

PICKLES & CHUTNEY



1.0 INTRODUCTION

Pickles & chutney are specialities of India and assume important position in the Indian cuisine. They are eaten along with main course and provide tempting tastes. Pickles are prepared from fruits and vegetables and they supplement the food with vitamins and minerals. There are many types of pickles available in India. Chutneys are fruits or vegetables cooked in syrup with spices, salt and vinegar and are invariably in semi-liquid form. They are an integral part of any Indian diet.

2.0 PRODUCTS

2.1 Applications

Pickles and chutney are made from many fruits and vegetables. Chutneys have not much shelf life as they generally contain more than 25% to 30% liquids including water. Pickles made with higher quantity of edible oils and preservatives have shelf-life of more than 1 year but certain pickles have much less shelf-life as well. There are many varieties of these products and many of them are made from local produces. Pickles are used as taste enrichers with the main course as well as with snacks whereas chutney imparts palatability to food. These are commonly used items and can be produced across the nation. This note considers Assam as the proposed location.

2.2 Availability of know and compliances

CFTRI, Mysore, has successfully developed the technical know-how. Compliances with the FPO provisions and the PFA Act are mandatory.

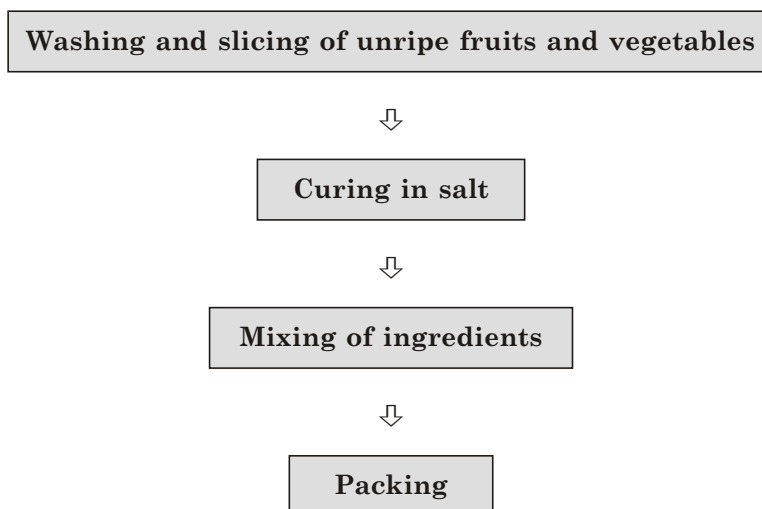
3.0 MARKET POTENTIAL

These products have very good market potential as they are consumed in most of the households, restaurants, other eateries, clubs, hostels etc. They are sold through many outlets like grocery shops, departmental stores etc. As per one estimate, the average consumption of pickles in the North-East is around 2 kgs. per family per year. Thus, they are mass consumption products and with proper quality standards, in-roads can be made in the market. Some innovative products using locally popular fruits or vegetables should also be tried as such products are not available in the market at present.

4.0 MANUFACTURING PROCESS

Pickles and chutney are made in India since many years. Unripe fruits or vegetables are thoroughly washed and then are cut into small pieces. Then these pieces are cured with salt and then mixed with oil and spices and are finally packed. The process more or less remains the same in case of all pickles. In case of chutney, fruits or vegetables are washed, cleaned and peeled. After slicing them, they are boiled wherever required. Then this boiled mass is mixed with onion, garlic, ginger, sugar, salt, some other spices etc. and finally chutney is packed. The process flow chart is as under:

A Pickles



B Chutneys

Washing, cleaning and peeling of fruits and vegetables



Slicing and boiling wherever required



Mixing of ingredients



Packing

5.0 CAPITAL INPUTS

5.1 Land and Building

There is no need to go in for own land as ideally the cost of the project should be minimum. Moreover, requirement of built-up area is not more than 75 sq.mtrs. Hence, a readymade built up space with one production hall of 35-40 sq.mtrs. and two other rooms for packing and storage is adequate. The total cost would be Rs. 1,00,000/-.

