

## **TEA BLENDING UNIT**



### **1. INTRODUCTION:**

Tea is the product which becomes necessity for most of Indians. Tea blending is process of bringing together teas from various sources and regions with varied level of flavor and liquor. Some regions grow tea of low level of flavor and strength and that needs to be blended with better quality of tea as per consumer's preferences. There is growing market and preference for spiced flavor tea which gives more opportunities for blending.

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

Tea is highly consumed product in Indian market. Most of people have tea as a routine in their daily needs. It is consumed sometimes 3-4 times a day by an average person. Tea with various varieties, flavor and juice is preferred by consumers. In small and large corporate, tea is needed for vending machines. Pre-mix tea or instant mix tea is also getting space in Indian tea market. Spiced, elaichi, ginger flavored tea is getting more demand in today's consumption. Moreover, wastages during blending process can be utilized for fertilizer and can give revenue and help environment.

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

Successful running this project does not require any specific qualification.

#### **4. INDUSTRY LOOKOUT AND TRENDS**

Tea is a very popular beverage prepared by boiling leaves and buds obtained from the plant of *Camellia sinensis*. Cultivation of organic tea is done without the use of harmful fertilizers and pesticides which contain harmful chemicals. The harmful chemicals may enter our food chain and can lead to severe health problems.

Tea is considered to be a refreshing drink which helps in reducing stress and is consumed worldwide. Organic tea is rich in antioxidants and flavonoids. Flavonoids are beneficial in reducing the risks of cardiovascular diseases and also help in lowering cholesterol. They are considered to have anti-cancer and anti-ageing properties which make them a healthier choice.

##### **Market Segmentation**

Organic tea market can be segmented on the basis of type, form, packaging type, distribution channel, and regions.

Based on the type, organic tea market is segmented into five major segments which include white organic tea, green organic tea, black organic tea, oolong organic tea, and others. Out of these, black organic tea segment is estimated to occupy a dominant market position. Also, due to the increasing awareness amongst people about the health advantages obtained from green tea, the organic green tea market is expected to grow in the given forecast period.

On the basis of form, organic tea market can be segmented into dried leaf, powder, liquid (organic iced tea) and others. The organic tea available in the dried leaf form is being increasingly consumed and the market is expected to grow at a higher rate.

Based on the packaging type, organic tea products are sold in the form of paper pouches, cans, cartons, tea bags and others. Due to easy storage and greater shelf life, carton packages of organic tea are more preferred over others.

On the basis of the distribution channel, organic tea market can be segmented into supermarkets/hypermarkets, convenience stores, online, specialty stores and others. Supermarkets/hypermarkets segment contributes more as distribution channels for organic tea and is expected to grow at a high rate.

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

Growing demand and preference for various liquor and flavor, tea market is becoming stronger. Export market can also fetch great revenues compared to domestic market, as people worldwide prefer Indian flavor tea because of strong flavor and juice content. Preparing spiced tea and instant mix tea can be economical compared to other countries because of cheap labor and available wide range of raw materials for tea and spices. During April-September 2016, India exported tea of USD 306.9 million and it is expected to grow at much larger pace in coming years.

## **6. RAW MATERIAL REQUIREMENTS:**

Basic raw material required for this is various ranges of tea which include high quality of tea and ordinary tea with ranges of flavor and juice. To add more varieties in tea, other raw materials of spices, elaichi and ginger is required. This will be for forward integration where consumer will get added and complete solution for tea making. For packaging, food grade polymers, pouch materials and cardboard boxes are required.

## **7. MANUFACTURING PROCESS:**

High quality tea and lower quality tea are mixed in a Double cane Blender. The blended tea is loaded in the pouch fill pack-seal machine. Printed pouches are also loaded in the filling machine. The filling and sealing of pouches are done by the machine. Filled up pouches are then repacked in corrugated cardboard boxes for shipping.

