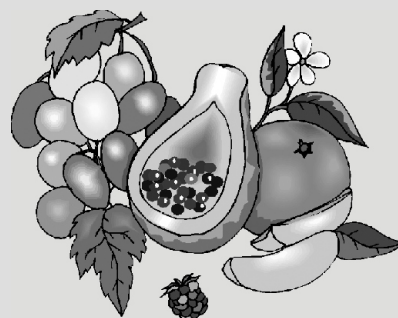


PAPAYA CHERRY



1.0 INTRODUCTION

Papaya cherry is an item of mass consumption and is mainly used in after-mint or mukhvas and chewing paan or masala. Other user segment is certain bakery products and some sweet preparations. But bulk of the consumption is by paan/masala selling shops round the year across the country. It is made from unripe or green papaya fruits and contains substantial quantum of sugar. Since the customers are scattered very widely, it is necessary to have proper marketing arrangements.

2.0 PRODUCT

Cherry or tutty-fruity is consumed by many people along with chewing paan or masala or mukhvas or after mint. It is also used in some bakery products and sweets. It is made from unripe papaya fruits; it is sweet in taste and of pinkish colour. This product can be made in many states of the country but this note considers Bihar and Jharkhand as the contemplated locations.

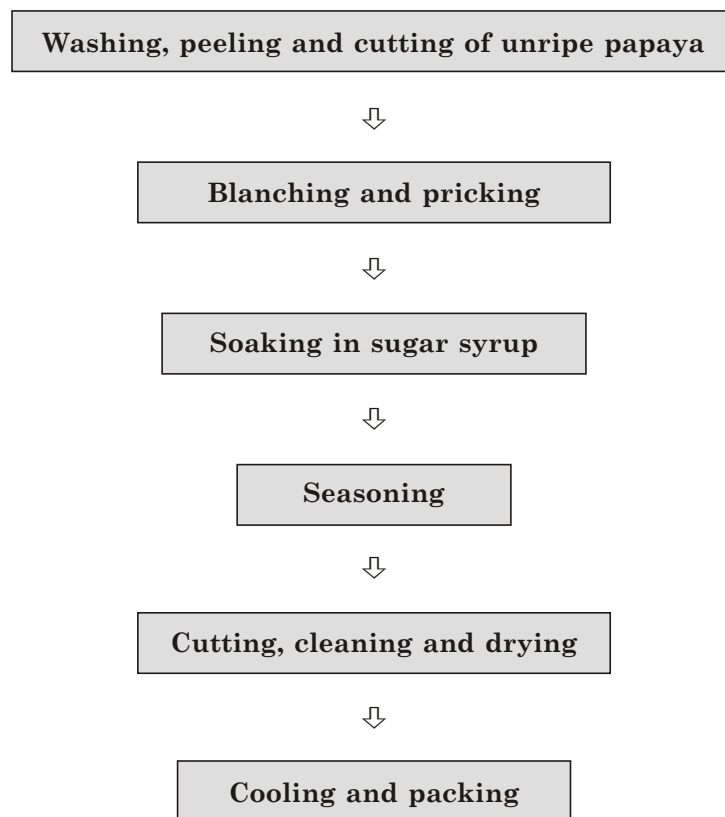
2.1 Compliance with FPO and PFA Act is mandatory.

3.0 MARKET POTENTIAL

Papaya cherry is an item of mass consumption and used while making chewing paan or masala and preparing mukhvas or after-mint. It is not consumed alone (except by children) but invariably mixed with other ingredients. Its sweet taste and flavour is liked by many. Market is controlled by very small manufacturers as it is sold to hundreds of paan-shops and servicing them is very difficult. Reportedly bulk of the supply to Jharkhand is from outside the state and there are good prospects for a local manufacturer. Appointment of area-wise distributors or stockists and regular supplies are the key elements.

