Pre-feasibility Study

SPICE PROCESSING, PACKING & MARKETING

November 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, andrevenues 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
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Government of Pakistan

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1 PROJECT PROFILE

Purpose of the Documents

This document is developed to provide the investor with potential investment opportunity to enter into Spices processing, packing & marketing business. This pre-feasibility gives insight into various aspects of Spices processing business setup including both technical and general information and provides all relevant details to facilitate the investor in making the correct decision providing various technological as well as business alternatives. The document also allows flexibility in change of various parameters to suit the customized needs of the entrepreneur.

Project Brief

There has been an immense progression in the spices industry. However, technological changes have had a great impact on the spices processing, packing and distribution, however the main thrust for survival has always revolved around quality, pricing, and distribution network.

In the last decade, the spices processing industry has grown at a point where many of commercial setups of spices processing and packing are established to handle the public demand in both local and international markets. Now the industry is changing again with the introduction of recipe packs and technology.

Opportunity Rationale

What makes it a lucrative business for an entrepreneur is a high probability of generating increasing profits by maintaining quality and competitive price as the product has vital standing in our daily life; however, setup can only achieve fast-track growth if some critical factors are considered to ensure smooth functioning of business. High standards of quality control and consistent quality check are two of the important factors that form an integral part of this fast growing business. In comparison with other businesses, spices have always been in consistent demand due to typical subcontinent food making curries, which are incomplete without having; some spices that have become the integral part of ingredients. That draws a substantial potential in this business; however, sudden increase in demand for spices have never experienced and market growth largely depends on:

- Population growth and child to adult conversion rate
- Ratio of younger people in the population (according to 2023[1] census 41% belongs to age group of between 15 to 39)
- Increase in urban life phenomenon; and
- Conversion from popular homemade curries to ready to use curries

[1] Pakistan Bureau of Statics :Digital Population census 2023

Population growth rate in Pakistan is 2.4% with population of 241[2] million, which is a motivating factor to invest in curry based spice business. Subcontinent countries like Pakistan and India both are the famous for verity of spicy dishes because of their use of spices.

Key Success Factors/Practical Tips for Success

Some factors play an instrumental role in the success of the project, when the business growth linked with business promotion, quality control and sales & distribution set up. Following are some important factors that should have considered carefully prior to setting up a Spices processing business:

1.4.1 Location

Deciding the location for setting up a Spice processing & packaging business has imperial implications on fixed costs, operational costs and procedures.

- Generally, industrial areas having better communication, water and power facilities are the target areas for many businesses. In effect, it all results from the vision of the investor. How to keep balance between the volume and the profit margins, which are involved in the business.

- Having the capability to invest large amounts in setting up a spice business in old industrial area does not qualify or guarantee a good business because prices of property or high rate of rental which would make business difficult. On the other hand prospecting some new industrial localities would surely increase profit margins.

1.4.3 Existing Competition

Although a pre-requisite for deciding the location. It is necessary to evaluate the existing competition in that locality and the type of services offered by them. Factors to consider are:

Number of existing competitors,
Type of products and schemes being offered by them,
Customer perception about the competitors' quality, and
Product prices and schemes offered to Customer.

- Usually customer traffic is divide when two or more companies offers same products. Therefore, there is a need to ensure competitive prices and promotion schemes aligned with customer interest/demand to maintain from the competitors to avoid unnecessary business concentration and to capture the untapped market. Too many businesses give fierce competition forcing the profit margins to go down thereby creating sustainability issues.

[2] Pakistan Bureau of Statics : Digital Population census 2023

- The promotion schemes offered by the competitor in a particular locality need to be carefully evaluate to identify weaknesses and opportunity. This is p predominantly affected by the level of technology employed by the competition, which again is a reflection of the associated customer profiles.

- Similarly, quality issues regarding established business are another opportunity wherein the customers might want to switch to a better quality and even at times willing to pay a higher price if their expectations are adequately meet.

1.4.5 Promotional Activities

Promotional activities are the primary source of revenue generation. Spices processing & packing business is unique in the sense that this is a common item of our daily life. However, it is very important to focus on promotional activities to ensure a constant stream of business. Mostly the curry spices business or branded spice business promote their products by announcing different schemes like by two get one free or giving cutlery items on purchase of their products etc.

Proposed Business Legal Status

Although the legal status of business tends to play an important role in any setup the spices processing, packing and marketing business is mostly operated on a sole proprietorship basis or on partnership basis in case of a large setup.

Typical Setup

Before this pre-feasibility ventures on to discuss the related business parameters it is imperative to understand the generic set up of a Spices Processing & Packing Business. A typical Business set up consists of three sections:

1. <u>Processing Section</u> – In processing, mixing and making of products performed as per production plan.

2. <u>Packing Section</u> – at this stage, the packaging machine performs the packing of products.

3. Storage Section – where finished goods and raw material is stored.

4. <u>Marketing & Sales Section</u> – Where customer service, order booking & delivery, cash handling etc. takes place.

Drawing from the set up described above the primary element is factory for processing and of spices followed by packing. Secondary element is marketing and sales/distribution of product. Some spice business set-ups outsource grinding process as well as sales and distribution of products.