## 8. MANPOWER REQUIREMENT:

The enterprise requires 10 employees as detailed below:

| Sr. No. | Designation of Employees        | Salary Per Person | Monthly Salary ₹ | Number of employees required |        |        |        |        |
|---------|---------------------------------|-------------------|------------------|------------------------------|--------|--------|--------|--------|
|         |                                 |                   |                  | Year-1                       | Year-2 | Year-3 | Year-4 | Year-5 |
|         | <b>Variable Labour: Workers</b> |                   |                  |                              |        |        |        |        |
| 1       | Operator                        | ₹ 10,000.00       | ₹ 20,000.00      | 2                            | 2      | 2      | 2      | 2      |
| 2       | Un Skilled Workers              | ₹ 8,000.00        | ₹ 32,000.00      | 4                            | 4      | 6      | 6      | 6      |
|         | <i>sub-total</i>                |                   | ₹ 52,000.00      | 6                            | 6      | 8      | 8      | 8      |
|         | <b>Fixed Staff:</b>             |                   |                  |                              |        |        |        |        |
| 1       | Accountant                      | ₹ 12,000.00       | ₹ 12,000.00      | 1                            | 1      | 1      | 1      | 1      |
| 2       | Store Keeper                    | ₹ 8,000.00        | ₹ 8,000.00       | 1                            | 1      | 1      | 1      | 1      |
| 3       | Sales Staff                     | ₹ 12,000.00       | ₹ 24,000.00      | 2                            | 2      | 2      | 2      | 2      |
|         | <i>sub-total</i>                |                   | ₹ 44,000.00      | 4                            | 4      | 4      | 4      | 4      |
|         | <b>Total</b>                    |                   | ₹ 96,000.00      | 10                           | 10     | 12     | 12     | 12     |

## 9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 7 months' time as detailed below:

| Sr. No. | Activity  | Time Required<br>(in months) |
|---------|---|------------------------------|
| 1       | Acquisition of premises   | 1.00                         |
| 2       | Construction (if applicable)  | 2.00                         |
| 3       | Procurement & installation of Plant & Machinery                       | 2.00                         |
| 4       | Arrangement of Finance  | 1.00                         |
| 5       | Recruitment of required manpower                                      | 1.00                         |
|         | Total time required ( <i>some activities shall run concurrently</i> ) | 7.00                         |

## 10. COST OF PROJECT:

The project shall cost ₹ 26.34 lacs as detailed below:

| Sr. No. | Particulars   | ₹ in Lacs    |
|---------|---|--------------|
| 1       | Land  | 2.00         |
| 2       | Building  | 2.00         |
| 3       | Plant & Machinery   | 4.85         |
| 4       | Furniture, other Misc. Equipments                           | 0.50         |
| 5       | Other Assets including Preliminary / Pre-operative expenses | 0.49         |
| 6       | Margin for Working Capital                                  | 16.50        |
|         | <b>Total</b>  | <b>26.34</b> |

## 11. MEANS OF FINANCE:

Bank term loans are assumed @ 75% of project cost. The proposed funding pattern is as under:

| Sr. No. | Particulars             | ₹ in Lacs    |
|---------|-------------------------|--------------|
| 1       | Promoter's contribution | 6.58         |
| 2       | Bank Finance            | 19.75        |
|         | <b>Total</b>            | <b>26.34</b> |

## 12. WORKING CAPITAL CALCULATION:

The project requires working capital of ₹ 16.50lacs as detailed below:

| Sr. No. | Particulars  | Gross Amt | Margin % | Margin Amt | Bank Finance |
|---------|--------------|-----------|----------|------------|--------------|
| 1       | Inventories  | 8.25      | 0.25     | 2.06       | 6.19         |
| 2       | Receivables  | 4.13      | 0.25     | 1.03       | 3.09         |
| 3       | Overheads    | 4.13      | 100%     | 4.13       | 0.00         |
| 4       | Creditors    | -         |          | 0.00       | 0.00         |
|         | <b>Total</b> | 16.50     |          | 7.22       | 9.28         |

### 13. LIST OF MACHINERY REQUIRED:

A detail of important machinery is given below:

| Sr. No.   | Particulars                                 | UOM | Qty | Rate (₹ in Lacs) | Value(₹ in Lacs) |
|-----------|---|-----|-----|------------------|------------------|
|           | <b>Plant &amp; Machinery / equipments</b>   |     |     |                  |                  |
| <b>a)</b> | <b>Main Machinery</b>                       |     |     |                  |                  |
| 1         | Tea Blending Machine                        | Nos | 1   | ₹ 1.50           | ₹ 1.50           |
| 2         | Packing and Sealing Machine                 | Nos | 1   | ₹ 2.50           | ₹ 2.50           |
| 3         | Material Handling Equipments                | Nos | 1   | ₹ 0.50           | ₹ 0.50           |
| 4         | Weighing Scale                              | Nos | 1   | ₹ 0.20           | ₹ 0.20           |
| 5         | Misc. Tools                                 | LS  |     | ₹ 0.15           | ₹ 0.15           |
|           | <i>sub-total Plant &amp; Machinery</i>      |     |     |                  | <b>₹ 4.85</b>    |
|           | <b>Furniture / Electrical installations</b> |     |     |                  |                  |
| 1         | Office furniture and Electrification        | LS  | 1   | ₹ 0.50           | ₹ 0.50           |
|           | <i>sub total</i>                            |     |     |                  | <b>₹ 0.50</b>    |
|           | <b>Other Assets</b>                         |     |     |                  |                  |
| 1         | preliminary and preoperative                | LS  |     | 0.49             | ₹ 0.49           |
|           | <i>sub-total Other Assets</i>               |     |     |                  | <b>₹ 0.49</b>    |
|           | <b>Total</b>                                |     |     |                  | <b>₹ 5.84</b>    |

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Fry-Tech Food Equipments Private Limited  
S. No. 4, Raviraj Industrial Estate,  
Bhikhubhai Mukhi Ka Kuwa Bharwadvash,  
Ramol, Ahmedabad - 380024,  
Gujarat, India

2. Hindustan Vibrotech Pvt. Ltd.

Office No. 2, Ground Floor,  
Vrindavan Building, Vile Parle East,  
Mumbai – 400057,  
Maharashtra, India

3. Electronics cooling systems Pvt. Ltd.

S-27, SIDCO Industrial Estate  
Kakkalur Industrial Estate  
Tiruvallur – 602003,  
Tamil Nadu, India

4. Springboard Enterprises India Ltd.

1st, 2nd & 3rd Floor,  
Plot No. 7, 8 & 9,  
Garg Shopping Mall,  
Service Centre, Rohini Sector 2  
New Delhi – 110085,  
Delhi, India

5. Flour Tech Engineers Private Limited

Plot No. 182, Sector 24,  
Faridabad - 121005,  
Haryana, India

6. P Square Technologies

3, Swami Mahal,  
Gurunanak Nagar,  
Off. Shankarsheth Road Bhavani Peth,  
Pune - 411002,  
Maharashtra, India

7. Ricon Engineers

10 To 13, Bhagwati Estate,  
Near Amraiwadi Torrent Power,  
Behind Uttam Dairy,  
Rakhial, Ahmedabad - 380023,  
Gujarat, India

8. Kamdhenu Agro Machinery

Plot No. 6, Near Power House,  
Wathoda Road Wathoda,  
Nagpur - 440035,  
Maharashtra, India

#### 14. 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 | 64.80       | 75.60       | 86.40       | 97.20        | 108.00       |
| 3       | Raw Materials & Other direct inputs | ₹. In Lacs | 45.65       | 53.26       | 60.87       | 68.48        | 76.09        |
| 4       | Gross Margin                        | ₹. In Lacs | 19.15       | 22.34       | 25.53       | 28.72        | 31.91        |
| 5       | Overheads except interest           | ₹. In Lacs | 13.26       | 14.08       | 15.74       | 16.24        | 16.57        |
| 6       | Interest @ 10 %                     | ₹. In Lacs | 1.98        | 1.98        | 1.32        | 0.99         | 0.79         |
| 7       | Depreciation @ 30 %                 | ₹. In Lacs | 3.40        | 2.43        | 1.70        | 1.21         | 1.09         |
| 8       | <b>Net Profit before tax</b>        | ₹. In Lacs | <b>0.52</b> | <b>3.85</b> | <b>6.77</b> | <b>10.28</b> | <b>13.46</b> |

The basis of profitability calculation:

This unit will have capacity of 2.5 MT per month at Sales value of around 350-400 Rs per Kg.

The growth of selling capacity will be increased 10% per year. (This is assumed by various analysis and study; it can be increased according to the selling strategy.)



Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per liter. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

## 15. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at 54.40% of projected capacity as detailed below:

| Sr. No. | Particulars                     | UOM           | Value  |
|---------|---------------------------------|---------------|--------|
| 1       | Sales at full capacity          | ₹. In Lacs    | 108.00 |
| 2       | Variable costs                  | ₹. In Lacs    | 76.09  |
| 3       | Fixed costs incl. interest      | ₹. In Lacs    | 17.36  |
| 4       | $BEP = FC/(SR-VC) \times 100 =$ | % of capacity | 54.40% |

## 16. STATUTORY / GOVERNMENT APPROVALS

The Ministry of Food Processing Industries has been operating several plan schemes for the development of processed food sector in the country during the 10th Plan. One of the schemes relates to the Technology Up-gradation/ Establishment/ Modernization of food processing industries.

The Indian food processing industry is regulated by several laws which govern the aspects of sanitation, licensing and other necessary permits that are required to start up and run a food business. The legislation that dealt with food safety in India was the Prevention of Food Adulteration Act, 1954 (hereinafter referred to as "**PFA**"). The PFA had been in place for over five decades and there was a need for change due to varied reasons which include the changing requirements of our food industry. The act brought into force in place of the PFA is the Food Safety and Standards Act, 2006 (hereinafter referred to as "**FSSA**") that overrides all other food related laws.

FSSA initiates harmonization of India's food regulations as per international standards. It establishes a new national regulatory body, the Food Safety and Standards Authority of India

(hereinafter referred to as "**FSSAI**"), to develop science based standards for food and to regulate and monitor the manufacture, processing, storage, distribution, sale and import of food so as to ensure the availability of safe and wholesome food for human consumption. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

**All food imports will therefore be subject to the provisions of the FSSA and rules and regulations which as notified by the Government on 5th of August 2011 will be applicable.**

### **Key Regulations of FSSA**

A. Packaging and Labelling

B. Signage and Customer Notices

C. Licensing Registration and Health and Sanitary Permits

## **17. BACKWARD AND FORWARD INTEGRATIONS**

The objective of the scheme is to provide effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market. Under the scheme, financial assistance is provided for setting up of primary processing centres/ collection centres at farm gate and modern retail outlets at the front end along with connectivity through insulated/ refrigerated transport.

The Scheme is applicable to perishable horticulture and non-horticulture produce such as, fruits, vegetables, dairy products, meat, poultry, fish, Ready to Cook Food Products, Honey, Coconut, Spices, Mushroom, Retail Shops for Perishable Food Products etc. The Scheme would enable linking of farmers to processors and the market for ensuring remunerative prices for agri produce.

The scheme is implemented by agencies/ organizations such as Govt./ PSUs/ Joint Ventures/ NGOs/ Cooperatives/ SHGs / FPOs / Private Sector / individuals etc.

**Backward Linkage:**

- Integrated Pack-house(s) (with mechanized sorting & grading line/ packing line/ waxing line/ staging cold rooms/cold storage, etc.)
- Pre Cooling Unit(s)/ Chillers
- Reefer boats
- Machinery & equipment for minimal processing and/or value addition such as cutting, dicing, slicing, pickling, drying, pulping, canning, waxing, etc.
- Machinery & equipment for packing/ packaging.

**Forward Linkage:**

- Retail chain of outlets including facilities such as frozen storage/ deep freezers/ refrigerated display cabinets/cold room/ chillers/ packing/ packaging, etc.
- Distribution centre associated with the retail chain of outlets with facilities like cold room/ cold storage/ ripening chamber.

**18. TRAINING CENTERS AND COURSES**

There are few specialised Institutes provide degree certification in Food Technology, few most famous and authenticate Institutions are as follows:

1. Indian Institute of Food Science & Technology,  
Plot No.1, Near Maa-Baap ki Dargah, Opp to Nath Seeds,  
Paithan Road Aurangabad  
Aurangabad - 431005  
Maharashtra, India
2. MIT College of Food Technology, Pune  
Gate.No.140, Raj Baugh Educational Complex,  
Pune Solapur Highway,  
Loni Kalbhor, Pune – 412201  
Maharashtra, India

3. CSIR - Central Food Technological Research Institute (CFTRI)

Cheluvamba Mansion, Opp. Railway Museum,

Devaraja Mohalla, CFTRI Campus, Kajjihundi, Mysuru

Karnataka – 570020

Udyamimitraportal ( link : [www.udyamimitra.in](http://www.udyamimitra.in) ) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

**Disclaimer:**

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.