4.0 MANUFACTURING PROCESS

It is standardised and simple. Big unripe papaya are washed and peeled. They are cut length-wise and seeds and fibres are removed. These pieces are blanched in boiling water for about 10 minutes and are pricked with forks to ensure proper absorption of sugar syrup. Sugar syrup is made and small quantity of citric acid and flavours are added to it. Pieces of papaya are soaked in this syrup for about 10 minutes and then taken out and kept for seasoning for around 8-10 hours and then cut into smaller square pieces and wiped with wet cloth to remove any dirt and excessive coating of sugar. Finally, they are dried in a dryer at around 60 °C temperature for 10-12 minutes, cooled and packed in polythene bags. The weight loss on account of removal of skin, seeds etc. from papaya is around 25%. The process flow chart is as follows:



5.0 CAPITAL INPUTS

5.1 Land and Building

A large hall or shed of around 80 sq.mtrs. could be bought. It can accommodate production as well as storage and packing activities. Total investment is worth Rs. 2 lacs.

5.2 Machinery

For annual installed capacity of 80 tonnes with 2 shift working and 300 working days, following machines shall be required.

Item	Qty.	Price (Rs.)
Papaya peeling machine with SS Body and all Accessories.	1	25,000
Papaya slicing and cubing machine of SS with double rollers, hopper and electric motor	1	30,000
LPG furnace (Bhatti) with burners, blower etc.	1	15,000
Electrically operated dryer with aluminium trays- 48 trays	1	40,000
Heat Sealing machine and weighing scales	--	10,000
	Total	1,20,000

5.3 Miscellaneous Assets

An amount of Rs.30,000/- is provided towards furniture and fixtures, packing tables, storage racks etc.

5.4 Utilities

Power requirement will be 10 HP and around 1200 ltrs. of water shall be required every day for washing of papaya and potable and sanitation purposes. 5 LPG cylinders shall be required every month.

5.5 Raw Materials

The most critical materials will be unripe but fully grown papaya and sugar. Since quantity required of these items every month will not be much, no difficulty is envisaged in their procurement. The process and weight loss is around 30% which is to some extent compensated by absorption of sugar syrup and the net loss is around 25%. Other materials like food grade colours, flavours, citric acid etc. shall be available locally. Polythene bags shall be required for packing.

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Skilled Workers	2	2,250	4,500
Helpers	4	1,250	5,000
Salesman	1	2,500	2,500
		Total	12,000

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

An expenditure of Rs. 2.00 lacs is estimated on a readymade shade.

8.2 Machinery

Total expenses on machinery are likely to be Rs. 1.20 lacs as explained earlier.

8.3 Miscellaneous Assets

A provision of Rs.30,000/- is made under this head as stated earlier.

8.4 Preliminary & Pre-operative Expenses

A provision of Rs.50,000/- is made towards pre-production expenses like registration, establishment and administrative expenses, travelling, interest during implementation, trial run expenses etc.

8.5 Working Capital Requirements

Major raw material is papaya which will not be stored for more than 2-3 days. Process time is hardly 12 hours and stock of finished goods will be kept for about a week. Hence, it is assumed that bank would sanction adhoc facility of Rs. 50,000/- and the promoters would bring-in Rs. 30,000/- by way of margin.

8.6 Cost of the Project & Means of Financing (Rs. in lacs)

Particulars	Amount
Building	2.00
Machinery	1.20
Miscellaneous Assets	0.30
P&P Expenses	0.50
Contingencies @ 10% on Building & Machinery	0.30
Working Capital Margin	0.30
Total	4.60
Means of Financing	
Promoters' Contribution	1.40
Term Loan from Bank/FI	3.20
Total	4.60
Debt Equity Ratio	2.29 : 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 & Build-up

As against the processing capacity of 80 tonnes, actual utilisation is assumed to be 65% in the first year and 75% thereafter.

9.2 Sales Revenue at 100%

Assuming selling price of Rs.30,000/- per ton, the annual sales at 100% would be Rs. 18.00 lacs.

