

VALUE-ADDED SPICES



1.0 INTRODUCTION

Spices are very common in Indian cuisine and variety of spices are used every day. In the daily food or snack preparations, spices like red chilly powder, turmeric powder or black pepper powder are used regularly. But this note describes some speciality spices which are prepared from combination of several spices and offer special taste. Many special vegetables or snacks are prepared with the help of such speciality spices or value-added spices and use of such spices is increasing in individual households, restaurants and other eateries, during many social and religious functions etc. This is a versatile product and can be manufactured in many states but this note considers Maharashtra as the preferred location.

2.0 PRODUCTS

2.1 Applications

Many value-added spices are in vogue and they impart a special taste to food preparations. There is a very large list of such spices and new varieties are added every year. But this note is limited to three such varieties viz. Chicken Kolhapuri which is a typical Maharashtrian speciality, Vegetable Bhuna and Vegetable Jalfreze.

2.2 Availability of know-how and Compliances

CFTRI, Mysore, has successfully developed the technical know-how. Compliance with PFA Act is necessary and AGMARK is advisable.

3.0 MARKET POTENTIAL

The market for such spices is rapidly growing. Changing lifestyles, fast life and need to work by both husband and wife has given a major boost to this market. Everyone wants some change in daily food with spicy taste and that is why use of speciality spices is increasing.

There are some established national brands like MDH, Everest, Badshah etc. who are in the process of capturing the urban and semi-urban markets. But their products are costly on account of high overheads. Rural and semi-urban market cannot always afford these costly products. Hence, there is a fairly good scope for a small scale unit to penetrate this market segment by offering competitive prices. Advertisement in local media and attractive discounts to the retailers will be crucial.

4.0 MANUFACTURING PROCESS

Unground spices are cleaned to remove impurities and then washed. Once they are dried, they are pulverised in mixer grinder. Spices in powder form are passed through sieves to remove impurities and to obtain uniform mesh size. Finally, several spices are fed to the pin mill in the proportion as per the recipe and are thoroughly mixed to make speciality spices. It is imperative to have exact recipe and mix various ingredients in the exact proportion as the final taste depends upon it. The process loss is around 5% to 7%.

5.0 CAPITAL INPUTS

5.1 Land and Building

Land admeasuring to around 300 sq.mtrs. will be adequate as the built-up area requirement is not more than 150 sq.mtrs. Production area will require about 75 sq.mtrs. whereas packing, raw material storage and finished goods storage will require 75 sq.mtrs. Assuming price of land of around Rs.300/- per sq.mtr. and cost of civil work @ Rs.2,500 per sq.mtr; the total expenditure is estimated to be Rs. 4.80 lacs.

5.2 Plant and Machinery

Location is of utmost importance as the objective has to be to concentrate on upcoming rural and semi-urban markets. Production capacity would be governed by location to a great extent. However, we have suggested annual capacity of 30 tonnes considering 2 shift working and 300 working days every year. This would require installation of following machines:

Item	Qty.	Price (Rs.)
Spice grinding machines	4	1,50,000
Disintegrator	1	40,000
Sieves	4	25,000
SS Stigma Mixers	2	1,00,000
Frying Pans	2	40,000
Heat-sealing Machine	1	8,000
Weighing scales (Platform-type and Electronics)	2	20,000
	Total	3,83,000

5.3 Miscellaneous Assets

Furniture and fixtures, aluminium top working tables, electricals, exhaust fans, storage racks and bins, plastic crates, SS utensils etc. shall be required for which a provision of Rs. 75,000/- is made.

5.4 Utilities

Total power requirement shall be 30 HP whereas water will be required for washing ungrounded spices and for potable and sanitation purposes. The maximum expenditure is estimated to be Rs.1.20 lacs.

