

## COFFEE FLAVOURED MILK

### INTRODUCTION

Coffee beverage imparts refreshing and stimulating effect and is extremely popular throughout the world. Almost entire consumption of coffee is in the form of beverages, with or without milk or cream, chilled or hot. Though the consumption of coffee is increasing day-by-day in the country, no attempt has so far been made to commercialize a ready-to serve coffee beverage on a large scale except limited efforts made by a few co-operative milk marketing societies in some States. The non availability of the cost of manufacture of this product appears to be one of the main reasons that the food industry has not taken up its production in organized way. This profile highlights the cost of manufacture for ready to serve coffee flavoured milk drink.

### MARKET POTENTIAL

The availability of coffee flavoured milk in the market compared to its potential demand is very small in volume. As the nutritional awareness has caught on among the consumers, the demand for such drinks is increasing. It is equally liked by all irrespective of age. It could register good sale at airports, bus stops, railway stations, restaurants, hotels, picnic spots, college canteens etc. Hence the availability of market would not be a big challenge for such nutritional products.

### BASIS AND PRESUMPTIONS

1. The scheme is based on 75% efficiency, 24 hrs. a day for 300 days a year.
2. Time period required to achieve full capacity utilization is possibly 4-5 years.
3. Labour wages is as per the rates prevailing in the area.
4. Interest rate for total capital investment has been taken @14% per annum for both fixed and working capital.
5. Margin money is 25% of total capital investment.
6. Payback period of the project is 7 years.
7. Land cost and construction cost have been taken @ Rs. 40/sq ft. and Rs 900/sq. ft. respectively.

## IMPLEMENTATION SCHEDULE

1. Acquisition of land	: 1 Month
2. Preparation of Project report	: 1 Month
3. Financial assistance	: 3 Months
4. Building construction	: 6 Months
5. Arrangement of power	: 2 Month
6. Acquisition of machinery	: 2 Months
7. Installation of Machinery	: 1 Month
8. Appointment of Staff and labour	: 15 Days
9. Trial production and trouble shooting	: 15 Days
10. Commercial production	: 1 week
11. Time for commencement of commercial Production	: 1 Year
12. Udhog Adhar Filing	: One Day

## TECHNICAL ASPECTS

### Process of Manufacture

The fresh cow and buffalo milk received is first standardized to its fat content. The milk is then heated to 40°C and filtered through a double muslin cloth. Then again heated to 60°C and stabilizers like TSC and DSHP added @ 0.002%. This milk is then passed to homogeniser for breaking the fat globules and make uniformity in the product. On the other side, the coffee powder of 5% concentration is added to hot water and filtered through a muslin cloth. Finally homogenized milk, hot coffee water and sugar syrup are mixed in proper proportion and heated to 85°C and then sterilized at 115°C for 30 minutes. The sterilized bottles are cooled at room temperature and then stored in wooden crates.

**Quality Control and Standards:** As per FSSAI Regulations.

### Production Capacity (per annum)

**Quantity** : 4,65,000 (crates of 24 bottles (200 ml))

**Value** : Rs. 1023 Lakhs.

**Motive Power** : 80 HP

**Pollution Control:** As per the State Govt. Pollution Control Board.

**Energy Conservation:** Proper insulation may be done to avoid heat loss in heating equipments.

### FINANCIAL ASPECTS

#### A. Fixed Capital

##### i) Land and Building Amount (In Rs.)

Land: 10,000 Sq. ft. @ Rs 40/Sq. ft.		= 4,00,000
Building: Production Hall	40' × 50'	= 2,000 Sq. ft.
Store (R.M)	30' × 30'	= 900 Sq. ft.
Store (F.P)	30' × 30'	= 900 Sq. ft.
Laboratory	10' × 15'	= 150 Sq. ft.
Office	10' × 15'	= 150 Sq. ft.
W.C and Bath	10' × 5'	= 50 Sq. ft.
	4,150 Sq. ft. @Rs. 900 per Sq. ft.	37,35,000
<b>Total</b>		<b>41,35,000</b>

##### ii) Machinery and Equipments

Sl.	Particulars	Qty. No.	Rate (In Rs.)	Total (In Rs)
1.	Water Treatment unit	1 No.	75,000	75,000
2.	Boiler	1 No.	1,50,000	1,50,000
3.	S.S. Tank 1000Ltr Cap	3 Nos	20,000	60,000
4.	Plate heat exchanger	1 Set	50,000	50,000
5.	Homogeniser (2000 ltrs/ Hr Cap.)	1 No.	1,50,000	1,50,000
6.	Bottling Plant (including bottle washer, filter, crown corking m/c and sterilizer of 100 Bottle/min)	1 set.	15,00,000	15,00,000