9.3 Raw & Packing Material Required at 100%

(Rs. in lacs)

Product	Qty. (Tonnes)	Price/Ton (Rs.)	Value
Unripe Papaya	80	5,000	4.00
Sugar	-	-	3.60
Citric Acid, Food grade colour, flavours etc.	--	--	0.40
Packing Materials	--	--	0.60
		Total	8.60

9.4 Utilities

The annual cost of utilities at 100% activity level would be Rs. 90,000/-.

9.5 Selling Expenses

There will be many expenses like sampling, transportation, selling commission etc. for which a provision of 12.5% of sales income is made every year.

9.6 Interest

Interest on term loan of Rs. 3.20 lacs is calculated @ 12% per annum assuming repayment in 3 years including a moratorium period of 6 months. Interest on bank finance for working capital is calculated @ 14% every year.

9.7 Depreciation

It is calculated @ 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	-- 80 Tonnes --	
	Capacity Utilisation	65%	75%
	Sales Realisation	11.70	13.50
B	Cost of Production		
	Raw and Packing Materials	5.60	6.45
	Utilities	0.59	0.68
	Salaries	1.44	1.60
	Stores and Spares	0.12	0.15
	Repairs & Maintenance	0.21	0.30
	Selling Expenses @ 12½%	1.46	1.69
	Administrative Expenses	0.30	0.40
	Total	9.72	11.27
C	Profit before Interest & Depreciation	1.98	2.23
	Interest on Term Loan	0.32	0.19
	Interest on Working Capital	0.07	0.09
	Depreciation	0.50	0.42
	Profit before Tax	1.09	1.53
	Income-tax @ 20%	--	0.10
	Profit after Tax	1.09	1.43
	Cash Accruals	1.59	1.85
	Repayment of Term Loan	0.60	1.20

11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		11.70
[B]	Variable Costs		
	Raw and Packing Material	5.60	
	Utilities (70%)	0.42	
	Salaries (70%)	1.00	
	Stores & Spares	0.12	
	Selling Expenses (70%)	1.00	
	Admn. Expenses (50%)	0.15	
	Interest on WC	0.07	8.36
[C]	Contribution [A] - [B]		3.34
[D]	Fixed Cost		1.85
[E]	Break-Even Point [D] ÷ [C]		56%

12.0 [A] LEVERAGES

Financial Leverage

$$= \text{EBIT/EBT}$$

$$= 1.48 \div 1.09$$

$$= 1.36$$

Operating Leverage

$$= \text{Contribution/EBT}$$

$$= 3.34 \div 1.09$$

$$= 3.06$$

Degree of Total Leverage

$$= \text{FL/OL}$$

$$= 1.36 \div 3.06$$

$$= 0.44$$

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr
Cash Accruals	1.59	1.85	2.12
Interest on TL	0.32	0.19	0.09
Total [A]	1.91	2.04	2.21
Interest on TL	0.32	0.19	0.09
Repayment of TL	0.65	1.30	1.25
Total [B]	0.97	1.49	1.34
DSCR [A] ÷ [B]	1.96	1.37	1.65
Average DSCR	----- 1.66 -----		

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 4.60 lacs.

(Rs. in lacs)

Year	Cash Accruals	16%	18%	20%	24%
1	1.59	1.37	1.35	1.32	1.28
2	1.85	1.37	1.33	1.28	1.20
3	2.12	1.36	1.29	1.23	1.11
4	2.31	1.28	1.19	1.11	0.98
	10.36	5.38	5.16	4.94	4.57

The IRR is around 24%.

Some of the machinery suppliers are as under:

1. Punjab Engg. Works, Ram Krishna Samadhi Rd, Kolkata
2. S.R. Trading Co, Station Road, Patna
3. A.M.S. Engg, Station Road, Patna
4. SSP Pvt. Ltd. 19,DLF INDS. Area, 13/4, Mathura Road, Faridabad - 121003
Tel. No. : 2527544/7730