

**Profile No.: 43**

**NIC Code: 10304**

## **FRUIT BAR**

### **1. INTRODUCTION:**

Fruit toffee and fruit bar are delicious and nutritious products. The manufacturing process is simple. And the commercial manufacturing is a highly profitable business. Fruits are highly perishable items. Additionally, fruits are only available on the seasonal basis. Therefore, different types of value-added processed fruit products are commercially very successful. It can be predicted that few entrepreneurs may enter in this venture along with other food base product.

### **2. PRODUCT & ITS APPLICATION:**

Fruit bar is a traditional item. However, commercially produced fruit bars are better in terms of color, taste, and quality. Furthermore, fruit toffee is a highly nutritious food compared to other toffee and chocolates. Pulp fruits like banana, mango, guava, apple, pineapple etc. are the best fruits for making fruit bars. For example, Mango is one of the best fruits in India. Mango bar can be prepared from green mango, ripe mango and mango juice. Mango currently accounted 39% of the total fruit export from the India. There is very good domestic and export demand of mango products. The growth rate of mango fruits bar is 20 %.

### **3. DESIRED QUALIFICATIONS FOR PROMOTER:**

Anyone can start this project. Successful running of this project does not require any specific qualification.

#### **4. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:**

The change in the income growth, increase in population, lifestyle and concern towards health and nutrition worldwide have resulted in a large demand for processed fruit and vegetable products all over the globe. India is among the topmost vegetable and fruit producer in the world and accounts for about 15% of the world's production of vegetables. A large number of units are in the cottage/home scale and small scale sector, having small capacities up to 250 tons/annum though big Indian and multinational companies have capacities in the range of 30 tons per hour or so. It has the distinction of producing almost all-tropical and exotic fruits and vegetables because of varied climatic conditions. India's food processing sector covers fruit and vegetables. Value addition to food products has assumed vital importance in our country due to diversity in socio-economic conditions, industrial growth, urbanization and globalization. Value is added by changing their form, color and other such methods to increase the shelf life of perishables.

Fruit and vegetable processing industry has taken a new direction and is growing gradually with strong growth rate annually. Infrastructure development for processing may take this industry to the new heights in the years to come with the help of sufficient exports and investments. Fruit and vegetable processing is done widely in the food and beverage industry. Fruits and vegetables are processed into a variety of products such as juices and concentrates, pulp, canned and dehydrated products, jams and jellies, pickles and chutneys etc. The extent of processing of fruits and vegetables varies from one country to another. Fruit toffee and fruit bar are considered as healthy snacks items. In addition, these products have better demand compared to sun dried items. In addition, these items have the larger shelf life than fresh fruits. The products have good export potential also. However, for export, you must pay attention to the quality and packaging of the product. Apart from the retail market, you can offer these products to your institutional clients. Additionally, fruit toffee containing fruit pulps or juices are very popular in the Indian market.

## 5. RAW MATERIAL REQUIREMENTS:

You will need to procure the raw materials like fruit pulps and juices, starch, sugar, color, preservatives, skimmed milk powder, hydrogenated fat, flavor, glucose etc. Either you can obtain the fruit pulps from other fruits and vegetable processing units or you can produce your own. Since your unit is small and the quantity required is small it is cheaper to procure it from other manufacturers. Finally, you have to procure flexible packaging materials like polyester-polyethylene laminate, polyester-aluminum foil-polyethylene laminates, corrugated board boxes etc.

## 6. MANUFACTURING PROCESS:

The manufacturing process is simple and standardized. First of all, you will need to thoroughly wash the fresh and ripe fruits. And then extract the pulp from the fruits. Then mix the pulp with the required quantity of sugar. This blend is then dehydrated in tray dryer and drying time is around 18-20. In fruit toffee, you will need to mix sugar, color, preservatives, glucose, skimmed milk powder, hydrogenated fat, flavor etc. In next step, dehydrate this blend in tray dryer and drying time is around 18-20 hours. On cooling, cut the slabs in pre-determined sizes and are pack in BOPP or other food grade printed film. These packs are packed in cardboard or duplex board boxes for onward distribution. The average yield is around 75%. CFTRI, Mysore has successfully commercialized the production process.

