

**PROJECT  
PROFILE ON TEA  
PROCESSING  
UNIT**

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## INTRODUCTION

India is one of the major producer, consumer and exporter of tea in the world. Tea is mainly growing in the states like – Assam, West Bengal, Kerala, Karnataka, Tamil Nadu, parts of Uttarakhand, Himachal Pradesh and Tripura. Tea is a natural beverage brewed from the young leaves. Among them Assam is the lead producer state, produce about half of the tea, followed by West Bengal (around one fourth of the total produce). Darjeeling tea is world famous tea. Though, tea is commercially cultivated in around 16 states in India, out of which, Assam (52.0%), West Bengal (21.9%), Tamil Nadu (14.6 %) and Kerala (7.1%) produces more than 95% of the total tea in the country.

To boost up the tea industry the Tea Board of India has given initiatives in the form of subsidy for the machineries, marketing, to set up of mini (processing upto 500 kg per day capacity) and micro (200 kg per day capacity) factories in the country. This would help in improving the quality of processed tea from green leaves of small tea gardens by retaining the freshness of tealeaves. This will also help the country for employment generation.

This project profile is for setting up of a Mini Tea Factory with installed processing capacity of 100 Ton of Processed Tea, based on 200 working days per annum and 8 working hours per day.

## PRODUCTS AND ITS APPLICATION

Around three fourth of Indians drink tea. As per Tea Board of India, Tea consumption in India is growing at 3-3.35% every year. Recently processed tea segment (Canned or bottled teas, soluble tea mixes, tea beverages, frozen tea liquid, tea tablets, iced tea mixes and fruit tea mixers) is growing popularity among Indians, as people's awareness towards health is growing and as a result the shift of consumer from normal tea to free/limited pesticides tea is on the rise. However, the price for such tea is higher than ordinary tea. Similarly, flavored version of green tea has also become popular among all age groups even youngsters.

Instant tea premix serves an alternative to regular tea, and is frequently used to prepare tea within a short duration. The process of dehydrating the infusions of either black tea or green tea yields a highly hygroscopic product called Instant tea. Instant teas are available in different types namely hot- soluble and cold-soluble depending on consumer preferences.

Different raw materials are used for Instant tea preparation - green tea, black tea etc. Apart from processed tea, the low-grade tea, crude tealeaves and dust tea waste are also used as raw material. Main types of raw materials used in the industry are processed leaves, fermented dhools, refuse tea (BMF grade) in black, green teas. Quality control of ingredients for Instant tea preparation is mandatory to produce best quality Instant tea.

## INDUSTRY OUTLOOK/TREND

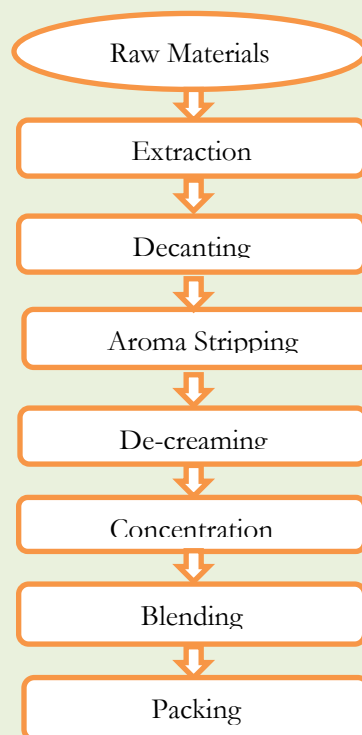
India is exported instant tea around 16% of the total tea exports. The global instant tea market size was valued at \$1.4 billion in 2019. This market is projected to reach \$2.1 billion by 2027, registering a CAGR

of 6.8% from 2021 to 2027. India is the third largest exporter of Instant tea in the world after China and Kenya. Major export destinations are USA, UK and UAE.

HS Code	Commodity	2018-2019	2019-2020	2020-2021	2021-2022(Apr-May)
21012010	INSTANT TEA	28,942.72	31,159.42	31,333.95	4,163.72

## INSTANT TEA PROCESS FLOW DIAGRAM

Instant teas are produced from black tea by extracting the liquor from processed leaves, tea wastes, or undried fermented leaves, concentrating the extract under low pressure, and drying the concentrate to a powder by freeze-drying, spray-drying, or vacuum-drying. Low temperatures are used to minimize loss of flavour and aroma. Instant green teas are produced by similar methods, but hot water is used to extract liquor from powdered leaves. Because all instant teas absorb moisture, they are stored in airtight containers or bottles. 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.



