

# PROJECT PROFILE

## CHEWING GUM

### 1. INTRODUCTION

Chewing gum is a kind of sweet, made up of a combination of rubber latex, ester gum and sweetening agents. It has no nutrient value except it contains glucose which has some stamina properties. It is a consumable item. It is very popular among children as well as among adults.

### 2. OBJECTIVES

The objective of the profiles is to encourage and assist prospective entrepreneurs in MSME sector in and guiding making them aware of the opportunities of this sector. It is also being developed by the Directorate of the Food Processing Industries, Government of West Bengal to help entrepreneurs with knowledge about raw materials availability, knowledge of market, source of technology and plant and machinery suppliers. M/s ITV Agro & Food Technologies Pvt. Ltd., New Delhi has helped in developing the project profile.

### 3. RAW MATERIAL AVAILABILITY

The following raw material will be required.

		Value ( Rs.)
1.	Edible Ester gum 450 kgs @ Rs. 70 kg	- 31,500
2.	Synthetic latex / natural latex 412.5 kgs @ Rs. 50 per kg.	- 20,600
3.	Glycerol mono stearate (GMS) 106.26 kgs @ Rs. 80 per kg.	- 8,480
4.	Calcium carbonate 362. 5 kgs @ Rs. 32 per kg	- 11,584

5.	Sugar -3437.5 kgs.	-	1,10,016
6.	Glucose	-	1,06,250
7.	Citric acid	-	1,875
8.	Essence	-	22,050
9.	Color	-	600
10.	wax coated wrappers	-	1,11,720
11	Polythene Bags - 12500 pcs	-	12,500
12	wooden crates 250 pcs		7,500
13	Ropes & nail	-	900
14	Other miscellaneous item	-	900
<b>Total</b>		-	<b>Rs. 4,46,475</b>

#### **4. MARKET OPPORTUNITIES**

India is a thickly populated country. It is known that due to rapid industrialization in the country the purchasing power is also increasing and the living standards of people are going up. Chewing gum is very popular among children and there is a great demand in the urban areas. The demand for this product is also increasing in the rural area. As such there is scope for the product in the coming years.

#### **5. PROJECT DESCRIPTION**

##### **a) Product & Its uses**

Chewing gum is a kind of sweet made of a combination of rubber latex, ester gum and sweetening agents. It has no nutrient value except it contains glucose which has some stamina properties. It is a consumable item. It is very popular among children as well as among adults.

**b) Capacity**

The proposed capacity of the plant is to produce 68 MT / annum of chewing gum.

**c) Manufacturing process**

In the manufacturing process of bubble gum, first the ingredients are pulverized into fine powder form. Then the gum base is made by mixing and heating ester gum, natural latex/synthetic latex (all of edible grade) G.M.S. and calcium carbonate in a mixing bottle, for about two hours. When the ingredients have mixed homogenously, then the resultant mass is further mixed with sugar, glucose, citric acid, essence and food colour for two more hours. The mixed mass is then passed through bubble gum cutting machine to cut small pieces of required size and shape, which are then kept in an air conditioned room for 24 hours for complete drying. Once dried, these pieces are wrapped in printed packs and sealed.

**6. PROJECT COMPONENTS & COST**

<b>a) Land &amp; Building</b>	<b>(Rs. in lacs)</b>
Building with 1450 sq. ft. covered area .	8.40
<b>b) Plant &amp; Machinery</b>	<b>(Rs. in lacs)</b>
1. Bubble gum mixing machine	Rs. 3.00
2. Bubble gum cutting machine	Rs. 0.42
3. Bubble gum cutting machine	Rs. 2.30
4. Pulveriser	Rs. 0.45
5. Air conditioner (1.5 ton)	Rs. 1.20
6. Erection and installation	Rs. 0.75
7. Office furniture	Rs. 0.65
<b>Total</b>	<b>Rs. 8.77</b>

*c) Misc fixed assets*

Other miscellaneous assets required are fans, weighing balance, tables, chairs, furniture, etc. which would cost Rs. 2.25 lacs.

*d) Utilities*

Power requirement shall be 20 HP whereas daily water requirement would be 3000 ltrs Roaster will need oil as fuel. The cost of utilities is estimated to be Rs. 2.80 lacs.

*e) Prel. & Pre Operative Expenses*

A provision of Rs. 3.15 lacs is made towards certain pre-production expenses like establishment, registration, administrative and travelling charges, interest during implementation, trial run expenses etc.

*f) Working Capital Assessment*

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoter's
Stock of raw & packing material	1 month	30%	0.23	0.16	0.07
Stock of Finished Goods	½ month	30%	0.93	0.65	0.28
Receivable	½ month	30%	1.70	1.19	0.51
<b>Total</b>			<b>2.86</b>	<b>2.0</b>	<b>0.86</b>

g) *Project cost & Means of finance*

Item	Amount (Rs. in lacs)
Land and Building	8.40
Plant and Machinery	8.77
Miscellaneous Assets	2.25
P & P Expenses	3.15
Contingencies @ 10% on building and plant & machinery	1.71
Working capital margin	0.86
<b>Total</b>	<b>25.14</b>
<b>Means of Finance</b>	
Promoters' contribution	10.00
Term loan from Bank/ FI	15.14
<b>Total</b>	<b>25.14</b>
Debt Equity Ratio	1.5:1
Promoters contribution	40%

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.