7. Testing equipment	–	50,000	50,000
8. Weighing balance	1 No.	5,000	5,000
<b>Total</b>			<b>20,40,000</b>
Erection and Electrification @ 10%			2,04,000
Glass bottle 8000 crates in wooden @ Rs.100 per crate			8,00,000
Cost of office equipment, tables, etc.			70,000
<b>Total</b>			<b>31,14,000</b>

iii) Pre-operative Expenses	30,000
<b>Total Fixed Capital</b>	<b>Amount (In Rs.)</b>
Land and Building	41,35,000
Machinery and Equipments	31,14,000
Pre-operative Expenses	30,000
<b>Total</b>	<b><u>72,79,000</u></b>

### B. Working Capital (per month)

#### (i) Personnel

Sl.	Designation	No	Salary	Total
a)	Manager	1	10,000	10,000
b)	Production Supervisor	2	5,000	10,000
c)	Sales Supervisor	1	4,000	4,000
d)	Accountant	1	4,000	4,000
e)	Clerk-cum-Typist	1	4,000	4,000
f)	Skilled Worker	4	3,500	14,000
g)	Unskilled Worker	15	3,000	45,000
h)	Peon	1	3,000	3,000
i)	Watchman	1	3,000	3,000
	<b>Total</b>			<b>1,00,000</b>

#### (ii) Raw Material (per month)

Particulars	Qty.	Rate	Total
1. Milk	1,87,500 Lt.	35/Lt.	65,62,500
2. Sugar	10,500 Kg.	28/Kg.	2,94,000
3. Instant	1,425 Kg.	200/Kg.	2,85,000

Coffee			
4. Stabiliser (Trisodium Citrate)	L. S.	–	10,000
5. Crown Caps of 50 gross each Carton	62 Cartons	1200/	74,400
<b>Total</b>			<b>72,25,900</b>

<b>(iii) Utilities</b>	<b>Amount</b>
1. Water	3,000
2. Electricity	10,000
3. Fuel	15,000
<b>Total</b>	<b>28,000</b>

**(iv) Other Contingent Expenses Amount**

1. Postage and Stationery	700
2. Telephone	1,000
3. Consumable Stores	2,500
4. Transport Charge	10,000
5. Repair and Maintenance	5,000
6. Advertisement and Publicity	10,000
7. Insurance	2,000
8. Taxes	4,000
9. Miscellaneous Expenditure	5,000
<b>Total</b>	<b>40,200</b>

<b>(v) Total Recurring Expenses (per month)</b>	<b>Amount</b>
1. Personnel	1,00,000
2. Raw Material	72,25,900
3. Utility	28,000
4. Other Contingent Expenses	40,200
<b>Total</b>	<b>73,94,100</b>

**C. Total Capital Investment**

Particulars	Amount
Fixed Capital	72,79,000
Working Capital for 2 months	1,47,88,200
<b>Total</b>	<b>2,20,67,200</b>

**FINANCIAL ANALYSIS**

(1) Cost of Production (per annum)	Amount
a) Recurring expenses	8,87,29,200
b) Depreciation on building @ 5%	1,86,750
c) Depreciation on machinery @ 10%	2,11,000
d) Depreciation on bottles @ 20%	1,60,000
e) Interest on total capital investment @ 14%	30,89,408
<b>Total</b>	<b>9,23,76,358</b>
or Say	<b>9,23,77,000</b>

(2) Turnover (per annum)	Qty.	Rate (In Rs.)	Total (In Rs.)
Coffee flavoured milk in 200ml.	4,65,000 of crate Bottle 24 bottles	220/ Crates	10,23,00,000

**(3) Net Profit (per annum)**

$$\begin{aligned} \text{Turnover} - \text{Cost of Production} &= \text{Rs. } 10,23,00,000 - \text{Rs. } 9,23,77,000 \\ &= \text{Rs. } 99,23,000 \end{aligned}$$

## (4) Net Profit Ratio

$$= \frac{\text{Net Profit (p.a.)} \times 100}{\text{Turnover (p.a.)}}$$

$$= \frac{(99,23,000 \times 100)}{10,23,00,000}$$

$$= 9.6\%$$

## (5) Rate of Return on Total Capital Investment

$$= \frac{\text{Net Profit (p.a.)} \times 100}{\text{Total Investment}}$$

$$= \frac{(99,23,000 \times 100)}{2,20,67,200} = 44.97\%$$

## (6) Break-even Point

$$\text{B.E.P} = \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Annual Net Profit}}$$

Annual Fixed Cost	Amount
40% Salaries	48,00,000
40% Utilities	1,34,400
40% Contingencies	1,92,960
Total Depreciation	5,57,750
Total Interest	30,89,408
<b>Total</b>	<b>87,74,518</b>
<b>or Say</b>	<b>87.74 lakhs</b>

$$\text{B.E.P} = \frac{87.74 \times 100}{87.74 + 99.23} = 46.92\%$$