

KOKUM SYRUP



1.0 INTRODUCTION

Peculiar climate of the Konkan region of Maharashtra provides many opportunities in food processing segment. Kokum fruits (also known as Ratamba) are natural source for making syrup which has some medicinal properties as well. Apart from juice or syrup, they are also used for extraction of oil and in curry preparations. Kokam plants are grown in large areas of Konkan and provide an opportunity to make syrup. Kokum syrup is very popular in Maharashtra and Goa and is gradually making in-roads in nearby states like Karnataka, Gujarat and Madhya Pradesh.

2.0 PRODUCTS

Kokam fruits have certain medicinal properties. Juice extracted from this fruit is sweet and sour and thus liked by many. A glass of cold kokam syrup is refreshing and it also improves the digestive system. The product is popular in the state since long and now it is sold in nearby states as well. Since it is a natural fruit extract, it is preferred by many people.

2.1 Compliance with PFA Act and FPO is necessary.

3.0 MARKET POTENTIAL

3.1 Demand and Supply

Plantation of kokam or ratamba trees is a typical horticulture activity confined primarily to the Konkan region of Maharashtra. Many useful products are made from its fruit and seeds since long. Few years back, some processors undertook aggressive promotion campaign and gradually these products started being accepted by the consumers.

3.2 Marketing Strategy

Brands like Yojak, Ajaramar or Marco have made kokam syrup very popular not only in Maharashtra but also in other states like Karnataka, Gujarat and Madhya Pradesh. Hence, a new entrant would find it easier to capture growing market. Konkan railway also provides good opportunities as the product can reach even the southern states. Kokam syrup is extracted from fruits and thus has distinct advantages over other synthetic preparations. It also improves digestive system and thus many people drink it regularly. With proper sales network, the product can be sold easily. With addition of preservatives, its shelf life goes up to almost 4 months which is yet another advantage.

4.0 MANUFACTURING PROCESS

The process of manufacture is simple and standardised. Fresh and ripe kokam fruits are cleaned and cut into 2 pieces and seeds are removed. Then these pieces along with sugar are kept in transparent glass jars and jars are kept under sunlight for around 8-10 days. With melting of sugar, juice is naturally extracted from fruits and over a period of time syrup is formed. This syrup is filtered and some preservatives are added into it before packing it in 1 ltr. capacity plastic jars. Seeds and shells of fruit are sold to oil extractors and other processors who make products for curry making. From 100 kgs. of kokam fruits, around 35 ltrs. of syrup is made whereas by-products like shell and seeds account for 15 kgs. Rest of the ingredients are waste or process loss.

5.0 CAPITAL INPUTS

5.1 Land and Building

Land of about 125 sq.mtrs. with built-up area of 60 sq.mtrs. is adequate. Land may cost Rs. 40,000/- whereas cost of construction could be Rs. 1.35 lacs.

5.2 Machinery

Capacity in this case is not much driven by the machinery as majority of the operations are manual. Hence, to install processing capacity of 72,000 kgs. of kokam fruits for 200 days of season with working of about 12-14 hours everyday, following facilities will be needed :

Item	Qty.	Price (Rs.)
Stainless Steel Utensils	10	15,000
Knives	25	10,000
Washing Tank	1	10,000
Plastic Jars	25	20,000
Weighing Scales	2	15,000
Bottle Capping Machine	1	2,000
	Total	72,000

All items shall be easily available from local markets.

5.3 Miscellaneous Assets

Some other support assets like furniture and fixtures, storage racks, packing tables etc. shall also be required for which a provision of Rs. 35,000 is made.

5.4 Utilities

Power requirement will be hardly 2 HP whereas water requirement will be about 800 ltrs. per day during the season. Expenditure during the season will be Rs. 18,000/-.

5.5 Raw and Packing Materials

The most critical raw material will be kokam fruits. There is a large scale kokam plantation in Konkan and it is increasing since the last few years. Hence, location of the processing unit has to be nearer to plantation area and prior arrangements with owners would ensure smooth supply. Preservatives and sugar will be available locally. Syrup is packed in one litre capacity plastic jars for which proper arrangements should be made.

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Semi-skilled Worker	1	1,750	1,750
Helpers	8	1,250	10,000
Salesman	1	2,000	2,000
		Total	13,750

7.0 TENTATIVE IMPLEMENTATION SCHEDULE

Activity	Period (in months)
Application and sanction of loan	1.5
Site selection and commencement of civil work	0.5
Completion of civil work and placement of orders for machinery	1.5
Erection, installation and trial runs	0.5

8.0 DETAILS OF THE PROPOSED PROJECT

8.1 Land and Building

Particulars	Area (Sq.Mtrs)	Cost (Rs.)
Land	125	40,000
Building	60	1,35,000
	Total	1,75,000

8.2 Machinery

The total expenditure under this head will be Rs. 72,000/- as explained earlier.

8.3 Miscellaneous Assets

A provision of Rs.35, 000/- is adequate under this head as mentioned before.

8.4 Preliminary and Pre-operative Expenses

A provision of Rs.40,000/- would take care of certain expenses to be incurred before commencement of production like registration and other administrative expenses, interest during project implementation etc.