Project Capacity and Rationale

The project capacity for a Spices Processing & Packaging Business setup is dependent on the demand of the spice within the region. The business volume varies from area to area and is very much location specific. Based on our discussions with the industry stakeholders and existing business operators, two broad categories of business volume that can be generate according to the income level of the locality are as follows:

Curry Spices

1. Low Income Areas – 10 to 15% of sale
2. Medium/ High Income Areas – 85 to 90% of sale

Whole/Grinded Spices

1. Low Income Areas – 70 to 80% of sale
2. Medium/ High Income Areas – 20 to 30% of sale

This study proposes is to set-up the business in an industrial area, where you will have better communication, power and water facilities. Which is important to provide a reasonable profit margin and market access.

Project Investment

A total of Rs. 15,092,383/- will be required to setup and operate the proposed Spices processing & packing business. The assumed breakup of the above project investment is as follows:

Item	Investment (Rs.)
Machinery (Grinding and packaging)	725,000
Facility Construction Cost	700,000
Office Equipment & Furniture	700,000
Vehicles	500,000
Rent in Advance	720,000
Preliminary and Transportation Expenses	500,000
Utilities - Three Months	180,000
Salaries - Three Months	1,266,000
Raw Material Inventories - One Month	9,501,383
Misc. Expenses - Three months	300,000
Total	**15,092,383**

Proposed Product Mix

The primary sources of revenue generation for a spices business are factory for processing & packing, marketing and sales/distribution. This pre-feasibility takes into account, the revenue generation that is traceable, and these three services where profit margins are expect to be the maximum. Besides, type of product and the devised recipe would play a major role in the success of the business. For the purpose of this study, following product mix are proposed. General ingredients will remain the same, however, their ratio for any specific product will largely depend on the business setter, as every instant formula used by the existing players has its own unique taste and the prospective owner would need to develop his own curry recipe.

For the purpose of this feasibility, the proposed product mix is to be as follows:

<table>
<tr><th>S. No.</th><th>Product Name</th><th>General Ingredients</th><th>Packaging</th><th>Quantity</th><th>Selling Price (Rs.)</th></tr>
<tr><td>1</td><td>Biryani Masala</td><td rowspan="2">1. Red Chilli (Surkh Mirch)
2. Salt (Namak)
3. Coriander (Dhanya)
4. Cumin Seed (Sufed Zeera)
5. Black Pepper (Kali Mirch)</td><td rowspan="2">Plastic pillow packs</td><td>70 grams</td><td>130</td></tr>
<tr><td>2</td><td>Karahi Masala</td><td>70 grams</td><td>130</td></tr>
</table>

3	Nehari Masala	6. Turmeric (Haldi) 7. Clove (Long) 8. Cinnamon (Dar Cheeni) 9. Cardamom (Alaichi) 10. Mace (Jautri) 11. Nutmeg (Jaifal) 12. Bay Leaf (Tez Pat) 13. Mango Powder (Aam Chur) 14. Plum (Aalo Bokhara) 15. Preservatives 16. Citric Acid		70 grams	130

Recommended Project Parameters

Capacity	Capacity Utilisation	Human Resource	Technology/ Machinery	Location
250 Kg per day (84,324 Kg/month	55%	15	Grinding and Packing	Medium Scale Industrial Area
Financial Summary				
Project Cost	**IRR**	**NPV (Rs)**	**Payback Period**	
Rs. 15,092,383	61%	74,590,804	3 Years & 2 Months	

Proposed Location

The proposed project would be located in a medium scale industrial area. For the purpose of this study it is assumed that the locality be in a medium income level areas or industrial areas in first or second tier cities across Pakistan.

2 SECTOR & INDUSTRY ANALYSIS

The Spice industry is mostly un-documented, which makes it difficult to determine the exact market share. However on a macro scale there are a number of major players like National Foods, Shan Foods, Mehran , Kausar, Habib, Ziaqa ,Puro Food and Spiceo which hold major part of the market share of the curry spice business (about 42%), however, major share (about 58%)[3] still lies with unbranded market. There are also small players in curry spices business are restricted to very selective local market of rural areas.

Apart from the major brands, there are a large number of self-owned independent spice business, and are not affiliated with other brands. Such set ups are largely undocumented and unorganized hence this makes it difficult to estimate the approximate market size. It is estimated, there are over a thousand spice business set-ups spread across Pakistan.

Informal trade of spices through India-Kandahar rout entered in Pakistan from Chamman border and reached Karachi. There is also another route called India-Kabul (Afghanistan) channel, through this channel spices moved into Peshawar and later distributed to Lahore and Rawalpindi. Pakistan generally imports spices from Indonesia, India, China, Srilanka, Singapore, Iran, Bangladesh, Burma etc. Vietnam is the major raw spices sourcing country for Pakistan. 2022. Pakistan mainly export spices to Dubai, USA, United Kingdom, Saudi Arabia, Yemen, Spain, Germany, Australia and Jordan etc. Shan Foods, National and Mehran Masala are the biggest exporters of spices as expressed by the existing operators.

Pakistan has share of 17.7%[4] in total world exports of spices with ranking 02 for mixed spices (HS Code: 091091) in Value and Number 03 in terms of Quantity. Exports of Pakistan's spices reaches up to USD 81.2 Million in 2022[5]. Major Importer of Pakistan's Spices are Saudi Arabia, USA, United Kingdom, Canada UAE and Australia.