5.5 Raw Material

In view of the contemplated product mix, many varieties of spices shall be needed like red chilli, turmeric, ginger, coriander, cummin, cloves, black pepper, cardamum and cinnamon. Other items like salt, edible oil, dry garlic and onion, dry coconut etc. shall be needed. Since the quantum of each item will not be significant, no difficulty is envisaged in procurement. Packing materials are very important. Products shall be initially packed in plastic bags made from food grade variety and there will be outer packing of good quality card-board with all statutory and other materials printed on it. The final packing would be that of corrugated boxes which can be bought from second-hand market.

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Skilled Worker	4	2,250	9,000
Helpers	8	1,250	10,000
Salesman	1	2,500	2,500
		Total	21,500

7.0 TENTATIVE IMPLEMENTATION SCHEDULE

Activity	Period (in months)
Application and sanction of loan	2
Site selection and commencement of civil work	1
Completion of civil work and placement of orders for machinery	4
Erection, installation and trial runs	1

8.0 DETAILS OF THE PROPOSED PROJECT

8.1 Land and Building

Particulars	Area (Sq.Mtrs)	Cost (Rs.)
Land	300	90,000
Building	150	3,90,000
	Total	4,80,000

8.2 Machinery

As elaborated earlier, the total expenditure on machinery would be Rs. 3,83,000/-.

8.3 Miscellaneous Assets

There will be number of other assets required to facilitate smooth production as spelt out earlier and a provision of Rs.75,000/- is made towards them.

8.4 Preliminary & Pre-operative Expenses

Any manufacturing unit has to incur certain expenses prior to commencing production such as registration, establishment and administrative charges, trial-run expenses, interest during implementation etc. An amount of Rs. 50,000/- is set aside towards such expenditure.

8.5 Working Capital Requirement

In the first year at 60% capacity utilisation, the working capital needs shall be as under:

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Raw & Packing Materials	½ Month	30%	0.68	0.48	0.20
Stock of Finished Goods	½ Month	25%	1.00	0.75	0.25
Receivables	½ Month	25%	1.35	1.00	0.35
Working Exps.	1 Month	100%	0.35	--	0.35
		Total	3.38	2.23	1.15

8.6 Cost of the Project and Means of Financing

(Rs. in lacs)

Item	Amount
Land and Building	4.80
Plant and Machinery	3.83
Miscellaneous Assets	0.75
P&P Expenses	0.50
Contingencies @ 10% on Land & Building and Plant and Machinery	0.86
Working Capital Margin	1.15
Total	11.89
Means of Finance	
Promoters' Contribution	3.69
Term Loan from Bank/FI	8.20
Total	11.89
Debt Equity Ratio	2.22 : 1
Promoters' Contribution	31%

Financial assistance in the form of grant is available from the Ministry of Food Processing Industries, Govt. of India, towards expenditure on technical civil works and plant and machinery for eligible projects subject to certain terms and conditions.

9.0 PROFITABILITY CALCULATIONS

9.1 Production Capacity and Build-up

The rated capacity of the plant would be 30 tonnes of value-added spices whereas actual working is considered to be 60% and 75% respectively during first 2 years.

9.2 Sales Revenue at 100%

It is advisable to introduce smaller packing of 100 gms or 200 gms of each product. But it is also possible to enter into bulk supply contract with some restaurants or caterers. Thus, sales-mix may vary. Likewise, the products have to be sold at different prices in retail and bulk markets. Hence, average realisation of Rs. 180/- per kg. or Rs. 1.80 lacs per ton is assumed. In other words, sales revenue at 100% shall be Rs.54.00 lacs per year.

9.3 Raw Materials Required at 100%

Sales-mix determines the exact requirement of raw materials as well as packing materials. In case of consumer packs, packing material cost will be on a higher side whereas for sale in bulk, the packing cost will come down. Therefore, these two important costs are worked out as per industry norms and keeping in mind the process loss of 7%. Raw materials required per ton would be Rs. 90,000/- or worth Rs. 27.00 lacs annually. Packing materials required will be @ Rs.10,000/- per ton or Rs.3.00 lacs per year.