## 7. MANPOWER REQUIREMENT :

The enterprise requires 10 employees as detailed below:

Sr. No.	Designation	SALARY	Salary ₹	Number of Employees				
				Year-1	Year-2	Year-3	Year-4	Year-5
1	Production Manager	18000	18000	1	1	1	1	1
2	Operators	12000	12000	1	1	1	1	1
3	Helpers	10000	20000	2	2	2	2	2

Sr. No.	Designation	SALARY	Salary ₹	Number of Employees				
4	Admin Manager	15000	15000	1	1	1	1	1
5	Accounts/Stores Assistant	12500	12500	1	1	1	1	1
6	Office Boy	9000	9000	1	1	1	1	1
	Total		86500	7	7	7	7	7

## 8. IMPLEMENTATION SCHEDULE:

The project can be implemented in 4 months' time as detailed below:

Sr. No.	Activity	Time Required (in months)
1	Acquisition of premises	2.00
2	Construction (if applicable)	2.50
3	Procurement & installation of Plant & Machinery	2.50
4	Arrangement of Finance	1.00
5	Recruitment of required manpower	1.00
	Total time required <i>(some activities shall run concurrently)</i>	4.00

## 9. COST OF PROJECT:

The project shall cost ₹ 35.50 lacs as detailed below:

Sr. No.	Particulars	₹ in Lacs
1	Land	0.00
2	Building	0.00
3	Plant & Machinery	26.00
4	Furniture, other Misc. Equipments	1.50
5	Other Assets including Preliminary / Pre-operative expenses	2.60
6	Margin for Working Capital	5.40
	<b>Total</b>	<b>35.50</b>

## 10. MEANS OF FINANCE:

Bank term loans are assumed @ 75 % of fixed assets.

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	8.88
2	Bank Finance	26.63
	<b>Total</b>	<b>35.50</b>

## 11. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹ 5.40 lacs as detailed below:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	2.70	0.25	0.68	2.03
2	Receivables	1.35	0.25	0.34	1.01
3	Overheads	1.35	100%	1.35	0.00
4	Creditors	-		0.00	0.00
	<b>Total</b>	5.40		2.36	3.04

## 12. LIST OF MACHINERY REQUIRED:

In initiating a small scale production unit, a 500 Sq. Mt space is sufficient. However, according to the desired production quantity output, you must select the area of your unit. In addition, you will need to provide the major utilities like water, electricity and semi-skilled labors. The main machinery is Pulp and Juice preparation line consisting of Baby Pulper, Fruit mill, Preparation Table, SS Trays, set of Knives etc. Raw material mixing and boiling section consisting of Holding Tank, Homogenizer, Steam jacketed kettles, pump etc. Tray dryers, Weighing scale, Toffee drawing and cutting machine, Cooling conveyor, Wrapping /Packing machine, Boiler, Trays, Preparation Tables, Trolley, electrical, Laboratory equipment

Sr. No.	Particulars	UOM	Qty	Rate (₹)	Value
					(₹ in Lacs)
	<b>Plant &amp; Machinery / equipments</b>				
<b>a)</b>	<b>Main Machinery</b>				
1	Baby Pulper, Fruit mill,	Nos	1	2.50	2.50
2	SS Trays, mixing, boiling Tank	Nos	6	3.00	3.00
3	Homogenizer, Steam jacketed kettles	Nos	1	4.50	4.50
4	Tray dryers and other machineries	Nos	1	11.00	11.00
5	Utility Equipments		1	3.00	3.00
	Installation, Taxes and Transportation			2.00	2.00
	<i>sub-total</i>			<b>26.00</b>	<b>26.00</b>
	<b>Furniture / Electrical installations</b>				
a)	Office furniture	LS	1	150000	1.50
b)	Stores Cupboard	LS	1	250,000	2.50
c)	Computer & Printer	LS	1	100000	1.00
	<i>sub total</i>				<b>1.50</b>
	<b>Other Assets</b>				
a)	Preliminary and preoperative				2.60
	<i>sub-total Other Assets</i>				2.60
	<b>Total</b>				<b>30.10</b>

### 13. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	16.20	18.90	21.60	24.30	27.00
3	Raw Materials & Other direct inputs	₹. In Lacs	10.80	12.60	14.40	16.20	18.00
4	Gross Margin	₹. In Lacs	5.40	6.30	7.20	8.10	9.00
5	Overheads except interest	₹. In Lacs	3.90	4.15	4.64	4.78	4.88
6	Interest @ 10 %	₹. In Lacs	2.66	2.66	1.78	1.33	1.07
7	Depreciation @ 30 %	₹. In Lacs	7.80	5.46	3.98	3.12	2.34
8	<b>Net Profit before tax</b>	₹. In Lacs	<b>-8.97</b>	<b>-5.97</b>	<b>-3.19</b>	<b>-1.13</b>	<b>0.71</b>

#### 14. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at % of projected capacity as detailed below:

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	27.00
2	Variable costs	₹. In Lacs	18.00
3	Fixed costs incl. interest	₹. In Lacs	5.95
4	$BEP = FC / (SR - VC) \times 100 =$	% of capacity	66.06%