

# SUGARCANE JUICE BEVERAGE

PRODUCTION CAPACITY: 6 lakh bottles of 200 mL cap./annum

## 1.0 PRODUCT AND ITS APPLICATIONS

Freshly extracted sugarcane juice is a very popular drink in India. Presently, the juice is being extracted using hand/power operated crusher which cannot be stored for a couple of hours due to its fast deteriorating quality. Sugarcane juice is quite nutritious as it contains natural sugars, minerals like iron, magnesium, phosphorous, calcium and organic acids e.g. malic acid, succinic acid, acotinic acid, amino acid, protein, starch, gums, waxes, non-sugar phosphatides. The sugarcane juice preserved and packed in 200 mL glass bottle has a good storage life and is available during off-season also.



## 2.0 MARKET POTENTIAL

At present the street vendors crush sugarcane and serve the juice in an unhygienic way. Thus hygienically produced and bottled sugarcane juice has a good market potential like any other soft drink.

## 3.0 BASIS AND PRESUMPTION

- The unit proposes to work at least 200 days per annum on single shift basis.
- The unit can achieve its full capacity utilization during the 3rd year of operation.
- The wages for skilled workers is taken as per prevailing rates in this type of industry.
- Interest rate for total capital investment is calculated @ 12% per annum.
- The entrepreneur is expected to raise 20-25% of the capital as margin money.
- The unit proposes to construct own building as per F.P.O. specifications.
- Costs of machinery and equipment are based on average prices enquired from machinery manufacturers.



## 4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

❖ Scheme preparation and approval	:	01 month
❖ SSI provisional registration	:	1-2 months
❖ Sanction of financial supports etc.	:	2-5 months
❖ Installation of machinery and power connection	:	6-8 months
❖ Trial run and production	:	01 month

## 5.0 TECHNICAL ASPECTS

### 5.1 Location

The plant should be situated at a place where sugarcane is easily available.

### 5.2 Availability of Raw Material

Sugarcane, the basic raw material, is available during the season. The other materials like preservatives and additives are also available locally.

### 5.3 Process of Manufacture

Fresh, juicy and fully mature sugarcane, which is free from insect and fungal attack or any other blemish, is taken for extracting the juice. The juice so obtained is clarified and filtered to get a clear colution. Required quantities of permitted preservatives, additives and flavours are added. The process should be carried out under hygienic conditions. The sugarcane juice beverage is stored in 200 mL bottles and crown corked. The bottles and crown cork closures should conform to ISI standards. Production technology is available from CFTRI, Mysore.

## 6.0 POLLUTION CONTROL

The bagasse from the cane should be disposed off quickly or dried at a distant place since it attracts flies and ferments leading to foul odour.

## 7.0 ENERGY CONSERVATION

The fuel for the steam generation in the boiler is coal or LDO depending upon the type of boiler. Proper care should be taken while utilising the fuel for the steam production. There should be no leakage of steam in the pipe lines and adequate insulation should be provided.

## 8.0 PRODUCTION CAPACITY

Quantity	:	6 lakh bottles/annum or 3,000 bottles/day
Value	:	Rs. 72 lakh
Installed capacity	:	8 lakh bottles/annum
Working days	:	200/annum
Optimum capacity utilization	:	70%
Manpower	:	22
<b>Utilities</b>		
Motive Power	:	20 kWH
Water	:	10 kL/day
Fuel	:	Dry bagasse can also be used

## 9.0 FINANCIAL ASPECTS

### 9.1 Fixed Capital

#### 9.1.1 Land & Building Amount (Rs. lakh)

Land 800 sq.m.	:	1.20
Built up Area 100 sq. m.	:	2.50
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Total cost of Land and Building	:	3.70

#### 9.1.2 Machinery and Equipment

Description		Amount (Rs. lakh)
Plate and frame filter press, cylindrical tank, bottle washing machine, filling machine, crown corking machine, walk-in-cooler, water treatment plant, cane crusher, pasteurising tank, baby boiler.	:	7.00
Erection & electrification @10% cost of machinery & equipment	:	0.70
Office furniture & fixtures	:	0.50
Total :		----- 8.20