There are five major companies at national which sales branded spices that claim a growing major percent market share. National food has the major share in spices sector, further Shan food and Mehran foods is also competent brand in this sector. Local informal brand also comprise some share of spices market but are less as compared to major above-mentioned brands.

As per the market survey, major shareholder in spices industry belongs to Sindh and Punjab. Both the provinces claim almost equal share. KPK and Baluchistan have less share as compared to Punjab and Sindh. Punjab & Sindh accounts for approximately 90% of the packaged spices market due to a large number of towns and developed cities/areas. The remaining 10% caters to the KPK and Baluchistan region.

[3] Pakistan Journal for Agriculture & agriculture Engineering, 2016

[4] International Trade Centre - Trade map

[5] International Trade Centre - Trade map

International Spices Market

The top 10 exporter accounted 70% of total global value spices exported; Netherland is a leading exporter with 24.5%[6] export quantity for mixture of different types of spices, while India ranks at No. 02 with 21% of share in world exports in said category in 2022. The top 06 world importers of mixed spice are USA, Netherlands, Saudi Arabia, Germany, Belgium and UAE. Industry estimated spices market size currently valued at USD 570.5 million for imports[7]. There was a growing trend towards the trade of processed spices during the period, which fetch higher prices. The increasing demand for value-added processing of spices such as capsicum and ginger offer business opportunities for the food and spice industries in international markets.

Sector Characteristics

The demand for branded spices business has experienced a gradual change over the past years. As mentioned earlier the advent of technology has opened a new option of export for many potential investors.

However, this does not imply that the demand spices business is affect by technology. Because considering the associated costs and the subsequent pricing the affordability for spices by a large population of Pakistan becomes questionable.

Branded spices are facing competition from loose spices in terms of their prices. Branded spices are at least 30 percent more expensive than loose spices, because of the GST.

3 PRODUCTION PROCESS

A typical setup for packaged spices goes through three main stages end up with storage. The process is very simple which starts from the procurement of whole spices sent to the grinding process where mixing is carried out. Mixed spices are stored in tanks or large sized tumblers from where they are shifted for conversion into desired packet sizes. In small setups (with 500 kg/day) pre-grinded spices are also used, whereas, in large scale production generally manufacturing setups use their own grinding facility, however, during Eid, Ramadan and Moharram grinded spices are also used due to increased demand.

Process Flow

Unlike a manufacturing concern, a spices business has a very basic process flow diagram, which enables a person to understand the underlying principles involved in the workflow.

Process flow consists of four steps:

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[6] International Trade Centre - Trade map
[7] International Trade Centre - Trade map

- Finish Drying

– Generally dried spices are used which need to be further checked whether humidity has influenced the quality. Certain machines perform this process. This can be manual or automatic.

- Grinding and Mixing

– Spices are grinded and mixed using stone mill.

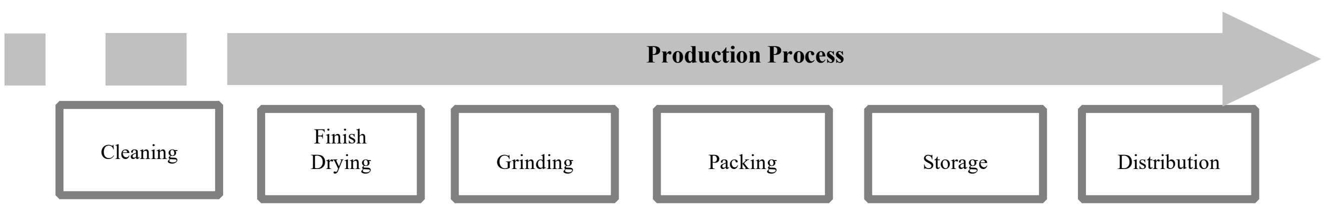
- Packing

– Grinded spices are pack into desired sizes using automatic packaging machines.

- Storage

– Finished packets are stored in warehouse in the form of carton.

The following illustration gives an understanding of process flow in conventional spices processing, packing and marketing business:



It is recommend that the investor/entrepreneur develop the generic workflow and customize it according to technological advancement. The process in the proposed project with the selected machinery will be as follows:

- Spices (in the whole form) are stored in the godown in 25 and 50 k.g. bags i.e. Chili, coriander etc
- According to desired recipe (curry i.e. Biryani Masala, Nehari Masala, Karahi Gosht etc.) different spices are mixed in the prescribed ratios and again packed into 10-15 kg bags to be grinded according to production plan
- Before starting the production, you must have a production plan, indicating what recipe is to be produce and in what quantity, which recipe will follow it and total how many recipes have to be produce.

- For example, to start with Biryani Masala you have to shift prepared bags in 10-15 kg to the processing hall where these are grinded and stored in the large sized containers.
- Grinded spices are fed into the vassal (feeding system), from where grinded spice will be filled automatically into the pillow packs. Conveyer will move the filled packs ahead and whole items are fill manually (if required) according to the spice recipe.
- Completed packets are sealed and ejected for cartooning.
- After one curry process completes, machine is ready to use for the subsequent curries.

