



# BAKING POWDER, JELLY CRYSTALS & CUSTARD POWDER

## 1.0 INTRODUCTION

With increasing disposable incomes and changing life-styles, eating habits have also witnessed a definite shift. This phenomenon is no more restricted to the urban elites but it is spreading very fast to other areas as well. Thus, the contemplated products have experienced continuous increase in demand during last few years. Consistent advertising by some established manufacturers have made these products very popular across the country which would help the new entrants provided product quality is comparable and prices are competitive.

## 2.0 PRODUCT

### 2.1 Applications

Baking powder is used to hold the raised batter till it is properly set while baking. It imparts uniform crumb and prevents shrinkages. Jellies are generally of 2 types viz. high solid jellies or fruit jellies and low solid or dessert jellies. Custard powder is a popular dessert item and is served with egg pudding, jelly crystals etc. These are not location specific products and can be made in the North Eastern States of the country as market for these products is growing in this region.

### 2.2 Quality standards and Compliances

Certification under the PFA Act and FPO is required. BIS has specified quality standards vide IS 1159:1957 for Baking Powder.

## 3.0 MARKET POTENTIAL

### 3.1 Demand and Supply

Last few years have witnessed overall improvement in the standard of living of people along with a definite shift in their mind set. People are willing to spend on many so-called

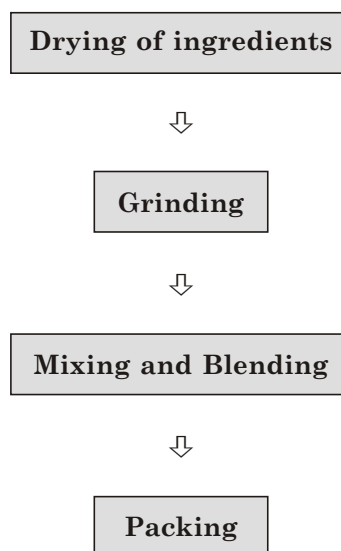
luxurious items without bothering for future. Eating habits have also seen significant changes with traditional items being gradually replaced by convenience food items and this trend is fast spreading due to urbanisation. Fast food items, jams & jellies, sauces and ketch-ups, butter and cheese, custard powders, cakes and pastries, instant mixes and many such items have become extremely popular in households, restaurants, clubs, bakeries, with caterers and so on.

### **3.2 Marketing Strategy**

There is a competition from some established brands like Blue Bird and Weikfield but pricing, proper placement of the products and attractive commission would enable to penetrate this ever increasing market. Proper assessment of the major markets is necessary before launching of the product.

## **4.0 MANUFACTURING PROCESS**

Manufacturing process is standardised and simple. Various ingredients are dried to bring down the moisture level before grinding. Then they are mixed in the required proportion and blended thoroughly and then packed. Baking powder is made from sodium bi-carbonate, edible starch and sodium aluminium sulphate whereas jelly crystals from sugar, fumaric acid, potassium citrate, edible gums, salt, carageena and food colours and flavours. Making of custard powder requires edible starch, corn flour and food colours and flavours. The Process Flow Chart would be as under:



## **5.0 CAPITAL INPUTS**

### **5.1 Land and Building**

A plot of land of around 250 sq.mtrs. with built up area of 125 sq.mtrs. would be adequate. Land may cost Rs. 75,000/- whereas the construction cost is assumed to be Rs. 3.25 lacs.

## 5.2 Machinery

Total pulverising and mixing capacity is assumed to be 40 tonnes with single shift working and 300 working days every year. This would require following machines.

Item	Qty.	Price (Rs)
Micro-pulveriser complete with all accessories and electric motor-100 Kgs capacity	1	65,000
Sifter	1	15,000
Double shaft mixer with electric motor and accessories- 50 Kgs capacity	1	40,000
Electrically-operated oven with 48 trays and other accessories	1	80,000
Weighing scales, polythene bag sealing machines, etc.	--	10,000
	<b>Total</b>	<b>2,10,000</b>

## 5.3 Miscellaneous Assets

Some other assets like furniture & fixtures, packing tables, storage racks, SS utensils etc. shall be required for which a provision of Rs. 45,000/- is made.

## 5.4 Utilities

Power requirement shall be 30 HP whereas daily water requirement would be about 1000 ltrs.

## 5.5 Raw and Packing Materials

Major raw materials would be sugar and edible starch whereas others like sodium bi-carbonate, carageena, potassium citrate, salt etc. shall be required in small quantities. Packing materials like polythene bags, inner & outer cartons, BOPP tapes shall be required for which prior arrangements should be made.

## 6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs)	Total Monthly Salary (Rs)
Skilled Workers	2	2,500	5,000
Semi-skilled Workers	4	1,750	7,000
Helpers	4	1,250	5,000
Salesman	1	2,500	2,500
		<b>Total</b>	<b>19,500</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

Particulars	Area (Sq.Mtrs)	Cost (Rs.)
Land	250	75,000
Building	125	3,25,000
	<b>Total</b>	<b>4,00,000</b>

### 8.2 Machinery

The total cost of machinery is expected to be Rs. 2.10 lacs as explained earlier.

### 8.3 Miscellaneous Assets

A provision of Rs. 45,000/- is adequate as described earlier.

### 8.4 Preliminary & Pre-operative Expenses

An amount of Rs. 50,000/- would take care of pre-production expenses like establishment, registration and administrative charges, travelling, interest during implementation, trial run expenses etc.

### 8.5 Working Capital Requirements

To achieve capacity utilisation of 60% in the first year, following working capital will be required.

