

TOMATO PRODUCTS

QUALITY AND STANDARDS	:	As per FPO specifications
PRODUCTION CAPACITY/ANNUM	:	Tomato ketchup 60MT
		Tomato juice 24 MT
		Tomato puree 24 MT



1.0 PRODUCT AND ITS APPLICATIONS

A number of tomato products e.g. ketchup, juice, puree, paste, sauce, pickles are available in the market. These are items of common use in households, hotels, restaurants, institutions. Tomato puree is used as a substitute to fresh tomato during cooking. Ketchup is a sweet spicy food adjunct. Tomato juice is nutritious and appealing juice in taste.

2.0 MARKET POTENTIAL

With the increasing living standards and rapid urbanization, the demand for tomato products is going up. Tomato puree finds a big market in households when market price of fresh tomato is high. Besides the fast food chains have boosted the consumption of tomato products.



3.0 BASIS AND PRESUMPTIONS

- The unit will work for 300 days per annum on single shift basis.
- The unit can achieve its full capacity utilization during the 3rd year of operation.
- The wages for skilled workers are taken as per prevailing rates in this type of industry.
- Interest rate for total capital investment is calculated @ 12% per annum.
- The entrepreneur is expected to raise 20-25% of the capital as margin money.
- The unit would construct its own building as per F.P.O. specifications.
- Costs of machinery and equipment are based on average prices of machinery manufacturers.

4.0 IMPLEMENTATION SCHEDULE

Project implementation will take a period of 8 months. Break-up of the activities and relative time for each activity is shown below:

❖ Scheme preparation and approval	:	01 month
❖ SSI provisional registration	:	1-2 months
❖ Sanction of financial supports etc.	:	2-5 months
❖ Installation of machinery and power connection	:	6-8 months
❖ Trial run and production	:	01 month

5.0 TECHNICAL ASPECTS

5.1 Location

The unit can be set up at a suitable location where tomatoes are available in abundance. Availability of road, skilled manpower, power, water are also to be considered while selecting the location.

5.2 Process of Manufacture

Fully ripe, sound fruits having thick pulp and bright red colour are selected. These are washed, stemmed and cut into small pieces and cooked in a kettle till the skin easily separates. The heated tomatoes are passed through a pulper to remove the skin and seeds.

For making juice, sugar and salt are added and product heated to 85-90 degree C. Hot juice is filled in glass bottles, crown corked and sterilized in boiling water.

For making puree, the juice is concentrated to 9-12 degree brix. The product is filled hot in bottles, crown corked and sterilized in boiling water.

For ketchup making, the juice obtained above is concentrated along with sugar, salt, spices, preservative to about 28 degree brix. It is filled hot in glass bottles, crown corked.

5.3 Quality Control and Standards : As per FPO requirements

6.0 POLLUTION CONTROL

There is no major pollution problem associated with this industry except for disposal of waste which should be managed appropriately. The entrepreneurs are advised to take "No Objection Certificate" from the State Pollution Control Board.



7.0 ENERGY CONSERVATION

The fuel for the steam generation in the boiler is coal or LDO depending upon the type of boiler. Proper care should be taken while utilising the fuel for the steam production. There should be no leakage of steam in the pipe lines and adequate insulation should be provided.



8.0 PRODUCTION CAPACITY

Quantity	: Ketchup:60+Juice:24+Puree:24 tpa
Installed capacity	: 300 tpa tomato
Optimum capacity utilization	: 70%
Working days	: 300/annum
Manpower	: 20

Utilities

Motive Power	: 15 kW
Water	: 10 kL/day
Coal/LD oil	: 250 Kg/day



9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building Amount (Rs. lakh)

Land 500 sq.mtr	:	0.75
Built up Area 150 sq. mtr.	:	4.50

Total cost of Land and Building		5.25

9.1.2 Machinery and Equipment

Description Amount (Rs. lakh)

Steam boiler, washing machine, s.s. steam jacketted kettles, pulper, processing tank, bottle washing unit, vacuum filling machine, weighing balance, crown corking machine, working tables, handling equipment	:	5.50
Erection and electrification @ 10% of machinery cost	:	0.55
Office furniture & fixtures	:	0.45

		6.50

9.1.3 Pre-operative Expenses

Consultancy fee, project report, deposits with electricity department etc.	:	0.85
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9.1.4 Total Fixed Capital : 12.60 (9.1.1+9.1.2+9.1.3)

9.2 Recurring expenses per annum

9.2.1 Personnel

Designation	No.	Salary Per month	Amount (Rs.lakh)
Factory Manager	1	8,000	0.96
Supervisor	2	5,000	1.20
Office Assistant	2	4,500	1.08
Technician	2	4,000	0.96
Skilled workers	3	3,000	1.08
Unskilled workers	10	2,000	2.40
			7.68
Perquisites @ 15%			1.12
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Total	:	20	8.80

9.2.2 Raw Material including packaging materials

Particulars	Qty.(MT)	Rate/kg	Amount (Rs. lakh)
Tomato	300	04	12.00
Sugar	12	16	01.92
Salt	05	06	00.30
Spices, chemicals, labels	LS	-	01.42
Glass bottles 500g cap	60,000	05	03.00
Glass bottles 500g cap	1,00,000	4	04.00
Crown corks	1,60,000	0.40	00.64
Plastic caps	1,60,000	0.60	00.96
Corrugated box	12,000	8	00.96