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*Mainly two types of recipe (curry) based packets are produced which are as follows:

Spice curry having whole items (powder with whole items) i.e. Plum, Bay leaf etc. Spice curry without whole items (only powder)

Raw Material Requirement

Two main input materials are required for the production on a regular basis. One is the whole spices or grinded spices for processing and mixing and the other is packing material for finalizing the products as per production plan. Both materials are crucial for smooth operations of the business.

3.1.1 Technology/Process Options

The main cost components in account of plant and machinery while setting up a spices business are the grinding and packing machines, while, for the drying purpose, sun-drying procedure is generally followed which is however inexpensive and compatible with the weather conditions of Pakistan. Both brand new and reconditioned machines are available in the market. However, considering the cost viability of the business most of the existing businesses operate on locally manufactured machines. Grinding process mostly performed by stone mills generic to all kinds of small or large-scale setups. What makes a difference is the use of packaging machines. Big market players use plastic or aluminum pillow packs placed in hard paper box. Pillow packing machinery is easily available in the market at a reasonable price whereas, the companies generating substantial revenue through exports only use paper box and packaging technology. Local machine are not too much expensive and easily available.

3.1.2 Merits & demerits of a particular technology

Although new machines are the best option for starting a business, cost constraints make reconditioned/locally manufactured machines an alternate viable solution. If properly handled and maintained on a regular basis, reconditioned/locally manufactured machines can give quality output for a longer period.

Machinery Requirement

For the purpose of this study, we are assuming that good locally manufactured machinery costing around Rs. 725,000 will be able to give the desired quality of output. The production capacity of the machine would depend on the amount of business expected to be generate.

The cost implications would depend on the capacity of the machine. For this pre-feasibility the locally manufactured grinding machine with a grinding capacity of 40 K.G. per hour, whereas, the packaging machine is assumed to have a capacity of producing 1800 packets per hour. This capacity seems reasonable for the initial years, which can be increased in future if business volume grows and brand awareness is established.

Machinery Description

Spice processing and packaging unit typically comprise on two separate sub-units supporting grinding and packaging process separately: Grinding and packaging.

(A) Grinding is a process where raw spices are grinded at certain level according the demand of product.

(B) Packaging is process where grinded spices packed with packaging machine. Size of packets are also decided on the demand market

Machine Maintenance

Maintenance of machine is essential to ensure consistency of quality and quality control. This pre-feasibility takes into account the necessary maintenance required to operate a machine over a period of 10 years. It is anticipated that the machine would require a recurring annual maintenance costing around 2.5 to 5% of the total cost machinery cost. Machinery suppliers may provide free service of packaging machinery for first year.

Product/Project Standards and Compliance Issues

The government has laid down certain regulations for food products, which include registration of the product(s) with Pakistan Standard Quality Control Authority (PSQCA) and carrying a safety logo on the package. Failure to do so is punishable by fine and imprisonment. For production registration, form the said authority information can be download from the website:
www.psqca.com.pk

Machine Brands & Suppliers

For the purpose of this study, we have proposed to use local machinery and pillow packing. During the study we have contacted following pillow packing machinery manufacturer whereas, grinding mills manufacturers are located in different cities in Pakistan. Some of the local and even the export-oriented business are also using locally manufactured machinery due to its reliability:

M S Engineering Karachi	Packaging/Wrapping Machine Manufacturers **Services Offered:** Machinery Installation and trial production /Importer of Plant/Machinery	021-36361868
Sama Engineering	Packaging/Wrapping Machine Manufacturers **Services Offered:** Machinery Installation and trial production /Importer of plant machinery	021-36688883 0345-2266203

However, hard paper box packing machine is expensive. Most of the prominent existing setups are using imported machines.

4 LAND & BUILDING REQUIREMENT

Land Requirement

The workspace required to setup the assumed Spice processing unit, is a 400 square yards covered area, which will serve for the office, storage godown and spice processing and packaging.

HUMAN RESOURCE REQUIREMENT

Spices processing industry is consider as labor-intensive industry where most of the functions are preformed manually. For the proposed setup, 15 persons can handle the operations of the spices processing and packaging. The business unit will work on one shift basis. Semiskilled staff is sufficient to look after all the processing operations, while one trained staff will be required for operating packing machine. Such staff is available in the local market. Total estimated labor required for the business operations along with their respective salaries in the table below.

Type of Manpower	Number	Monthly Salary	Annual Salary
Owner	-	-	-
Plant Operator(trained)	1	35,000	420,000

Operator wrapping machine(trained)	1	32,000	384,000
Helper	1	32,000	384,000
Packers	4	32,000	1,536,000
Total	**7**	**205,000**	**2,724,000**

General Management / Administrative & Selling Staff

Type of Manpower	Number	Monthly Salary	Annual Salary
Sales Executive	3	32,000	1,152,000
Accounts Officer	1	35,000	420,000
Peon	1	32,000	384,000
Guard	1	32,000	384,000
Total	**8**	**131,000**	**2,340,000**

1. ***The owner*** is required to manage the following jobs:

   - Overall business operations including general administration and will draw remunerations from net income.
   - Procurement of new orders
   - Distribution & selling
   - Customer handling
   - Production & Product quality
   - Ensuring adequate cash flow to meet working capital requirements etc.