5.2 Machinery

Majority of the processes are manual. A set of following equipments will be required costing around Rs. 1,20,000/- Stainless steel utensils, water tanks and working tools, ceramic/food grade plastic jars, bottle washing machine, cap sealing machine, gas burners, mixer grinders, water filters and weighing scale.

The necessary equipments will be available from the local traders.

Production capacity can be easily increased by adding manpower and certain balancing equipments. The above set of equipments is suggested so as to make 12 tonnes of pickles and 9 tonnes of chutney per year with 325-330 working days and around 10-12 hours working per day.

5.3 Miscellaneous Assets

Some other assets like cutters, graters, working tables, furniture, exhaust fans, storage racks and bins etc. shall be required costing around Rs. 40,000/-.

5.4 Utilities

The total power requirement will be 5 HP whereas water requirement will be 750-800 ltrs. per day. Annual requirement of gas cylinders will be 100 at 100% capacity utilisation. Thus, annual cost of utilities at 100% activity level would be Rs.60,000/-.

5.5 Raw Material

It is suggested to have a set-up which can make 12 tonnes of pickles and 9 tonnes of chutney per year at 100% capacity. The exact product-mix is difficult to suggest as number of imaginative combinations palatable to local population can be made. But it is assumed that pickles shall be produced from mango, ginger, jack-fruit, mushroom, bamboo shoot, Assamese lemon, olive, chilly and carambola whereas chutney from olive, tomato, carambola and mango. Depending upon the availability of these products (season - off-season) the product mix needs to be determined. All these products are grown/cultivated in ample quantity in Assam and hence there will not be any difficulty in procuring them as even at 100% capacity utilisation, the total requirement of all the products put-to-gather will not be more than 20 tonnes. Other raw materials required are edible oil, free flowing salt, spices, preservatives, etc. are available locally. Glass/food grade plastic bottles shall be required for packing:

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Skilled Worker	2	2,000	4,000
Semi-skilled Workers	2	1,500	3,000
Helpers	5	1,200	6,000
Salesmen	1	2,500	2,500
		Total	15,500

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 Building

As explained earlier, a readymade premise of about 75 sq.mtrs. with big hall and 2 smaller rooms can serve the purpose. The total capital cost would be Rs. 1.00 lac.

8.2 Machinery

Expenditure of Rs. 1,20,000/- is estimated under this head for the contemplated capacity.

8.3 Miscellaneous Assets

Other support assets would cost Rs. 40,000/- as explained earlier.

8.4 Preliminary & Pre-operative Expenses

A provision of Rs.30,000/- will be enough to take care of expenses like registration and establishment expenses, trial run expenses and interest during project implementation.

8.5 Working Capital Requirement

At 60% capacity utilisation in the first year, the unit would require following working capital funds:

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Finished Goods	½ Month	25%	0.32	0.24	0.08
Receivables	1 Month	25%	0.84	0.63	0.21
Working Expenses	1 Month	100%	0.23	--	0.23
		Total	1.39	0.87	0.52

8.6 Cost of the Project and Means of Financing

(Rs. in lacs)

Item	Amount
Building	1.00
Machinery	1.20
Miscellaneous Assets	0.40
P&P Expenses	0.30
Contingencies @ 10% on Building and Plant & Machinery	0.22
Working Capital Margin	0.52
Total	3.64
Means of Finance	
Promoters' Contribution	1.04
Loan from Bank/FI	2.60
Total	3.64
Debt Equity Ratio	2.50 : 1
Promoters' Contribution	29%

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 capacity of the unit is to make 12 tonnes of pickles and 9 tonnes of chutney at 100% utilisation. It is envisaged that the actual utilisation during first two years would be 60% and 75% respectively.

9.2 Sales Revenue at 100%

It is not advisable to suggest exact sales mix as it has to vary from season to season, depending upon consumer preference and prices of fruits etc. Hence, the average selling price is assumed to be Rs. 80,000/- per ton. In other words, sales at 100% utilisation would be Rs. 16.80 lacs per year.

