

GROUND AND PROCESSED SPICES

PRODUCT CODE	: 219201005
QUALITY AND STANDARDS	: Mandatory : PFA Act, 1954 Optional : ISI/Agmark
PRODUCTION CAPACITY	: Qty. : 8000 Kg. per month : Value : Rs. 7,25,000 per month
MONTH AND YEAR OF PREPARATION	: May, 2003
PREPARED BY	: Small Industries Service Institute E-17/18, Udyog Nagar, Naini, Allahabad (U.P) Phone Nos. 2696810, 2697468 Fax: 2696809

INTRODUCTION

Spices play an important role in enhancing the flavour and taste of the processed foods. They are also used in the medicines because of their carminative, stimulative and digestive properties. India produces almost all the known spices and is the largest exporter of this commodity. Ground spices are extensively used in all types of curried dishes in India and abroad.

Although spices are traded chiefly in an unprocessed form, a small yet significant quantity enters international trade as spice powders. Curry powder is the foremost of those blends or mixes and sometimes consists of 20 or more spices designed to add the characteristic flavour of an Indian curry, which is appreciated all over the world. Apart from the overseas market, processed curry powder is becoming popular in the domestic market also. Hence the

demand for unadulterated spices and curry powder in attractive handy packaging, is fast emerging.

MARKET POTENTIAL

India is one of the leading exporters of spices. The export earnings from spices can be increased quite considerably if the export of spices is encouraged in processed form, which will bring more value addition to the unit price of whole spices. Further as it is a mass consumption item mostly used in culinary preparations or seasoning of food products, its domestic demand is increasing quite steadily due to improvement in purchasing power of people.

BASIS AND PRESUMPTIONS

- i) The scheme is based on single shift per day 300 working days per annum.

- ii) The rate of interest on total capital investment is taken as 14%.
- iii) The break-even point has been calculated on full capacity utilization basis.
- iv) The unit is located in a rented premises.
- v) For this industry, working capital has been considered for one month.
- vi) The cost of machinery and equipments indicated refers to a particular brand and the prices are approximately those ruling at the time of the preparation of this project profile.
- vii) The provision made in the other respects viz; raw materials, personnel, utilities and other expenses are on the basis of the standard operations and average output and costs indicated against each are approximate based on the local market conditions and observations.

IMPLEMENTATION SCHEDULE

The project will take atleast 6 months to come into operation for which the implementation schedule has been worked out as follows:

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|---|------------|
| 1. Preparation of project report, selection of site, registration as SSI unit | 1 month |
| 2. Availability of finance, selection of machinery and procurement of machinery | 2-3 months |
| 3. Erection and commissioning | 3-4 months |
| 4. Recruitment of labour and commercial production | 3-4 months |

- | | |
|-------------------------------|-------------------|
| 5. Trial run | 4-5 months |
| 6. Commencement of production | 6th month onwards |

TECHNICAL ASPECTS

Process of Manufacture

The process of manufacture involves cleaning, drying, pulverizing, sieving and packing of spices such as chilli, pepper, turmeric, coriander etc. either individually or in combination with other spices. There are various formulations for curry powder, but the ingredients like red chilli, black pepper, cloves, coriander seed, cumin seed, fenugreek seed, ginger and turmeric are typically common. The proportion and the inclusion of spices in a particular mix depends upon individual manufacturers.

Quality Control and Standards

The following ISI specifications are available for ground spices:

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|--|--------------|
| i) Black pepper whole and ground | IS:1778:1982 |
| ii) Chilli powder | IS:2445:1984 |
| iii) Coriander powder | IS:2444:1980 |
| iv) Curry powder | IS:1909:1961 |
| v) Turmeric powder | IS:2446:1980 |
| vi) Method of sampling and test of spices and condiments | IS:1797:1973 |
| vii) Technology for spices and condiments | IS:1877:1973 |
| viii) Method of test for spices and condiments | IS:1797:1985 |

Provisions have also been made in the scheme for a testing laboratory so that the unit will be able to test their products and maintain the quality as per PFA Act and 'Agmark' standards.

Production Capacity

Qty. : 8000 Kgs.per month

Value : Rs.7,25,000 per month

Motive Power 30 H.P.

Pollution Control

There is no major pollution problem associated in the setting up of this type of industry. However, entrepreneur should seek guidance from concerned State Pollution Control Board in this regard.

