

# CANNED SWEETS



## 1.0 INTRODUCTION

Indians are fond of sweets and there are many varieties of sweet preparations. Sweets are eaten round the year and their consumption goes up during festivals and religious and social functions and ceremonies. Certain items are eaten fresh and hot whereas items like rosogolla, gulab-jamun, rasamalai etc. can be canned as well. This note primarily considers canned rosogollas but the promoters can work out a judicious product mix.

This is not a location specific product and states like Bihar, Uttar Pradesh and Maharashtra are preferred locations.

## 2.0 PRODUCT

### 2.1 Applications

Rosogolla is a very popular and delicious sweet preparation made from cow milk. It is a typical Bengali preparation but over a period of time it has become very popular across the country.

### 2.2 Compliance and Quality Standards

Compliance under the PFA Act is mandatory. Quality standards are specified vide IS 4079:1967.

## 3.0 MARKET POTENTIAL

### 3.1 Demand and Supply

Indian diet provides several varieties of sweets and many of them are prepared from milk. Demand for these products is more or less steady round the year but it goes up during festivals, marriage season and religious celebrations. Majority of the products are available in fresh form but with growing urbanisation, increase in the disposable incomes and preference

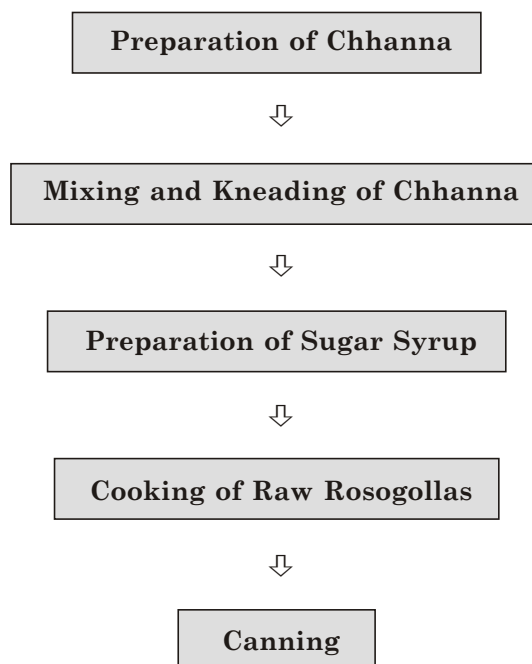
for hygienically prepared products canned sweets have become popular. There are many local brands available in the market and off late some regional brands have also been introduced.

### 3.2 Marketing Strategy

Market for rosogolla is increasing steadily and the product is no more confined to West Bengal. With attractive packing, consistent quality and adequate marketing network, selling contemplated quantity would not be difficult.

## 4.0 MANUFACTURING PROCESS

The process of making rosogollas is not only standardised but simple as well. To begin with, milk is boiled and then citric acid solution or lime juice is added in it. As soon as curdling takes place, watery portion is drained out with the help of muslin cloth. Entire quantity of whey is drained out and the residual material or “Chhanna” is mixed and kneaded. Chhanna should not be very wet and should have the consistency of soft wheat dough. After proper kneading, small round balls of around  $\frac{3}{4}$ ” dia are prepared from chhanna. Simultaneously, sugar syrup of 50° and 60° Brix is prepared. Syrup of 60° Brix is boiled and raw rosogollas are immersed in it for 15-20 minutes turning them slowly. Then these cooked pieces are drained and immersed in the 50° Brix syrup, flavours etc. Finally, rosogollas are filled in the sterilised cans (around 25 pieces per can) and cans are filled with 50° Brix sugar syrup. Cans are immediately sealed and processed for about 15 minutes. Recovery of Chhanna from milk is around 18-20%. On cooling, the cans are labelled. The process flow chart is as under



## 5.0 CAPITAL INPUTS

### 5.1 Land & Building

A plot of land of around 250 sq.mtrs. with built up area of 150 sq.mtrs. shall be adequate for the contemplated activities. Land may cost Rs. 75,000/- whereas cost of construction is assumed to be Rs. 3.75 lacs.

### 5.2 Machinery

To install rated capacity of 2.00 lac cans per year with 10-12 hours working every day and 300 working days, following machines shall be needed.