9.3 Raw Materials Required at 100%

In the absence of exact product-mix, it is not feasible to arrive at annual cost of each fruit. But for the sake of calculations, average per ton price of fruits is taken at Rs.10,000/-. Considering wastage and weight loss due to peeling and removal of seeds etc; it is assumed that for production of 21 tonnes at 100% capacity utilisation, the annual requirement of fruits would be 35 tonnes. Thus, expenditure under this head would be as under:

(Rs. in lacs)

Product	Qty. (Tonnes)	Rate per Ton	Value
Fruits	35	10,000	3.50
Edible Oils	2	60,000	1.20
Sugar, Spices, salt, preservatives etc.	--	--	0.60
Packing Materials	--	--	1.25
		Total	6.55

9.4 Utilities

As explained earlier, the total expenditure on utilities at 100% is likely to be Rs. 90,000/- inclusive of LPG cylinders.

9.5 Selling Expenses

This being a consumer product with some competition, a provision of 15% of sales value is made towards selling commission, sampling, leaflets etc.

9.6 Interest

Interest on term loan of Rs.2.60 lacs is computed @ 12% per annum assuming repayment in 4 years including a moratorium period of 1 year. Interest on bank assistance for working capital is computed @ 14% per annum.

9.7 Depreciation

It is calculated on WDV basis and the 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	--- 21 Tonnes ---	
	Capacity Utilisation	60%	75%
	Sales Realisation	10.08	12.60
B	Cost of Production		
	Raw Materials	3.93	4.91
	Utilities	0.54	0.68
	Salaries	1.86	2.20
	Repairs & Maintenance	0.21	0.30
	Selling Expenses @ 15%	1.50	1.90
	Administrative Expenses	0.24	0.36
	Total	8.28	10.35
C	Profit before Interest & Depreciation	1.80	2.25
	Interest on Term Loan	0.29	0.19
	Interest on Working Capital	0.12	0.15
	Depreciation	0.42	0.35
	Net Profit	0.97	1.56
	Income-tax @ 20%	--	0.30
	Profit after Tax	0.97	1.26
	Cash Accruals	1.39	1.61
	Repayment of Term Loan	--	0.80

11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		10.08
[B]	Variable Costs		
	Raw Materials	3.93	
	Utilities (70%)	0.38	
	Salaries (70%)	1.30	
	Selling Expenses (80%)	1.20	
	Admn Expenses (50%)	0.12	
	Interest on WC	0.12	7.05
[C]	Contribution [A] - [B]		3.03
[D]	Fixed Costs		1.83
[E]	Break-Even Point [D] ÷ [C]		61%

12.0 [A] LEVERAGES

Financial Leverage

$$\begin{aligned} &= \text{EBIT/EBT} \\ &= 1.38 \div 0.97 \\ &= 1.42 \end{aligned}$$

Operating Leverage

$$\begin{aligned} &= \text{Contribution/EBT} \\ &= 3.03 \div 0.97 \\ &= 3.12 \end{aligned}$$

Degree of Total Leverage

$$\begin{aligned} &= \text{FL/OL} \\ &= 1.42 \div 3.12 \\ &= 0.46 \end{aligned}$$

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr
Cash Accruals	1.39	1.61	1.77	1.95
Interest on TL	0.29	0.19	0.12	0.05
Total [A]	1.68	1.80	1.89	2.00
Interest on TL	0.29	0.19	0.12	0.05
Repayment of TL	--	0.85	0.85	0.90
Total [B]	0.29	1.04	0.97	0.95
DSCR [A] ÷ [B]	5.79	1.82	2.05	2.35
Average DSCR	----- 3.00 -----			

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 3.64 lacs.

(Rs. in lacs)

Year	Cash Accruals	24%	28%	32%
1	1.39	1.12	1.09	1.05
2	1.61	1.05	0.98	0.92
3	1.77	0.93	0.84	0.77
4	1.95	0.82	0.73	0.64
5	2.08	0.71	0.61	0.52
	8.80	4.63	4.25	3.90

The IRR is around 34%.