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Raw Materials	1 Month	30%	1.00	0.70	0.30
Stock of Finished Goods	½ Month	25%	0.75	0.55	0.20
Receivables	1 Month	25%	2.40	1.80	0.60
Other Expenses	1 Month	100%	0.35	--	0.35
		<b>Total</b>	<b>4.50</b>	<b>3.05</b>	<b>1.45</b>

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

Item	Amount
Land and Building	4.00
Machinery	2.10
Miscellaneous Assets	0.45
P&P Expenses	0.50
Contingencies @ 10% on Land and Building and Plant & Machinery	0.60
Working Capital Margin	1.45
<b>Total</b>	<b>9.10</b>
<b>Means of Finance</b>	
Promoters' Contribution	2.60
Term Loan from Bank/FI	6.50
<b>Total</b>	<b>9.10</b>
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 & Build-up**

As against the rated capacity of 40 tonnes, actual utilisation in the first year is taken at 60% and thereafter 75%.

**9.2 Sales Revenue at 100%**

The prevailing prices for all the 3 products of some established brands are in the range of Rs. 160 to 200 per kg. Hence, average realisation is taken at Rs. 120/- per kg. which would provide substantial competitive edge. This would mean annual sales of Rs. 48.00 lacs at 100%.

**9.3 Raw and Packing Materials Required at 100%** (Rs. in lacs)

Product	Qty. (Tonnes)	Price/Ton (Rs.)	Value
Sugar	10	18,000	1.80
Edible Starch	14	24,000	3.36
Sodium Bi-carbonate	8	10,000	0.80
Others	--	--	6.00
Food colours, flavours, etc.	--	--	0.75
Packing Materials @ Rs.20,000/Ton	--	--	8.00
		<b>Total</b>	<b>20.71</b>

#### 9.4 Utilities

Annual expenditure at 100% activity level would be Rs. 75,000/-.

#### 9.5 Selling Expenses

Marketing would be very critical. Middlemen must be offered attractive commission and proper advertisement in local media, local TV channel along with hoardings etc. is necessary. Hence, a provision of 27.5% of yearly sales revenue is made.

#### 9.6 Interest

Interest on term loan of Rs.6.50 lacs is calculated @ 12% per annum assuming complete repayment in 3 years including a moratorium period of 6 months. Interest on bank loan for working capital is taken as 14% per annum.

#### 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
<b>A</b>	<b>Installed Capacity</b>	<b>--- 40 Tonnes ---</b>	
	Capacity Utilisation	60%	75%
	Sales Realisation	28.80	36.00
<b>B</b>	<b>Cost of Production</b>		
	Raw and Packing Materials	12.42	15.53
	Utilities	0.45	0.57
	Salaries	2.34	2.70
	Stores and Spares	0.24	0.30
	Repairs & Maintenance	0.30	0.40
	Selling Expenses @ 27.5%	7.92	9.90
	Administrative Expenses	0.60	0.70
	<b>Total</b>	<b>23.37</b>	<b>30.10</b>
<b>C</b>	<b>Profit before Interest &amp; Depreciation</b>	<b>5.43</b>	<b>5.90</b>
	Interest on Term Loan	0.63	0.38
	Interest on Working Capital	0.42	0.53
	Depreciation	0.84	0.69
	Profit before Tax	3.54	4.30
	Income-tax @ 20%	0.71	0.85
	Profit after Tax	2.83	3.45
	Cash Accruals	3.67	4.14
	Repayment of Term Loan	1.20	2.40

## 11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		28.80
[B]	Variable Costs		
	Raw and Packing Materials	12.42	
	Utilities (70%)	0.32	
	Salaries (70%)	1.64	
	Stores & Spares	0.24	
	Selling Expenses (75%)	5.94	
	Admn Expenses (50%)	0.30	
	Interest on WC	0.42	21.28
[C]	Contribution [A] - [B]		7.52
[D]	Fixed Cost		3.98
[E]	Break-Even Point [D] ÷ [C]		53%

## 12.0 [A] LEVERAGES

### Financial Leverage

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

$$= 4.59 \div 3.54$$

$$= 1.30$$

### Operating Leverage

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

$$= 7.52 \div 3.54$$

$$= 2.12$$

### Degree of Total Leverage

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

$$= 1.30 \div 2.12$$

$$= 0.61$$

**[B] Debt Service Coverage Ratio (DSCR)**

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr
Cash Accruals	3.67	4.14	4.46
Interest on TL	0.63	0.38	0.13
<b>Total [A]</b>	<b>4.30</b>	<b>4.52</b>	<b>4.59</b>
Interest on TL	0.63	0.38	0.13
Repayment of TL	1.20	2.40	2.20
<b>Total [B]</b>	<b>1.83</b>	<b>2.78</b>	<b>2.33</b>
<b>DSCR [A] ÷ [B]</b>	<b>2.35</b>	<b>1.63</b>	<b>1.97</b>
<b>Average DSCR</b>	----- <b>1.98</b> -----		

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

Cost of the project is Rs. 9.10 lacs.

(Rs. in lacs)

Year	Cash Accruals	24%	28%	32%
1	3.67	2.96	2.87	2.78
2	4.14	2.69	2.53	2.38
3	4.46	2.34	2.13	1.94
4	4.78	2.02	1.78	1.57
	<b>17.05</b>	<b>10.01</b>	<b>9.31</b>	<b>8.67</b>

The IRR is around 29%.

**Some of the equipment and packing material suppliers are**

1. Industrial Equipments, Guwahati
2. Archana Machinery Stores from Guwahati (Assam).
3. KGN Engg., Plot No. 174, Old Airport Road, Secunderabad- 500001. Tel No. 27952147
4. Rolex Tin and Metal Works, 21 Yacoob Street, Nr. JJ Hospital, Mumbai-400003.  
Tel No. 23472420/23411034
5. Container Industries, C 299, Ghatkopar Industrial Estate, 72 LBS Marg, Mumbai- 400080