## RAW MATERIAL REQUIREMENT

Basic raw material required for this is various ranges of tea, which include high quality of tea and ordinary tea with ranges of flavour and juice. To add more varieties in tea, other raw materials of spices, elaichi (cardamom) 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.

## MANPOWER REQUIREMENT (PER MONTH)

Type	Number	Cost (Rs.)
<b>Variable Workers</b>		
Supervisor	1	18,000
Operator	2	26,000
Labour (unskilled)	4	36,000
Sub-total		80,000
<b>Fixed Staff</b>		
Accountant	1	18,000
Storekeeper	1	12,000
Sales Staff	2	30,000
Sub-total		60,000
<b>Total per month</b>		140,000
<b>Total per annum</b>		16,80,000

## LAND

Particulars	Units	Details
Land (Covered)	Sq. Ft.	4000
If rented area, rent	Rs.	60000-70000

## PLANT & MACHINERY

The company proposes to install a test and standard machines from the reputed Indian/International manufacturers. The total proposed investment in plant & machinery is Rs. 145.00 lakh including Effluent Treatment Plant. Details of the proposed machinery is given below:

Types of machinery	Quantity
Tea blending machine	1
Packing & sealing machine	1
Material handling equipment	1
Weighing machine	1
Deionized water plant	1
Spray Dryer	1
Belt conveyer	1
Centrifuge	1

## COST OF THE PROJECT

Sl. No	Particulars	Cost (Rs.)
1	Land rent	60,000
2	Plant & Machinery	145,00,000
3	Furniture	250,000
4	Working Capital	80,00,000
	<b>Total</b>	<b>2,28,10,000</b>

## IMPLEMENTATION SCHEDULE

Project Stages	Months.....						
	1	2	3	4	5	6	7
Acquisition of Land	Yellow	Yellow					
Ordering of Machinery	Light Green	Light Green					
Delivery of Machinery			Light Red	Light Red	Light Red		
Term/Wkg Loan Sanction	White	Blue	Blue				
Installation of Machinery				Brown	Brown		
Commissioning of Plant						Red	
RM/Inputs Procurement						Purple	
Manpower Appointments				White	Dark Purple		
Commercial Production							Orange

## SALES REVENUE

Particulars	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	5 <sup>th</sup> year
Opening stock (in INR lakh)	-	10.00	10.00	11.00	12.00
Production	134.00	147.00	181.00	217.00	251.00
Less closing stock	10.00	10.00	11.00	12.00	13.00
Net sale (opening stock + Production – Closing stock) (in INR lakh)	124.00	147.00	180.00	216.00	250.00

## RAW MATERIALS (in lakh)

	Year 1	Year 2	Year 3	Year 4	Year 5
Capacity Utilization (%)	60	70	80	90	100
Raw Material requirement	46	50	55	60	65

## WORKING CAPITAL ASSESSMENT

Particulars	Value (in INR lakh)
Finished Goods	6.00
Raw materials	55.00
Closing Stock	7.50
Less: Creditor	-
Paid Stock	70.00
Sundry Debtors	10.00
Working Capital (Annual)	80.00
Working Capital (month)	6.67

## PROFITABILITY CALCULATION

(in INR Lakh)

Sl. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
A	Gross Sales	124.00	147.00	180.00	216.00	250.00
	Less:					
1	Raw Materials	46	50	55	60	65
2	Power	1	1.5	2	2.25	2.5
3	Depreciation	14	14.5	16	17	18
4	Manpower	17	18	21	23	25
5	Repairs and maintenance	5	5.5	6	6.5	7
6	Packaging	14	14.5	17	18.5	20
7	Cost of production	97.00	104.00	117.00	127.25	137.50
8	Add opening stock	0	9	10	11	12
9	Less closing stock	9	10	11	12	13
10	Cost of sales	88.00	103.00	116.00	126.25	136.50
11	<b>Gross Profit</b>	<b>37.00</b>	<b>40.75</b>	<b>49.31</b>	<b>63.86</b>	<b>82.13</b>
12	Less: Interest on term loan	13.00	12.00	10.00	7.75	6.00
13	Less: Interest on WC loan	4.5	4.5	4.5	4.5	4.5
14	Less: Rent	4.80	5.28	5.81	6.39	7.03
	Less: Admin & Marketing	5.00	6.00	7.00	8.00	9.00

	expenses					
B	Total	27.3	27.78	27.31	26.64	26.53
C	Gross Profit (A-B)	9.70	12.97	22.00	37.22	55.60
	Tax (30%)	2.91	3.89	6.60	11.17	16.68
	Net Profit	6.79	9.08	15.40	26.05	38.92