2. ***Machines Operators*** are required to operate the packing machine. They are also responsible for machine's timely maintenance, oiling, etc.

3. ***Quality Assurance Officer*** The person will be responsible for the quality check of the raw material and finished products according to the industry standards.

4. ***Sales Coordinators*** are responsible for day-to-day coordination with distribution and production operations and coordination with the distributor. They are also responsible to carry out field surveys and ensuring product availability in the immediate market.

5. ***Admin. / Accounts Officer*** is mainly responsible for carrying out day-to-day administrative activities of the overall business including facilitation provided to the owner as and when required.

5 Financial Analysis & Key Assumptions

The project cost estimates for the proposed "Spice Processing, Packaging and Marketing" is estimated based on discussions with relevant stakeholders and experts. The projections cover the cost of land, machinery and equipment including office equipment, fixtures etc. The specific assumptions relating to individual cost components as under.

6.1 Land & Building

Description	Location	Total Cost (Rs.)	Rent Per Month (Rs.)	Expected Annual Increase in rent
400 Yards (covered area)	Medium Cost Industrial Area	(on rent)	100,000	10%
Renovation Cost	Office & Stores	400,000		
Renovation Cost	Production Facility	300,000		

This pre-feasibility study assumes that the space will be acquired on rental basis with an initial deposit of 6 months and initial advance rent of 6 months after which the rent will be payable on a monthly basis. In addition to construction and renovation will cost around Rs. 100,000/- which will depreciate at 10% per anum. Total initial outflow for acquisition of land would be as follows:

Description	Months	Rent
Security Deposit	6	600,000
Advance Rent	6	600,000
Total	**12**	**1200,000**

Land & Building will include:

- General Management Office
- Storage Area (Raw Material and Finished Goods)
- Production Factory

The proposed business unit would be based in a medium cost industrial locality in any first or second tier city suitable for this business as the business highly depends on a good distribution network and quick access to the prospective market with less distribution cost. The expected area required for the set up would be a single story building with two storage godowns of 30ft. x 30ft. each on the first floor. The total covered area (plot size) of land & building will be around 400 yards.

It is assumed that all activities will be undertaken under one roof and the factory be acquired on a rental basis at Rs. 100,000 per month for the projected period. This rent expected to increase at a rate of 5% per year. It is further assume that there will be no addition or deletion during the projected period. Furthermore, it is assume that RS. 1,200,000 will be pay in advance before possession of premises. This will include advance rent for six months and six months security deposit.

6.1.1 Overall Factory & Office Renovation

It is assume that a total of Rs. 500,000 require renovating the factory / office premises in Year 5 and Year 10 each. In the following lines, we are providing a break up of other assets required for setting up Spice processing unit.

6.2 Machinery

Assuming market competition i.e. technology advancement, machinery used by prospective competitors, desired volume of production and the minimum cost in which machinery is easily available in the local market, we have assumed that local machinery will be used for the proposed set-up.

The production capacity of the machine would depend on the amount of business expected to be generate. Assumed capacity for the proposed setup would be:

1. Grinding Machine: having a production capacity of 40 k.g. of grinded spice per hour
2. Packing Machine: Machine having a production capacity of more than 1800 packets of 50, 70 grams grinded spices per hour.

Machinery with the above specification is easily available in the local market at a cost of around RS. 725,000/- All machinery will operate on 8 working hours basis which seems enough during the initial period, however, this duration may increase as overall business volume expands.

6.2.1 Maintenance Requirement

The local machine expected to service on an annual basis, for the projected period, costing around 2.5% of the cost of machine for first five years and 5% for the coming years.

6.2.2 Depreciation Treatment

The treatment of depreciation would be on a diminishing balance method at the rate of 10% per annum.

6.3 Factory / Office Equipment & Furniture

A lump sum provision of Rs. 700,000 for procurement of office furniture and factory equipment assumed. This would include table, desk, chairs, office stationery and other necessary equipment. The breakup of Factory Office Furniture & Fixtures is as follows:

Item	Number	Total Cost
Table & Chair for Owner	1	35,000
Tables & Chairs for Staff	6	50,000
Carpet for Office	1	15,000
Air Conditioner	1	100,000
Waiting Chairs	6	25,000
Sofa Set	1	30,000
Curtains & Interior Decoration	-	100,000
Electrical Fittings & Lights	-	50,000
Safety Equipment (Masks and Apron etc)		200,000
Others	-	95,000
Total		**700,000**

6.3.1 Depreciation Treatment

Factory/Office equipment and furniture expected to depreciate at a constant rate of 10% per annum according to the diminishing balance depreciation method.

6.4 Office Vehicle

The proposed setup would require an office vehicle to cater urgent delivery requirements, if any. The cost of vehicle (Loader) assumed Rs. 500,000.

6.4.1 Depreciation Treatment

The office vehicle expected to depreciate at a constant rate of 10% according to the diminishing balance method.

6.5 Utilities

The proposed spice processing setup will operate using electricity for grinding and packing purposes. This would draw considerable amount of electricity, which would further increase in case of air conditioner. The cost of the utilities including electricity, telephone, and water estimated to be Rs. 2,160,000 per annum. The utility expenses assumed to increase at 10% per annum.