9.4 Utilities

Details about requirement of utilities are already furnished. Annual expenditure at 100% is estimated to be Rs.1.80 lacs.

9.5 Selling Expenses

Market is competitive as explained earlier. A provision of 17.5% of sales value is made towards selling commission, scroll type advertisement in local TV channel, hoardings etc.

9.6 Interest

Interest in term loan is calculated @ 12% per annum assuming repayment in 4 years including a moratorium period of 1 year. Interest on working capital assistance from bank is computed @ 14% per annum.

9.6 Depreciation

It is computed on WDV basis and rates assumed are 10% on building and 20% on machinery and miscellaneous assets.

10.0 PROJECTED PROFITABILITY

(Rs. in lacs)

No.	Particulars	1st Year	2nd Year
A	Installed Capacity	— 30 Tonnes —	
	Capacity Utilisation	60%	75%
	Sales Realisation	32.40	40.50
B	Cost of Production		
	Raw Materials	16.20	20.25
	Packing Materials	1.80	2.25
	Utilities	1.08	1.35
	Salaries	2.58	2.90
	Stores & Spares	0.12	0.20
	Repairs & Maintenance	0.18	0.30
	Selling Expenses @ 17.5%	5.67	7.09
	Administrative Expenses	0.30	0.42
	Total	27.93	34.76
C	Profit before Interest & Depreciation	4.47	5.74
	Interest on Term Loan	0.94	0.62
	Interest on Working Capital	0.31	0.39
	Depreciation	1.21	1.00
	Net Profit	2.01	3.73
	Income-tax @ 20%	0.40	0.73
	Profit after Tax	1.61	3.00
	Cash Accruals	2.82	4.00
	Repayment of Term Loan	--	2.60

11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		32.40
[B]	Variable Costs		
	Raw & Packing Materials	18.00	
	Utilities (60%)	0.61	
	Salaries (65%)	1.68	
	Stores & Spares	0.12	
	Selling Expenses (50%)	2.83	
	Admn Expenses (60%)	0.18	
	Interest on WC	0.31	23.73
[C]	Contribution [A] - [B]		8.67
[D]	Fixed Costs		5.21
[E]	Break-Even Point [D] ÷ [C]		61%

12.0 [A] LEVERAGES

Financial Leverage

= EBIT/EBT

= 3.26 ÷ 2.01

= 1.62

Operating Leverage

= Contribution/EBT

= 8.67 ÷ 2.01

= 4.31

Degree of Total Leverage

= FL/OL

= 1.62 ÷ 4.31

= 0.38

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr
Cash Accruals	2.82	4.00	4.42	4.91
Interest on TL	0.94	0.62	0.39	0.17
Total [A]	3.76	4.62	4.81	5.08
Interest on TL	0.94	0.62	0.39	0.17
Repayment of TL	--	2.70	2.70	2.80
Total [B]	0.94	3.32	3.09	2.97
DSCR [A] ÷ [B]	4.00	1.43	1.61	1.83
Average DSCR	----- 2.22 -----			

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 11.89 lacs.

(Rs. in lacs)

Year	Cash Accruals	16%	18%	20%	24%
1	2.82	2.43	2.39	2.35	2.27
2	4.00	2.97	2.87	2.78	2.60
3	4.42	2.83	2.69	2.56	2.32
4	4.91	2.71	2.53	2.37	2.08
5	5.48	2.61	2.39	2.20	1.87
	21.63	13.55	12.87	12.26	11.14

The IRR is around 22%.

The machinery suppliers are

1. M/s. Sujata Enterprises, Laxmi Rd., Pune 411 030
2. M/s. Laxicon Engg, Sitabardi, Nagpur 440 012
3. Raylons Metal Works, PB No. 17426, JB Nagar, Andheri (E), Mumbai-400059
4. Gladyin and Company, 251, DN Rd., Fort, Mumbai-400001