(Rs. in lacs)

Particulars	Qty	Amount
1000 ltrs. capacity SS tanks	2	0.50
Tilting type SS steam tank of 1000ltrs cap.	1	0.50
Plate heat exchanger	1	0.55
Mini Boiler	1	0.75
Kneaders	2	0.60
Canning retort with safety valve, pressure gauge, crates etc.	1	0.40
Can Reformer	1	0.40
Flanger with Rectifier	1	0.70
Can sealer	1	0.35
Can embossing machine	1	0.20
Other misc. equipments	--	0.30
<b>Total</b>		<b>5.25</b>

### 5.3 Miscellaneous Assets

Other assets like packing tables, furniture and fixtures, testing equipments, storage racks etc. would need around Rs. 80,000/-.

### 5.4 Utilities

Power requirement shall be 15 HP whereas LDO shall be required for boiler. Per day water requirement mainly for potable and sanitation purposes shall be 1500 ltrs.

### 5.5 Raw and Packing Materials

The all important material would be good quality cow milk for which prior arrangements are advisable. Sugar will be other major material. Cans, corrugated boxes and lables will be the packing materials.

## 6.0 MANPOWER REQUIREMENTS

Particulars	No	Monthly Salary (Rs.)	Total Monthly Salary (Rs.)
Skilled Workers	2	2,750	5,500
Unskilled Workers	4	1,750	7,000
Salesman	1	2,500	2,500
		<b>Total</b>	<b>15,000</b>

## 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 (Rs. in lacs)

Particulars	Area (Sq.Mtrs)	Amount
Land	250	0.75
Building	150	3.75

### 8.2 Machinery

The total cost of machinery is estimated to be Rs. 5.25 lacs as explained earlier.

### 8.3 Miscellaneous Assets

A provision of Rs. 80,000 is adequate under this head as stated before.

### 8.4 Preliminary and Pre-Operative Expenses

An amount of Rs. 1.00 lac has been earmarked towards pre-production expenses, trial runs and interest during implementation.

### 8.5 Working Capital Requirement

At 60% activity level 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%	1.50	1.05	0.45
Stock of Finished Goods	½ Month	25%	2.00	1.50	0.50
Debtors	½ Month	25%	3.00	2.25	0.75
Working Expenses	1 Month	100%	0.40	--	0.40
		<b>Total</b>	<b>6.90</b>	<b>4.80</b>	<b>2.10</b>

**8.6 Cost of the Project and Means of Financing**

(Rs. in lacs)

Items	Amount
Land and Building	4.50
Machinery	5.25
Miscellaneous Assets	0.80
Preliminary and Pre-operative Expenses	1.00
Contingencies @ 10% on land and building and machinery	1.00
Working Capital Margin	2.10
<b>Total</b>	<b>14.65</b>
<b>Means of Finance</b>	
Promoter's Contribution	4.25
Term Loan from Bank/FI	10.40
<b>Total</b>	<b>14.65</b>
Debt Equity Ratio	2.45 : 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**

As against the rated capacity of 2.00 lac cans every year, actual utilisation is expected to be 60% and 75% during first two years.

**9.2 Sales Revenue at 100%**

Considering selling price of Rs. 45 per can, annual sales at 100% would be Rs. 90.00 lacs.

### 9.3 Raw and Packing Materials Required at 100%

(Rs. in lacs)

Item	Qty.	Rate (Rs)	Value
Milk	37,000 Ltrs	11.50/Ltr	4.25
Sugar	6000 kgs	Rs.20/Kg	1.20
Packing Material @ Rs.15/Can	--	--	30.00
		<b>Total</b>	<b>35.45</b>

### 9.4 Utilities

Annual cost on utilities at 100% is estimated to be Rs. 2.00 lacs.

### 9.5 Selling Expenses

A provision of 30% of sales income every year would take care of expenses like transportation, selling commission, publicity etc.

### 9.6 Interest

Interest on term loan of Rs. 10.49 lacs is calculated @ 12% per annum assuming repayment in 4 years including a moratorium period of 1 year and on working capital from bank, it is computed @ 14% per annum.