6.6 Working Capital Requirements

It estimated an additional amount of approximately RS. 11,247,383 would be required as cash in hand to meet the working capital requirements / contingency cash for the initial stages. This provision based on the salaries of the staff and utilities charges for first three months of operations of the proposed spice business.

Cost	Amount in Rs.
First Three Months' Salary - Production	1,266,000
First Three Months Utilities Charges	180,000
First Three Months Misc. Expenses	300,000
Inventory (Raw Material-One Month)	9,501,383
Total	**11,247,383**

6.7 Preliminary and Machinery Transportation Expenses

A lump sum provision of Rs. 500,000 is assume to cover all preliminary expenses like registration, documentation charges etc. which will be amortize over the 5-year period.

6.8 Miscellaneous Expenses

Miscellaneous expenses of running the business are assumed RS 100,000 per month. These expenses include various items like office stationery; daily consumables, fuel expenses, traveling allowances etc. are assume to increase at a nominal rate of 10% per annum.

6.9 Raw Materials Inventory

It is assumed that an initial raw material inventory for one month would be purchased the total cost of which would be Rs. 9,501,383/-. The cost of raw materials is estimate to increase at the rate of 7.5% per annum for the projected period.

6.10 Finished Goods Inventory

The proposed setup is assumed would be maintain a Finished Goods Inventory of at least 15 days of the total annual production

6.11 Revenue Projections

Key assumptions for the revenue projections are as following:

Spice Pack	15x10 (Dimension)
Net weight per packet	70 grams
Price/Packet	Rs.130

It is be assumed this would take some time for the business to reach the optimal capacity utilization point for the projected period. Therefore, the first year sales on 60% capacity utilization and an annual increase of 10% in capacity utilization is to expected for the projection period. Provision for raw material wastage has assumed 1%.

6.12 Accounts Receivables

A collection period of 15 days has assumed for sales. A provision for bad debts has assumed equivalent to 2% of the annual gross sales.

6.13 Accounts Payables

A payable period of 15 days has assumed for raw material purchases.

6.14 Financial Charges

It is equity based and no need of financing.

6.15 Taxation

The business is assume to be run as a sole proprietorship; therefore, tax rates applicable on the income of an individual taxpayer are used for income tax calculation of the business.

6.17 Owner's Withdrawal

It assume that the owner will draw funds from the business once the desired profitability reached from the start of operations. The amount would depend on business sustainability and availability of funds for future growth.

6.18 ANNEXURES

6.18.1 Summary of Key Assumptions

6.18.2 Cost and Revenue Sheet

6.18.3 Projected Income Statement

6.18.4 Projected Balance Sheet

6.18.5 Projected Cash Flow Statement

Summary of Assumptions

Summary of Key Assumptions

Sr. No.	PARTICULARS	TOTAL COST/DETAILS
1	Plant & machinery	725,000
2	Facility Construction Cost	700,000
3	Office Equipment & Furniture	700,000
4	Vehicles	500,000
5	Rent in Advance	720,000
6	Preliminary and Transportation Expenses	500,000
	Total Capital Cost	**3,845,000**
7	Utilities - Three Months	180,000
8	Salaries - Three Months	1,266,000
9	Raw Material Inventories - One Month	9,501,383
10	Misc. Expenses - Three months	300,000
	Total Working Capital	11,247,383
	Total Project Cost	**15,092,383**
	PROJECT RETURNS AND OTHER FINANCIAL ASSUMPTIONS	
11	IRR	61%
12	NPV	74,590,804
13	Payback Period (Years)	3 Years and 2 Months
14	Debt Equity Ratio	100
15	Required return on equity	20%
16	Cost of finance	15%
17	Weighted Average Cost of capital	17.50%
	OTHER ASSUMPTIONS	
18	Depreciation	10%
19	Bed debts	1%
20	Selling & Distribution Expenses	2%
21	Wastage During production	1%
22	Repair & Maintenance	1.5% of the Total Plant Cost for Initial 5 Years and 2.5% after 5 Years
23	Increase in the Raw Material Cost (Annual)	5.0%
24	Increase in capacity utilisation (Annual)	5%

25	Increase in Staff Salaries	10%
26	Increase in Utilities Cost	10%
27	Increase in Rent Expenses	10%
28	Increase in Misc. Expenses	10%
29	Capacity Utilisation at the beginning of the period	
30	*Grinding Machine*	60%
31	*Packaging Machine*	2 Hours
32		
33	Finished Goods Inventory at the End of the Year	15 Days
34	Accounts Receiveable period	15 Days
35	Accounts Payable period	15 Days
36	Days per Month	26
37	Increase in Sales Price	10%

