202,637	22,308,627	26,162,748	30,773,265	35,410,155	40,214,162	45,008,118

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		182,468	1,007,263	1,697,816	2,361,730	3,885,272	3,608,155	4,337,832	4,447,593	4,601,215	4,605,289
Add: depreciation expense		1,364,910	1,364,910	1,364,910	1,375,143	1,373,493	1,764,219	1,776,065	1,774,155	1,774,155	1,787,867
amortization of pre-operating costs		42,000	42,000	42,000	42,000	42,000	-	-	-	-	-
Accounts receivable		(1,233,082)	(114,615)	(230,004)	(243,972)	(271,693)	(302,200)	(335,755)	(287,404)	(228,095)	(243,512)
Finished goods inventory		(414,887)	(69,920)	(78,337)	(87,712)	(98,093)	(109,582)	(122,293)	(77,551)	(83,780)	(90,518)
Raw material inventory	(147,083)	(36,064)	(39,506)	(46,643)	(54,963)	(64,652)	(75,924)	(60,415)	(67,626)	(76,333)	669,210
Pre-paid building rent	(270,000)	(27,000)	(29,700)	(32,670)	(35,937)	(39,531)	(43,484)	(47,832)	(52,615)	(57,877)	636,646
Accounts payable		1,006,975	173,367	177,223	197,878	220,718	245,965	272,686	189,298	202,792	188,667
Cash provided by operations	(417,083)	885,320	2,333,799	2,894,295	3,554,167	5,047,514	5,087,149	5,820,287	5,925,849	6,132,077	7,553,650
<i>Financing activities</i>											
Issuance of shares	11,397,917	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	11,397,917	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(10,549,600)	-	-	(191,008)	-	(5,153,632)	(221,116)	-	-	(255,969)	-
Acquisitions											
Cash (used for) / provided by investing activities	(10,549,600)	-	-	(191,008)	-	(5,153,632)	(221,116)	-	-	(255,969)	-
NET CASH	431,234	885,320	2,333,799	2,703,287	3,554,167	(106,118)	4,866,033	5,820,287	5,925,849	5,876,108	7,553,650

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Travelling Expense	15% of administration expense
Communication Expenses	5% of administration expense
Promotional Expenses	0.2% of revenue (Year 1 – Year 5) 0.1% of revenue (Year 6 – Year 10)
Depreciation Method	Straight Line
Depreciation Rate	10% on Machinery & Equipment 33% on Office Equipment 10% on Furniture & Fixture 20% on Office Vehicle
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%
Gas Price Growth Rate	5%

13.2 Production Cost Assumptions

Description	Details
Maximum Processing Capacity in Kgs	240,000
No of Operational Hours Per Day	10
Shift Length (Hours)	10
No of Operational Days	300
Maximum Production Capacity	90%
Processing Days Potatoes	75

Processing Days Onion	150
Processing Days Garlic	75

13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	7.5%
Capacity Utilization (Year 1)	60%
Capacity Utilization Growth Rate	5%

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