Total			25.20

9.2.3 Utilities

	Amount (Rs. lakh)
Power	0.78
Water	0.05
Coal	0.07

Total:	0.90

9.2.4 Other Contingent Expenses

	Amount (Rs. lakh)
Repairs and maintenance@10%	1.10
Consumables & spares	0.40
Transport & Travel	0.30
Publicity	1.12
Postage & stationery	0.25
Telephone	0.12
Insurance	0.11

Total:	3.40

9.2.5 Total Recurring Expenditure

(9.2.1+9.2.2+9.2.3+9.2.4)	38.30
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9.3 Working Capital

Recurring Expenditure for 3 months	9.57
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9.4 Total Capital Investment

Fixed capital (Refer 9.1.4)	12.60
Working capital (Refer 9.3)	9.57

Total:	22.17

10.0 FINANCIAL ANALYSIS

10.1	Cost of Production	(per annum)	Amount (Rs. lakh)
	Recurring expenses	(Refer 9.2.5)	38.30
	Depreciation on building	@5%	00.22
	Depreciation on machinery	@10%	00.55
	Depreciation on furniture	@20%	00.09
	Interest on Capital Investment	@12%	02.64

	Total:		41.80

10.2 Sale Proceeds / Annual turnover

Item	Qty. (MT)	Rate	Amount (Rs.lakh)
Tomato Ketchup 1 kg bottle	30,000	50	15.00
-----do----- 500 g bottle	60,000	30	18.00
Tomato juice 1 kg bottle	12,000	35	4.20
-----do----- 500 g bottle	24,000	18	4.24
Tomato puree 1 kg bottle	12,000	40	4.80
-----do----- 500 g bottle	24,000	24	5.76

			52.00

10.3 Net Profit per year

= Sales - Cost of production

= 52.00 - 41.80

= Rs. 10.20 lakh

10.4 Net Profit Ratio

= $\frac{\text{Net profit} \times 100}{\text{Sales}}$

= $\frac{10.20 \times 100}{41.80}$

= 24.40%

10.5 Rate of Return on Investment

= $\frac{\text{Net profit} \times 100}{\text{Capital Investment}}$

= $\frac{10.20 \times 100}{22.17}$

= 46.01%

10.6 Annual Fixed Cost	Amount (Rs. Lakh)
All depreciation	0.86
Interest	2.64
40% of salary, wages, utility, contingency	5.24
Insurance	0.11
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Total:	8.85

10.7 Break even Point

$$= \frac{\text{Annual Fixed Cost} \times 100}{\text{Annual Fixed Cost} + \text{Profit}}$$

$$= \frac{8.85 \times 100}{8.85 + 10.20}$$

$$= 46.46 \%$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

Batliboi Engineers (Bangalore) Pvt. Ltd.
99/2&3, N.R.Road
Bangalore – 560 002

SSP (Pvt) Ltd.
13th Milestone, Mathura Road
Faridabad – 121003, Haryana

B.Sen Barry & Co.
65/11, New Rohtak Road
New Delhi – 110 005

Narangs Corporation
P-25/90 Connaught Place
New Delhi – 110001

Gardners Corporation
158 Golf Links,
New Delhi – 110 003

Nirmal Services
2254/23 Rajguru Road, Chuna Mandi
Paharganj
New Delhi – 110055

Narene Tulaman Manufacturers Pvt. Ltd.
Balanagar
Hyderabad – 500 037

Ganson Ltd.
645 Anna Salai
Chennai – 600006

Raylon Metal Works
Kondivitta Lane
Post Box 17426
J.B.Nagar, Andheri (E)
Mumbai – 400 059

Grovers Pvt. Ltd.
223, Kaliandas Udyog Bhavan
Prabhadevi
Mumbai – 400 025

Bajaj Maschinen Pvt. Ltd.
7/20-7/27 Jai Laxmi Industrial Estate, Site IV
Sahibabad Industrial Area - 201010
Dist.Ghaziabad, UP

Macneill and Magor Ltd.
4, Mangoe Lane
Kolkata – 700 001

D.P.Pulverisers,
Nagindas Master Road, Behind Museum, Fort
Mumbai – 400 001

Sri Venkateswara Industries,
Yadavgiri Industrial Estate,
Mysore – 570 002

Mather & Platt (India) Ltd.,
805-806, Ansal Bhawan
16, Kasturba Gandhi Marg,
New Delhi – 110 001

Somani International Corporation,
1510, Market Chamber V,
Nariman Point
Mumbai- 400 021

K.S.J. Foods & Services (P) Ltd.,
7/87, Vishnu Prasad Mahant Road
Vile Parle
Mumbai – 400057

Cowel Can Ltd.,
Industrial Area
Barotiwala, Solan, H.P.

Diwecha Glass Industries,
249, Bal Rajeshwar Road,
LBS Marg, Mulund (W),
Mumbai – 400 080

Larson & Toubro Ltd.
Ballard Estate, Douggel Road
Mumbai – 400 001

Techno Equipments,
31, Parekh Street, Girgaon
Mumbai – 400 004

International Food Machinery
Corporation,
Krishna, Opposite Deep Bhawan,
Pandit Nehru Marg,
Jamnagar-361 008 (Gujarat)

Master Mechanical Works Pvt. Ltd.
75, Link Road, Ist Floor
Adjacent to Moolchand Hospital,
Lajpat Nagar-III,
New Delhi – 110 024

Gladwyn & Co.
Poonawala Building
251, Dr. Dadabhai Nauroji Road,
Mumbai – 400 001

12.0 OTHER SPECIAL FEATURES

A careful selection of product mix is necessary based on the local market demand and availability of raw materials. The facilities can also be utilised to manufacture other tomato products, bottled fruit juices, jams, jelly etc. for fuller utilisation of capacity.