#### 9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	0.60
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#### 9.1.4 Total Fixed Capital : 12.50 (9.1.1+9.1.2+9.1.3)

### 9.2 Recurring expenses per annum

#### 9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager	1	8000	0.96
Supervisor	1	5000	0.60
Office Assistant	2	5000	1.20
Boiler man	1	4000	0.48
Skilled workers	3	2000	0.72
Unskilled workers(8 months)	12	1500	1.44
Attendant	2	1500	0.36
			5.76
Perquisites @10%			0.58
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Total :	22		6.34

### 9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate/MT	Amount (Rs. lakh)
Sugar cane	200	950	01.90
Empty bottles	6.3 lakh	Rs 6 each	37.80
Additives	LS	LS	02.10
Crown corks	6 lakh	Rs.5000	3.00
			1000
Detergents	LS	-	00.90
Labels	6 lakh	Rs. 500	03.00
			-----
Total:			48.70

### 9.2.3 Utilities

	Amount (Rs. lakh)
Power	0.73
Water	0.02
Coal	0.41
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Total:	1.16

### 9.2.4 Other Contingent Expenses

	Amount (Rs. lakh)
Repairs and maintenance	1.02
Others	0.87
Insurance	0.11
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Total:	2.00

### 9.2.5 Total Recurring Expenditure

(9.2.1+9.2.2+9.2.3+9.2.4) **Amount (Rs. lakh)**  
58.20

### 9.3 Working Capital

Recurring Expenditure for 3 months **14.55**

### 9.4 Total Capital Investment

	Amount (Rs. lakh)
Fixed capital (Refer 9.1.4)	12.50
Working capital (Refer 9.3)	14.55
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Total:	27.05

## 10.0 FINANCIAL ANALYSIS

### 10.1 Cost of Production (per annum)

	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	58.20
Depreciation on building @5%	00.13

Depreciation on machinery @10%	00.77
Depreciation on furniture @20%	00.10
Interest on Capital Investment @12%	03.25
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Total:	62.45

### 10.2 Sale Proceeds (Turnover) per year

Item	Qty. (MT)	Rate per bottle	Amount (Rs.lakh)
Sugar cane juice in 200 mL glass bottles	6 lakh	7.00 each	42.00
Refund of used glass bottles	6 lakh	5.00 each	30.00
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Total:			72.00

### 10.3 Net Profit per year

= Sales - Cost of production  
= 72.00 - 62.45  
= Rs. 9.55 lakh

### 10.4 Net Profit Ratio

=  $\frac{\text{Net profit} \times 100}{\text{Sales}}$   
=  $\frac{9.55 \times 100}{72.00}$   
= 13.27%

### 10.5 Rate of Return on Investment

=  $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$   
=  $\frac{9.55 \times 100}{27.05}$   
= 35.3%

### 10.6 Annual Fixed Cost

	Amount (Rs. Lakh)
All depreciation	1.00
Interest	3.25
40% of salary, wages, utility, contingency	3.80
Insurance	0.11
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Total:	8.16

## 10.7 Break even Point

$$= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$$

$$= \frac{8.16 \times 100}{8.16 + 9.55}$$

$$= 46\%$$

## 11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

Alfa Engineering Works  
8, Annees Chambers Annex  
Carnae Road, P.B. No. 1284  
Mumbai – 400 001

B.Sen Berry & Co.  
65/11, New Rohtak Road  
New Delhi – 110 005

Gansons Ltd.,  
Overview  
L.N.Road  
Mumbai – 400 014

Gardners Corporation  
6, Doctors Lane  
New Delhi – 110 001

Peenya Engineering Industries  
492, 1 phase,  
Peenya Industrial Area  
Bangalore – 560 059

Raylons Metal Works  
J.B.Nagar Post Office  
Kondivitta Lane  
Andheri (East)  
Mumbai – 400 059