8.5 Working Capital Requirements

At 60% capacity utilisation in the first year, the working capital needs will be as under:

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Packing Materials	1 Month	30%	0.10	0.07	0.03
Stock of Finished Goods	½ Month	25%	0.60	0.45	0.15
Receivables	½ Month	25%	0.80	0.60	0.20
Working Expenses	1 Month	100%	0.20	--	0.20
		Total	1.70	1.12	0.58

8.6 Cost of the Project & Means of Financing

(Rs. in lacs)

Item	Amount
Land and Building	1.75
Machinery	0.72
Miscellaneous Assets	0.35
P&P Expenses	0.40
Contingencies @ 10% on Land and Building & Machinery	0.25
Working Capital Margin	0.58
Total	4.05
Means of Financing	
Promoters' Contribution	1.20
Term Loan from Bank/FI	2.85
Total	4.05
Debt Equity Ratio	2.38 : 1
Promoters' Contribution	30%

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

As against the installed processing capacity of 72 tonnes, actual utilisation during first 2 years is expected to be 60% and 75% respectively.

9.2 Sales Revenue at 100%

(Rs. in lacs)

Product	Qty.	Selling Price (Rs.)	Sales Value
Kokam Syrup	25,000 Ltrs.	120/Ltr	30.00
Kakam Shells and Seeds	10,800 Kgs	30/Kg	3.25
		Total	33.25

9.3 Raw & Packing Materials Required at 100%

(Rs. in lacs)

Product	Qty. (Tonnes)	Price/Ton (Rs.)	Value
Kokam Fruits	72	16,000	11.52
Sugar -	-	7.65	
Preservatives	--	--	0.18
Packing Jars of 1 Ltr. Capacity	25,000 Nos.	4	1.00
	Total	20.35	

9.4 Utilities

As described earlier, total expenditure even at 100% would be Rs. 18,000/- during the season.

9.5 Selling Expenses

A provision of 20% of sales value is made towards trade discount, publicity via leaflets or small advertisements in newspapers, free sampling etc.

9.6 Interest

Interest on term loan assistance of Rs. 2.85 lacs is calculated @ 12% every year assuming repayment in 4 years including a moratorium period of 1 year. Whereas on bank assistance of working capital it is taken @ 14% per annum.

9.7 Depreciation

It is computed @ 10% on building and 20% on machinery and miscellaneous assets on WDV basis.

10.0 PROJECTED PROFITABILITY

(Rs. in lacs)

No.	Particulars	1st Year	2nd Year
A	Installed Capacity	--- 72 Tonnes ---	
	Capacity Utilisation	60%	75%
	Sales Realisation	19.95	24.95
B	Cost of Production		
	Raw and Packing Materials	12.21	15.26
	Utilities	0.11	0.14
	Salaries	1.10	1.25
	Repairs & Maintenance	0.09	0.18
	Selling Expenses @ 20%	4.00	5.00
	Administrative Expenses	0.24	0.36
	Total	17.75	22.19
C	Profit before Interest & Depreciation	2.20	2.76
	Interest on Term Loan	0.30	0.20
	Interest on Working Capital	0.16	0.20
	Depreciation	0.34	0.28
	Profit before Tax	1.40	2.08
	Income-tax @ 20%	0.30	0.42
	Profit after Tax	1.10	1.66
	Cash Accruals	1.44	1.94
	Repayment of Term Loan	--	0.85

11.0 BREAK EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		19.95
[B]	Variable Costs		
	Raw and Packing Materials	12.21	
	Utilities (60%)	0.07	
	Salaries (70%)	0.77	
	Selling Expenses (75%)	3.00	
	Administrative Expenses (50%)	0.12	
	Interest on Working Capital	0.16	16.33
[C]	Contribution [A] - [B]		3.62
[D]	Fixed Assets		2.22
[E]	Break Even Point [D] ÷ [C]		61%

12.0 [A] LEVERAGES

Financial Leverage

= EBIT/EBT

= 1.86 ÷ 1.40

= 1.33

Operating Leverage

= Contribution/EBT

= 3.62 ÷ 1.40

= 2.59

Degree of Total Leverage

= FL/OL

= 1.33 ÷ 2.59

= 0.51

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr
Cash Accruals	1.44	1.94	1.79	1.63
Interest on TL	0.30	0.20	0.10	0.05
Total [A]	1.74	2.14	1.89	1.68
Interest on TL	0.30	0.20	0.10	0.05
Repayment of TL	--	0.95	0.95	0.95
Total [B]	0.30	1.15	1.05	1.00
DSCR [A] ÷ [B]	5.80	1.86	1.80	1.68
Average DSCR	----- 2.78 -----			

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 4.05 lacs.

(Rs. in lacs)

Year	Cash Accruals	24%	28%	32%
1	1.44	1.16	1.12	1.09
2	1.95	1.27	1.19	1.12
3	1.79	0.94	0.85	0.78
4	1.63	0.69	0.61	0.54
	6.81	4.06	3.77	3.53

The IRR is around 24%.