## BREAK EVEN POINT ANALYSIS

Sl. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
	<b>Gross Sales</b>	124.00	147.00	180.00	216.00	250.00
A1	Less: Work in progress goods	0	9	10	11	12
A2	Add: Closing Stock	9	10	11	12	13
<b>A</b>	<b>Total Sale</b>	<b>133.00</b>	<b>148.00</b>	<b>181.00</b>	<b>217.00</b>	<b>251.00</b>
	<b>Variable &amp; Semi variable expenses</b>					
B1	Raw Materials	46	50	55	60	65
B2	Power (85%)	0.85	1.28	1.70	1.91	2.13
B3	Manpower (60%)	10.20	10.80	12.60	13.80	15.00
B4	Admin & Marketing expenses (80%)	4.00	4.80	5.60	6.40	7.20
B5	Interest on WC loan	4.5	4.5	4.5	4.5	4.5
B6	Repairs and maintenance	5	5.5	6	6.5	7
B7	Packaging	14	14.5	17	18.5	20
<b>B</b>	<b>Total Variable &amp; Semi variable expenses</b>	<b>93.05</b>	<b>98.88</b>	<b>107.9</b>	<b>114.86</b>	<b>122.33</b>
	Contribution (A-B)	39.95	49.12	73.1	102.14	128.67
	<b>Fixed &amp; Semi-fixed expenses</b>					
C1	Power (15%)	0.15	0.23	0.30	0.34	0.38
C2	Manpower (40%)	6.80	7.20	8.40	9.20	10.00
C3	Interest on term loan	13.00	12.00	10.00	7.75	6.00
C4	Depreciation	14	14.5	16	17	18
C5	Admin & Marketing expenses (20%)	1.00	1.20	1.40	1.60	1.80
C6	Rent	4.80	5.28	5.81	6.39	7.03
<b>C</b>	<b>Total Fixed &amp; Semi-fixed expenses</b>	<b>39.75</b>	<b>40.41</b>	<b>41.91</b>	<b>42.28</b>	<b>43.21</b>
	Capacity Utilization	60%	70%	80%	90%	100%
C	Operating Profit (A-B)	0.2	8.71	31.19	59.86	85.46
	Break Even Point (%)	99.50	82.27	57.33	41.39	33.58

## References

- Instant tea- Basura J. Jayasundara, <https://www.slideshare.net/JanakaBJayasundara/instant-tea-104519213>
- Video Link- <https://youtu.be/tRoLUwiQD8k>

## MANUFACTURES/ SUPPLIERS OF MACHINERY

1. Fry-Tech Food Equipments Private Limited  
 S. No. 4, Raviraj Industrial Estate,  
 Bhikhubhai Mukhi Ka Kuwa Bharwadwash,  
 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. Electrons 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,  
Of. 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

9. M/s Vikram India  
Vill : Jaladhulaguri, N.D.T. Complex  
New Karala, P.O. Dhulaguri, P.S. Sankarail  
Dist. Howrah -711 302, West Bengal, India  
Phone No. + 91 9830811833 / 9331668028  
Fax No. + 91 9830811833 / 9331668028  
Email: [sales@vikram.in](mailto:sales@vikram.in)

10. M/s Zenith Forgings Pvt. Limited  
3, Brabourne Road, Kolkata 700 001, India.  
+91 33 2242 8083/9410/6557/6558  
+91 33 2242 6556  
[zenith@cal.vsnl.net.in](mailto:zenith@cal.vsnl.net.in)

[pk@zenithforgings.com](mailto:pk@zenithforgings.com)

11. M/s Tea Mech (India)  
Tea Spares & Agencies (After Sales Service)  
K.B.Road, Jorhat, Assam. 0376 321376  
96/D Karaya Road, 4th Floor,  
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Phone: +91 33 2281 2912.  
[contact@teamechindia.com](mailto:contact@teamechindia.com)  
[teamechindia10@gmail.com](mailto:teamechindia10@gmail.com)

## STATUTORY / GOVERNMENT APPROVALS

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

## DISCLAIMER:

This is an indicative illustration of project profile; the above calculation can vary with the locations. 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.

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