

CARBONATED FRUIT BEVERAGES

QUALITY AND STANDARDS : As per FPO specifications
PRODUCTION CAPACITY : 6 lakh bottles of 200 mL cap./annum



1.0 PRODUCT AND ITS APPLICATIONS

Carbonated soft drinks are known for their thirst quenching and refreshing properties. However, they lack nutritional content. On the other hand, fruit juices, packed in cans, bottles or pouches are also very popular in the country which contain the nourishing properties and goodness of the fruit. Carbonated fruit based beverage is a new concept which provides nutritional elements of the fruit along with natural pigments and flavour in addition to carbonation effects.

2.0 MARKET POTENTIAL

There is well established market for carbonated soft drinks. The fruit juice/pulp based carbonated beverage is expected to beget a rousing response in the market. Amla being a rich source of Vitamin C produces an excellent relishing drink.

3.0 BASIS AND PRESUMPTIONS

- a) The unit proposes to work at least 300 days per annum on single shift basis.
- b) The unit can achieve its full capacity utilization during the 2nd year of operation.
- c) The wages for skilled workers is taken as per prevailing rates in this type of industry.
- d) Interest rate for total capital investment is calculated @ 12% per annum.
- e) The entrepreneur is expected to raise 20-25% of the capital as margin money.
- f) The unit proposes to construct its own building as per FPO requirements.
- g) 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 Process of Manufacture

Fruits like amla, grape, jamun, lime, phalsa can be used. Fully ripe sound fruits are selected. These are washed and juice/pulp extracted. Further process involves preparation of fruit syrup base, carbonation by post mix method, heat processing, cooling and packaging in 200 mL glass bottles.

5.2 Quality Control and Standards : As per FPO specification.

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.

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
Value	:	Rs. 72 lakh
Installed capacity	:	8 lakh bottles
Working days	:	300/annum
Manpower	:	21

Utilities

Motive Power	:	15 kWh
Water	:	25 kL/day
Coal/LD oil	:	250 kg/60 L/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building

Amount (Rs. lakh)

Land 400 sq.m.	:	0.60
Built up Area 250 sq. m.	:	6.25

Total cost of Land and Building	:	6.85

9.1.2 Machinery and Equipment

Description	Amount (Rs. lakh)
Washing tank, fruit mill, hydraulic juice extractor, steam jacketing kettles (3), boiler, carbonation unit, mixing tank pasteurizer, crown corking machine, weighing scales, labeling machine, bottle washing unit, refractometer, pH meter, laboratory equipment	: 12.50

Erection & electrification @10% cost of machinery & equipment	:	1.25
Office furniture & fixtures	:	0.75
Total	:	----- 14.50

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	0.65
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9.1.4 Total Fixed Capital : 22.00 (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	10000	1.20
Accountant	1	7000	0.84
Storekeeper	1	6000	0.72
Production supervisor	1	4000	0.48
Sales supervisor	1	5000	0.60
Mechanic	1	4000	0.48
Skilled workers	3	2500	0.90
Unskilled workers	12	1500	2.16
			7.38
Perquisites @10%			0.74

Total	:	21	8.12

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate (Rs.)	Amount (Rs. lakh)
Fruits	18	8000/MT	1.44
Sugar	14.4	16000/MT	2.30
Citric acid	0.3	120000/MT	0.36
Glass bottles	6.25	4	25.00
Crown corks	6.25 lakh	-	1.88
Chemicals	LS	-	0.72
Labels	6.00 lakh	0.50	3.00
Cartons	25000	12	3.00
Carbon dioxide gas	-	-	0.63

Total:			38.33

9.2.3 Utilities	Amount (Rs. lakh)
Power	0.14
Water	0.01
Coal	3.00

Total:	3.15

9.2.4 Other Contingent Expenses	Amount (Rs. lakh)
Repairs and maintenance@10%	1.45
Consumables & spares	1.10
Transport & Travel	0.60
Publicity	0.50
Postage & stationery	0.23
Telephone	0.15
Misc.	0.16
Insurance	0.15

Total:	4.34

9.2.5 Total Recurring expenditure (9.2.1+9.2.2+9.2.3+9.2.4)	Amount (Rs. lakh) 53.94
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9.3 Working Capital	13.45
Recurring expenditure for 3 months	

9.4 Total Capital Investment	Amount (Rs. lakh)
Fixed capital (Refer 9.1.4)	22.00
Working capital (Refer 9.3)	13.45

Total:	35.45

10.0 FINANCIAL ANALYSIS

10.1 Cost of Production (per annum)	Amount (Rs. lakh)
Recurring expenses (Refer 9.2.5)	53.94
Depreciation on building @5%	00.31
Depreciation on machinery @10%	01.35
Depreciation on furniture @20%	00.15
Interest on Capital Investment @12%	04.25

Total:	60.00

10.2 Sale Proceeds (Turnover) per year

Item	Qty. per unit	Rate	Amount (Rs.lakh)
Carbonated beverage in 200 mL bottles	600000	8.00	48.00
Refund of empty bottles	600000	4.00	24.00
Total:			----- 72.00

10.3 Net Profit per year

= Sales - Cost of production

= 72.00 - 60.00

= Rs. 12 lakh

10.4 Net Profit Ratio

= $\frac{\text{Net profit} \times 100}{\text{Sales}}$

= $\frac{12 \times 100}{72}$

= 16.67%

10.5 Rate of Return on Investment

= $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$

= $\frac{12 \times 100}{35.45}$

= 33.85%

10.6 Annual Fixed Cost**Amount (Rs. Lakh)**

All depreciations	1.81
Interest	4.25
40% of salary, wages, utility, contingency	3.25
Insurance	0.15
Total:	----- 9.46

10.7 Break even Point

$$\begin{aligned} &= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}} \\ &= \frac{9.46 \times 100}{44.08} \\ &= 51\% \end{aligned}$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

Batliboi Engineers (Bangalore) Pvt. Ltd.
99/2&3, N.R. Road
Bangalore – 560 002

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

Gardners Corporation
158 Golf Links,
New Delhi – 110 003

Narene Tulaman Manufacturers Pvt. Ltd.
Balanagar
Hyderabad – 500 037

Raylon Metal Works
Kondivitta Lane
J.B.Nagar, Andheri
Mumbai – 400 059

Bajaj Maschinen Pvt. Ltd.
7/20-7/27 Jai Laxmi Industrial Estate, Site IV
Sahibabad Industrial Area - 201010
Dist.Ghaziabad, UP

SSP (Pvt) Ltd.
13th Milestone, Mathura Road
Faridabad – 121003, Haryana

Narangs Corporation
P-25/90 Connaught Place
New Delhi – 110001

Nirmal Services
2254/23 Rajguru Road, Chuna Mandi
Paharganj
New Delhi – 110055

Ganson Ltd.
645 Anna Salai
Chennai – 600006

Grovers Pvt. Ltd.
223, Kaliandas Udyog Bhavan
Prabhadevi
Mumbai – 400 025

Macneill and Magor Ltd.
4, Mangoe Lane
Kolkata – 700 001