SPICES PROCESSING, PACKAGING AND MARKETING
SAMPLE RATIO OF INGREDIENTS

		Total Qty./kg	Cost	Ingredient Ratio	Cost/k.g.
Regular Spices	1. Red Chilli (Surkh Mirch)	200	248	20%	1240
	2. Salt (Namak)	100	3	10%	30
	3. Coriander (Dhanya)	250	157.5	25%	630
Hot Spices	4. Turmeric (Haldi)	100	195	10.00%	1950
	5. Cumin Seed (Sufed Zeera)	80	196	8.00%	2450
	6. Black Pepper (Kali Mirch)	80	128	8.00%	1600
	7. Clove (Long)	50	206	5.00%	4120
	8. Cinnamon (Dar Cheeni)	40	40	4.00%	1000
	9. Cardamom (Alaichi)	30	186	3.00%	6200
	10. Mace (Jautri)	5	5.625	0.50%	1125
	11. Nutmeg (Jaifal)	5	5.625	0.50%	1125
	12. Bay Leaf (Tez Pat)	20	6	2.00%	300
	13. Mango Powder (Aam Chur)	3	0.9	0.30%	300
	14. Plum (Aalo Bokhara)	5	1.5	0.50%	300
	15. Preservatives & Citric Acid	30	6	3.00%	200
Weighted Average Cost of Regular Spices/k.g.					**409**
Weighted Average Cost of Hot Spices/k.g.					**977**
Total Cost/k.g.					**1385**

Income Statement

SPICES PROCESSING, PACKAGING AND MARKETING

Projected Income Statement (Rs.)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Gross Revenue	**131,545,814**	**149,222,283**	**183,970,357**	**217,211,945**	**254,541,637**	**297,524,297**	**346,722,626**	**402,642,570**	**465,790,075**	**513,794,081**
Net (Adjusted Sales)	**130,230,356**	**147,730,060**	**182,130,653**	**215,039,826**	**251,996,221**	**294,549,054**	**343,255,400**	**398,616,145**	**461,132,174**	**508,656,140**
Cost of Sales	**117,460,594**	**136,570,225**	**157,887,737**	**181,637,036**	**208,063,217**	**237,434,481**	**270,482,933**	**307,222,357**	**348,034,281**	**375,123,035**
Raw Material	114,016,594	132,781,825	153,720,497	177,053,072	203,020,856	231,887,884	263,942,974	299,501,958	338,910,111	364,328,369
Labor (Production Staff)	2,724,000	2,996,400	3,296,040	3,625,644	3,988,208	4,387,029	5,264,435	6,317,322	7,580,787	9,096,944
Utilities	720,000	792,000	871,200	958,320	1,054,152	1,159,567	1,275,524	1,403,076	1,543,384	1,697,722
Gross Profit	**12,769,763**	**11,159,836**	**24,242,916**	**33,402,789**	**43,933,004**	**57,114,573**	**72,772,467**	**91,393,788**	**113,097,893**	**133,533,105**
Gross Profit Margin	**10%**	**8%**	**13%**	**16%**	**17%**	**19%**	**21%**	**23%**	**25%**	**26%**
General Administrative & Selling Expenses										
Salaries	5,064,000	5,570,400	6,127,440	6,740,184	7,414,202	8,155,623	8,971,185	9,868,303	10,855,134	11,940,647
Rent Expense	720,000	792,000	871,200	958,320	1,054,152	1,159,567	1,275,524	1,403,076	1,543,384	1,697,722
Office Miscellaneous Expenses	1,200,000	1,320,000	1,452,000	1,597,200	1,756,920	1,932,612	2,125,873	2,338,461	2,572,307	2,829,537
Amortization of Preliminary Expenses	100,000	100,000	100,000	100,000	100,000	-	-	-	-	-
Depreciation Expense	262,500	236,250	212,625	191,363	172,226	190,004	171,003	153,903	138,513	124,661
Maintenance Expense	18,125	18,125	18,125	18,125	18,125	36,250	36,250	36,250	36,250	36,250
Selling & Distribution	2,604,607	2,954,601	3,642,613	4,300,797	5,039,924	5,890,981	6,865,108	7,972,323	9,222,643	10,173,123
Subtotal	***9,969,232***	***10,991,376***	***12,424,003***	***13,905,988***	***15,555,550***	***17,365,037***	***19,444,943***	***21,772,316***	***24,368,230***	***26,801,941***
Operating Income	**2,800,531**	**168,460**	**11,818,913**	**19,496,801**	**28,377,454**	**39,749,537**	**53,327,523**	**69,621,472**	**88,729,662**	**106,731,164**
Financial Charges (8% Per Annum)	-	-	-	-	-	-	-	-	-	-
Earnings Before Taxes	**2,800,531**	**168,460**	**11,818,913**	**19,496,801**	**28,377,454**	**39,749,537**	**53,327,523**	**69,621,472**	**88,729,662**	**106,731,164**
Tax	-	29,480	2,363,783	3,899,360	5,675,491	7,949,907	10,665,505	13,924,294	17,745,932	21,346,233
Net Profit	**2,800,531**	**138,979**	**9,455,130**	**15,597,441**	**22,701,963**	**31,799,629**	**42,662,019**	**55,697,177**	**70,983,730**	**85,384,931**
Monthly Profit After Tax	***233,378***	***11,582***	***787,928***	***1,299,787***	***1,891,830***	***2,649,969***	***3,555,168***	***4,641,431***	***5,915,311***	***7,115,411***