Energy Conservation

Although the energy requirement is small, adequate care should be taken in electrical installations and optimal utilization of machinery.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

150 sq. meter (rented per month) Rs 3500

(ii) Machinery and Equipments

Sl. No.	Description	Qty.	Rate (In Rs.)	Total (In Rs.)
1.	Micro pulveriser with 5 HP motor	2	25000	50000
2.	Disintegrator with 7.5 HP	1	20000	20000
3.	Hot air drier cabinet type electrically operated with temp. control device	1	25000	25000
4.	Platform weighing scale capacity 300 Kg	1	5400	5400
5.	Counter scale balance upto 5 kg	1	1100	1100
6.	Sieving machine (locally fabricated)	1	5000	5000

Sl. No.	Description	Qty.	Rate (In Rs.)	Total (In Rs.)
7.	Heat sealer for plastic bags electrically operated	2	8000	16000
8.	Form fill seal machine (FFS)	1	95000	95000
	Testing equipments	LS	50000	50000
	Office furniture and other equipments	LS	50000	50000
	Electrification and installation charges @ 10% cost of machinery and equipment			31750
	Total			2,17,500
	(iii) Pre-operative Expenses			31,750
	Total Fixed Capital			38,1000

B. Working Capital (per month)

i) Personnel

Sl. No.	Designation	Nos.	Salary (In Rs.)	Total (In Rs.)
i)	Manager	1	8000	8000
ii)	Supervisors	2	6000	12000
iii)	Skilled Workers	2	3000	6000
iv)	Unskilled Workers	5	2000	10000
	Total			36000

ii) Raw Materials including Packaging Requirements

Sl. No.	Particulars	Qty. (Rs)	Rate Rs/kg	Amount (In Rs.)
i)	Chilli	3000	60	180000
ii)	Turmeric	1500	35	52500
iii)	Coriander	1500	37	55500
iv)	Pepper	1000	210	210000
v)	Ginger	1000	75	75000
vi)	Packaging materials cartons, etc.	LS		25000
	Total			598000

iii) Utilities	Amount (In Rs.)
i) Electricity	6000
ii) Water Charges	1000
Total	7000

iv) Other Contingent Expenses	Amount (In Rs.)
i) Rent	3500
ii) Postage and stationery	1000
iii) Repair and maintenance	1500
iv) Transportation charges	3000
v) Advertisement and publicity	3000
(vi) Other Misc. expenses such as tax insurance etc.	2000
Total	14000

v) Total Recurring Expenditure (per month)	Amount (In Rs.)
i) Raw materials	598000
ii) Personnel	36000
iii) Utilities	7000
iv) Contingent expenses	14000
Total	655000

C. Total Capital Investment

	Amount (In Rs.)
i) Fixed Capital	381000
ii) Working capital for 1 month	655000
Total	10,36,000

FINANCIAL ANALYSIS

i) Cost of Production (per year)	Amount (In Rs.)
(a) Total recurring cost/year	78,60,000
(b) Depreciation on machinery and equipment @ 10%	26,750
(c) Depreciation on Office Furniture @ 20%	10,000
(d) Interest on total capital investment @ 14%	1,45,000
Total	80,41,750
Say	80,42,000

ii) Turnover (per year)

Item	Qty. (P.M.)	Rate (Rs./kg)	Total (In Rs.)
Chilli powder	3000 Kg	80	2,40,000
Turmeric powder	1500 Kg	45	67,500
Coriander powder	1500 Kg	45	67,500
Pepper powder	1000 Kg	250	2,50,000
Ginger powder	1000 Kg	100	1,00,000
Total			7,25,000

Turnover (per year)

$$\text{Rs. } 7,25,000 \times 12 \quad \text{Rs. } 87,00,000$$

(iii) Net Profit (*per year Before Tax*)Rs. 6,58,000

(iv) Net Profit Ratio 7.5%

(v) Rate of Return 62.3.5%

(vi) Break-even Point

i) Fixed Cost	Amount (In Rs.)
a) Depreciation on machinery and equipments @10%	26,750
b) Rent	42,000
c) Interest on total investment	1,45,000
d) Insurance	30,000
e) 40% of salary and wages	1,72,800
f) 40% of other contingent expenses	38,400
Total	4,54,950
or Say	4,55,00

ii) Net Profit (per year)

$$\begin{aligned} \text{B.E.P.} &= \frac{\text{F.C.} \times 100}{\text{F.C.} + \text{P}} \\ &= \frac{4.55 \times 100}{11.13 (4.55+6.58)} \\ &= 41\% \end{aligned}$$

Addresses of Machinery and Equipment Suppliers

1. M/s. Batliboi and Co. Ltd.
P.B. No. 1719,
M.G. Road,
Ernakulam,
Cochin-682016.

2. M/s. Jayems Engg. Works
M.G. Road,
Ernakulam -16.
3. M/s. Avery and Co. of India Pvt. Ltd.
Ballard Estate,
Mumbai.
4. M/s. Chemida India
69, Sumitha,
98, Cuffe Parade,
Mumbai-5.
5. M/s. Hindustan Furnaces
Marar Lane,
Trichur-1.
6. M/s. Kerala Scientific Glass Works
Industrial Estate,
Ollur.
7. M/s. P.R.S. Technology Pvt. Ltd.
Mumbai.

Raw Material Suppliers
Local Market.