### 9.7 Depreciation

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

## 10.0 PROJECTED PROFITABILITY

(Rs. in lacs)

No	Particulars	1st Year	2nd Year
<b>A</b>	<b>Installed Capacity</b>	--- 2 Lac Canss ---	
	Capacity Utilisation	60%	75%
	Sales Income	54.00	67.50
<b>B.</b>	<b>Cost of Production</b>		
	Raw and Packing Materials	21.30	26.60
	Utilities	1.20	1.50
	Salaries	1.80	2.20
	Stores and Spares	0.48	0.60
	Repairs and Maintenance	0.60	0.72
	Adm. Expenses	1.50	2.00
	Selling Expenses @ 30%	16.20	20.25
	Total	43.08	53.87
<b>C.</b>	<b>Profit before Interest &amp; Depreciation</b>	<b>10.92</b>	<b>13.63</b>
	Interest on Term Loan	1.25	0.94
	Interest on Working Capital	0.67	0.84
	Depreciation	1.59	1.31
	Profit before Tax	7.41	10.54
	Income Tax @ 20%	1.48	2.11
	Profit after Tax	5.93	8.43
	Cash Accrual	7.52	9.74
	Repayment of Term Loan	--	3.45

## 11.0 BREAK-EVEN POINT ANALYSIS

(Rs. in lacs)

No.	Particulars	Amount	
<b>A</b>	<b>Sales</b>		<b>67.50</b>
<b>B</b>	<b>Variable Costs</b>		
	Raw and Packing Materials	26.60	
	Utilities (70%)	1.05	
	Salaries (70%)	1.54	
	Repairs and Maintenance	0.72	
	Selling Expenses (70%)	14.18	
	Administrative Expenses (50%)	1.00	
	Interest on working capital	0.84	<b>45.93</b>
<b>C</b>	<b>Contribution</b>		<b>21.57</b>
<b>D.</b>	<b>Fixed Costs</b>		<b>11.03</b>
<b>E.</b>	<b>Break Even Point (D ÷ C)</b>		<b>51%</b>

**12.0 [A] LEVERAGES**

**Financial leverage**

= EBIT/EBT

= 12.32 ÷ 10.54

= 1.17

**Operating Leverage**

= Contribution/EBT

= 21.57 ÷ 10.54

= 2.05

**Degree of Total Leverage**

= FL/OL

= 1.17 ÷ 2.05

= 0.57

**[B] Debt Service Coverage Ratio**

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr
Cash Accruals	7.52	9.74	01.28	10.68
Interest on Term Loan	1.25	0.94	0.53	0.29
<b>Total (A)</b>	<b>8.77</b>	<b>10.68</b>	<b>10.81</b>	<b>10.97</b>
Interest on Term Loan	1.25	0.94	0.53	0.29
Repayment of Term Loan	--	3.45	3.45	3.50
<b>Total (B)</b>	<b>1.25</b>	<b>4.39</b>	<b>3.98</b>	<b>3.79</b>
<b>DSCR (A) ÷ (B)</b>	<b>7.02</b>	<b>2.43</b>	<b>2.72</b>	<b>2.89</b>
<b>Average</b>	----- <b>3.75</b> -----			



**[C] Internal Rate of Return (IRR)**

Cost of the project is Rs. 14.65 lacs.

(Rs. in lacs)

Year	Cash Accruals	16%	18%	20%	24%	28%	32%
1	7.52	4.15	3.88	3.62	3.18	2.81	2.47
2	9.94	8.57	8.42	8.28	8.01	7.76	7.53
3	10.28	7.64	7.38	7.13	6.68	6.27	5.90
	<b>27.74</b>	<b>20.36</b>	<b>19.68</b>	<b>19.03</b>	<b>17.87</b>	<b>16.84</b>	<b>15.90</b>

The IRR is around 33%.

**Some of the machinery suppliers are**

1. Narang Corporation, P-25 Connaught Place, New Delhi 110 001
2. Raylon Metal Works, Post Box 17426, JBG Nagar, Andheri (E), Mumbai 400 059
3. SSP Pvt Ltd, 19 DLF Industrial Area II, 13/4 Mathura Road, Faridabad 121 003
4. Cowel Can Ltd, Industrial Area, PO Barotiwala, Dist Solan (Himachal Pradesh)
5. Gladwyn & Co, 251 DN Road, Fort, Mumbai 400 093
6. Hilden Packaging Machine Pvt Ltd, Plot No 101, Road No 16, MIDC Chakala, Mumbai 400 093
7. Gardners Corporation, 158 Golf Links, New Delhi 110 003