

GINGER : BLEACHED & UNBLEACHED

QUALITY AND STANDARDS : As per AGMARK and PFA specifications

PRODUCTION CAPACITY : 28 tpa

1.0 PRODUCT AND ITS APPLICATIONS

Dry ginger is produced from the green underground rhizomes of the plant *Zingiber officinale*. It is prepared by peeling off the outer skin and drying in the sun for about a week. The dry ginger so prepared is known as "unbleached ginger". Bleached ginger is produced by steeping in a solution of milk of lime and then drying. Besides India, ginger is also grown in Jamaica, Nigeria, China, Sperra Leone and Thailand. In India, ginger is predominantly grown in Kerala, North East, West Bengal, Orissa, Bihar, Madhya Pradesh, Karnataka and Himachal Pradesh.



2.0 MARKET POTENTIAL

Bulk of the ginger produced in the country is marketed in the fresh form or as dried product called sonth. A small portion is used for oil/oleoresin extraction. There is a wide fluctuation in the prices of dry commercial ginger depending on the season, place and method of processing. India exports a large quantity of dry ginger and there is considerable scope to give further boost to exports.

3.0 BASIS AND PRESUMPTION

- The unit would work for 180 days per annum on single shift basis. However, the production activity will be available only for 5 months.
- The unit can achieve its full capacity utilization during the 3rd year of operation.
- The wages for skilled workers is 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 proposes to construct own building while the cost of construction is based on local enquiry. Average cost of land and building have been taken into account as there is a large variation from place to place.

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 Process of Manufacture

Ginger rhizomes are thoroughly washed to remove adhering soil. The skin is peeled partially by mechanical peeling using an abrasive peeler. The pieces are kept steeped in milk of lime solution. It is then dried in mechanical drier at a temperature of 60°C. The drying time is usually 24 hours in cross-flow drier at 60°C or 14 hours in through-flow drier. Dried ginger is packed in suitable containers. The yield of dry ginger is about 16-22%. The technology for production of dehydrated/bleached ginger is available at CFTRI, Mysore.

5.2 Quality Control and Standards

The quality should conform to standards laid down in PFA Act. However, for better marketing of this product standards may be maintained as per "AGMARK" and BIS specifications.

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

Proper care should be taken in maintaining the drying temperature to avoid over run of drier and high electricity consumption.

8.0 PRODUCTION CAPACITY (PER ANNUM)

Quantity	:	28 MT/annum
Value	:	Rs. 19.60 lakh
Installed capacity	:	200 kg bleached ginger/day
Working days	:	150/annum
Manpower	:	15

Utilities

Motive Power	:	30 kW
Water	:	3 kL/day

9.0 FINANCIAL ASPECTS

9.1 Fixed Capital

9.1.1 Land & Building		Amount (Rs. lakh)
Land 600 sq.mtr @Rs 100 sq. m.	:	0.60
Built up Area 150 @ Rs. 3000 sq.m.	:	4.50

Total cost of Land and Building	:	5.10

9.1.2 Machinery and Equipment

Description	Amount (Rs. lakh)
Washing tanks, wooden preparation tables, peelers, slicing machines, drier, trolleys and weighing scale bag stitching machine	6.00
Erection & electrification @10% cost of machinery & equipment	0.60
Office furniture & fixtures	0.50
Total	7.10

10.1 Net Profit per year

= Sales - Cost of production
= 19.60 - 14.05
= Rs. 5.55 lakh

10.2 Net Profit Ratio

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

= $\frac{5.55 \times 100}{19.60}$

= 28%

10.3 Rate of Return on Investment

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

= $\frac{5.55 \times 100}{15.52}$

= 35.7%

10.6 Annual Fixed Cost

	Amount (Rs. Lakh)
All depreciation	0.92
Interest	1.87
40% of salary, wages, utility, contingency	2.12
Insurance	0.06
Total:	4.97

10.7 Break even Point

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

$$= \frac{4.97 \times 100}{4.97 + 5.55}$$

$$= 47\%$$

11.0 ADDRESSES OF MACHINERY AND EQUIPMENT SUPPLIERS

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

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

Gardners Corporation
158 Golf Links,
New Delhi – 110 003

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

Raylon Metal Works
Kondivitta Lane
J.B.Nagar, Andheri
Mumbai – 400 059

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

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

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

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

Ganson Ltd.
645 Anna Salai
Chennai – 600006

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

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