Balance Sheet

SPICES PROCESSING, PACKAGING AND MARKETING											
Projected Balance Sheet (Rs.)	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Assets											
Current Assets											
Cash & Bank Balance	1,746,000	16,970,577	11,079,394	27,955,395	44,643,268	67,868,089	100,454,277	143,865,564	200,109,524	271,475,769	355,878,047
Raw Material Inventory	9,501,383	9,976,452	10,475,275	10,999,038	11,548,990	12,126,440	12,732,762	13,369,400	14,037,870	14,739,763	15,476,751
Accounts Receivable	0	1,315,458	9,028,702	3,214,027	3,781,577	4,349,469	5,054,971	5,846,954	6,730,477	7,710,600	7,408,209
Prepaid Rent	720,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000	720,000
Total Current Assets	**11,967,383**	**28,982,488**	**31,303,371**	**42,888,460**	**60,693,835**	**85,063,998**	**118,962,009**	**163,801,918**	**221,597,871**	**294,646,133**	**379,483,007**
Fixed Assets											
Plant Machinery & Facility	1,425,000	1,282,500	1,154,250	1,038,825	934,943	1,191,448	1,072,303	965,073	868,566	781,709	1,053,538
Furniture & Fixtures	700,000	630,000	567,000	510,300	459,270	413,343	372,009	334,808	301,327	271,194	244,075
Vehicle	500,000	450,000	405,000	364,500	328,050	295,245	265,721	239,148	215,234	193,710	174,339
Total Fixed Assets	**2,625,000**	**2,362,500**	**2,126,250**	**1,913,625**	**1,722,263**	**1,900,036**	**1,710,033**	**1,539,029**	**1,385,126**	**1,246,614**	**1,471,952**
Intangible Assets											
Preliminary and Transportation Expenses	**500,000**	**490,000**	**480,000**	**470,000**	**460,000**	**0**	**0**	**0**	**0**	**0**	**0**
Total Assets	**15,092,383**	**31,834,988**	**33,909,621**	**45,272,085**	**62,876,098**	**86,964,034**	**120,672,042**	**165,340,947**	**222,982,997**	**295,892,746**	**380,954,960**
Owner's Equity	15,092,383	17,492,913	17,131,892	25,787,023	40,384,464	61,586,427	91,686,056	132,348,075	185,545,253	253,528,983	335,413,914
Short-term Liabilities											
Account Payable	0	14,252,074	16,597,728	19,215,062	22,131,634	25,377,607	28,985,986	32,992,872	37,437,745	42,363,764	45,541,046
Long Term Liability	0	0	0	0	0	0	0	0	0	0	0
Total Equity & Liabilities	**15,092,383**	**31,744,988**	**33,729,621**	**45,002,085**	**62,516,098**	**86,964,034**	**120,672,042**	**165,340,947**	**222,982,997**	**295,892,746**	**380,954,960**

Cash Flow Statement

SPICES PROCESSING, PACKAGING AND MARKETING											
Projected Statement of Cash Flows (Rs.)	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Cash Flow From Operating Activities											
Net Profit	0	2,800,531	138,979	9,455,130	15,597,441	22,701,963	31,799,629	42,662,019	55,697,177	70,983,730	85,384,931
Add: Depreciation Expense	0	262,500	236,250	212,625	191,363	172,226	190,004	171,003	153,903	138,513	124,661
Amortization Expense	0	100,000	100,000	100,000	100,000	100,000	-	-	-	-	-
(Increase) / decrease in Receivables	-	(1,315,458)	(7,713,244)	5,814,675	(567,551)	(567,891)	(705,502)	(791,983)	(883,523)	(980,123)	302,392
(Increase) / decrease in Payables	-	14,252,074	2,345,654	2,617,334	2,916,572	3,245,973	3,608,379	4,006,886	4,444,873	4,926,019	3,177,282
(Increase) / decrease in RM Inventory	-	(475,069)	(498,823)	(523,764)	(549,952)	(577,450)	(606,322)	(636,638)	(668,470)	(701,893)	(736,988)
Net Cash Flow From Operations	**0**	**15,624,577**	**(5,391,183)**	**17,676,001**	**17,687,873**	**25,074,822**	**34,286,188**	**45,411,287**	**58,743,960**	**74,366,245**	**88,252,278**
Cash Flow From Financing Activities											
Receipt of Long Term Debt	0										
Repayment of Long Term Debt		0	0	0	0	0	0	0	0	-	-
Owner's Equity	15,092,383	(400,000)	(500,000)	(800,000)	(1,000,000)	(1,500,000)	(1,700,000)	(2,000,000)	(2,500,000)	(3,000,000)	(3,500,000)
Net Cash Flow From Financing Activities	**15,092,383**	**(400,000)**	**(500,000)**	**(800,000)**	**(1,000,000)**	**(1,500,000)**	**(1,700,000)**	**(2,000,000)**	**(2,500,000)**	**(3,000,000)**	**(3,500,000)**
Cash Flow From Investing Activities											
Capital Expenditure	(1,925,000)					(350,000)					(350,000)
Office Equipment & Furniture	(700,000)										
Preliminary Operating Expenses	(500,000)										
Security Deposit and Advance Rent	(720,000)										
Raw Material Inventory	(9,501,383)										
Net Cash Flow From Investing Activities	**(13,346,383)**	**0**	**0**	**0**	**0**	**(350,000)**	**0**	**0**	**0**	**0**	**(350,000)**
NET CASH FLOW	**1,746,000**	**15,224,577**	**(5,891,183)**	**16,876,001**	**16,687,873**	**23,224,822**	**32,586,188**	**43,411,287**	**56,243,960**	**71,366,245**	**84,402,278**

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