7) **PROJECTED PROFITABILITY**

a) *Production Capacity*

The rated production capacity of the plant is 68 tonnes per year whereas actual capacity utilization is expected to be 60% and 75% during 1<sup>st</sup> year and 2<sup>nd</sup> year respectively.

**b) Sales Revenue at 100%**

Product	Qty (Tons)	Selling Price (Rs. / kg)	Sales (Rs. in lacs)
Chewing gum	68.00	100	68.00

**c) Projected Profitability**

(Rs. in lacs)

S. No.	Particulars	1 <sup>st</sup> year	2 <sup>nd</sup> year
<b>A.</b>	<b>Installed capacity</b>	<b>68 Tons</b>	
	Capacity Utilisation	60%	75%
	Sales Realisation	40.80	51.00
<b>B.</b>	<b>Cost of Production</b>		
	Raw material & packing material	2.68	3.35
	Utilities	1.68	2.10
	Salaries	6.78	7.45
	Stores and Spares	2.10	2.62
	Repairs and Maintenance	1.80	2.25
	Selling Expenses @15%	6.12	7.65
	Administrative Expenses	1.20	1.50
	Total	22.36	26.92
<b>C.</b>	<b>Profit before Interest &amp; Depreciation</b>	<b>18.44</b>	<b>24.08</b>
	Interest on Term Loan	1.51	1.21
	Interest on Working Capital	0.24	0.30
	Depreciation.	1.71	1.54
	Net Profit	14.98	21.03
	Income-tax @ 20%	2.98	4.20
	Profit after tax	12.00	16.83

	Cash Accruals	13.71	18.37
	Repayment of Term Loan	Nil	3.00

*d) Break Even Point Analysis*

S. No.	Particulars	Amount (Rs. in lacs)	
(A)	Sales		40.80
(B)	Variable Costs		
	Raw material & packing material	2.68	
	Utilities(70%)	1.17	
	Salaries (60%)	4.06	
	Stores and Spares	2.10	
	Selling Exps (70%)	4.28	
	Admn Expenses (50%)	0.60	
	Interest on WC	0.24	15.13
(C)	Contribution (A) - (B)		25.67
(D)	Fixed Costs		8.96
(E)	Break Even Point		35%

*e) Debt Service Coverage Ratio (DSCR)*

(Rs. in lacs)

Particulars	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year
Cash Accruals	13.71	18.37	22.04
Interest on TL	1.51	1.21	0.95
Total (A)	15.22	19.58	22.99
Interest on TL	1.51	1.21	0.95
Repayment of TL	Nil	3.00	3.00
Total (B)	1.51	4.21	3.95
DSCR (A) / (B)	10.07	4.65	5.82
Average DSCR	6.84		

*f) Internal Rate of Return (IRR)*

Cost of the project is Rs. 25.14 lacs

(Rs. in lacs)

Year	Cash Accruals	28%	32%
1	13.71	10.70	10.07
2	18.37	11.20	10.47
3	22.04	10.51	9.47
<b>Total</b>		<b>32.41</b>	<b>31.01</b>

The IRR is 32 %

*g) Manpower requirement*

Particulars	Nos.	Monthly	Total yearly Salary (Rs. in lacs)
Skilled workers /operator	2	7,500	1.80
Semi Skilled Workers	3	6,000	2.16
Manager	1	8,000	0.96
Salesman	1	8,000	0.96
Office staff	1	7,500	0.90
<b>Total</b>			<b>6.78</b>

**8. ASSUMPTIONS**

- The plant will work for 300 days in a year. :
- The operating capacity is 60% , 75%, 90 % during 1<sup>st</sup> year , 2<sup>nd</sup> year and 3<sup>rd</sup> year respectively.
- The interest on term loan is taken at 10% per annum and on working capital it is 12% per annum.
- Selling price of finished products is taken at Rs. 100 / kg.



## **9. SOURCES OF TECHNOLOGY**

CFTRI, Mysore, has successfully developed the technical know-how for the product. BIS has laid down the quality standard. The compliance under FSSAI act is a must.

## **10. PLANT & MACHINERY SUPPLIERS**

1. Dhiman Group  
Dakhni gate, Nakodar (Punjab) – 144040  
Ph.220010 / 220018  
Email. [info@dhimangroup.com](mailto:info@dhimangroup.com)
2. Linhandle  
No. 33 Lane 201, Chung Hsiao Road,  
Panchiao city , Taipei hsien, Taiwan  
0888-2-29536225