

7 BLEACHED AND DEHYDRATED UNIT



BLEACHED AND DEHYDRATED GINGER

1. INTRODUCTION

Ginger (*Zingiber officinale*) is a globally valued spice known for its culinary and medicinal uses, particularly in India, where it plays a key role in cooking, Ayurvedic medicine, and beverages like ginger tea. Bleached and dried ginger is in high demand among ginger products due to its extended shelf life, ease of transport, and wide applications. With its favorable climate, fertile soil, and strategic location, Uttarakhand offers a significant opportunity to cultivate high-quality ginger, and a huge number of fresh gingers are available in the local market. With the growing demand in the food, pharmaceutical, and herbal industries and the increasing trend of health-conscious consumers, the enterprise will provide a steady income for local farmers, promote sustainable agricultural practices, and contribute to the region's socio-economic development.

2. PRODUCT AND ITS APPLICATION

Dried ginger has a market as a culinary item in almost all over the world. In the culinary sector, it is used as a spice in cooking, as ginger powder in baking, and in beverages like ginger tea. The market for instant masalas has been growing for some time, and supply to restaurants, supermarket chains, etc. Aggressive advertising is needed, though all the competition comes from imported products. In pharmaceuticals, it is valued for its medicinal properties, aiding digestion and reducing inflammation, and is processed into extracts and essential oils for use in natural medicines. Additionally, it is used in cosmetics, skincare products, and hair care products. In the nutraceuticals sector, dried ginger is incorporated into supplements and functional foods for its health benefits. The global demand for bleached and dried ginger is increasing, particularly in Europe, the Middle East, and North America. Furthermore, its essential oil is used in aromatherapy for mental clarity and stress relief. This product offers a significant opportunity for an enterprise in Uttarakhand to cater to domestic and international markets, benefiting local farmers and promoting sustainable agricultural practices.

3. DESIRED QUALIFICATIONS FOR PROMOTER

To succeed in bleached and dehydrated ginger enterprise, a promoter should ideally possess knowledge and skills in horticulture, agriculture, or food processing. Specific qualifications may include:

1. A background in agriculture, botany, food science, or a related field.

2. Practical experience in horticulture, especially vegetable cultivation and post-harvest management.
3. Training in food processing, specifically in dehydration technologies.
4. Business management skills for running a processing facility.
5. Knowledge of local market trends and export requirements for dried fruits.

Additionally, a commitment to sustainable farming practices and the willingness to keep updated on fruit and vegetable processing technology advancements will be beneficial.

4. BUSINESS OUTLOOK AND TRENDS

The business outlook for a bleached and dried ginger enterprise in Uttarakhand is highly promising due to the growing demand for natural, health-oriented products in domestic and international markets. The global spice industry, particularly for ginger, continues to experience upward growth, driven by its culinary, medicinal, and wellness applications. Additionally, there is an increasing consumer preference for organic and natural ingredients in food, pharmaceuticals, and personal care products, further boosting the demand for bleached and dried ginger. Uttarakhand's favourable agro-climatic conditions for ginger cultivation and the region's strong agricultural base make it an ideal location for this enterprise. With the rise in health-conscious consumers seeking the digestive and anti-inflammatory benefits of ginger and opportunities in the export market, the business trend points toward expansion and profitability. The potential for value-added processing, such as bleaching and drying, enhances the product's appeal, offering long-term sustainability and significant growth potential in local and global markets.

5. MARKET POTENTIAL AND MARKETING ISSUES

The market potential for bleached and dried ginger in Uttarakhand is substantial, driven by increasing consumer demand for natural and health-oriented products. Ginger is widely used in the food and beverage industry, pharmaceuticals, cosmetics, and nutraceuticals. The global market for ginger, particularly in regions like Europe, North America, and the Middle East, is expanding due to the growing popularity of ginger-based products for their digestive, anti-inflammatory, and antioxidant benefits.

Fresh and dried ginger, ginger oil, and ginger powder are used in large quantities in many vegetarian and non-vegetarian food preparations in Indian, Continental, and Chinese cuisine. Ginger also has medicinal attributes and is used in many households and by pharmaceutical companies. Bit fresh ginger is available only for about 5-6 months, so the demand for bleached and dehydrated ginger is increasing.

Marketing issues to consider:

Quality Control: Ensuring the dehydrated ginger maintains its flavour, colour, and nutritional value during dehydration.

Storage and Packaging: Proper storage and packaging are crucial to ensure a long shelf life and prevent spoilage.

Competition: As the demand for dried ginger grows, competition from other products could be challenging.

Branding and Promotion: Building a brand in the health food sector is critical, and proper marketing strategies targeting health-conscious consumers and exporting nations will be necessary.

Marketing Strategy

Manual and sun-drying methods have been in vogue for dehydration for a long time, but production is limited, and quality is not up to the mark. Hence, mechanically bleached and dehydrated ginger has become very popular. Restaurants, eateries and Dhaba's, clubs, caterers, the food processing industry, and pharmaceutical companies are the main consumers. There are very good export markets as well, but the contemplated capacity of the project does not warrant this.

6. RAW MATERIALS REQUIRED

The all-important raw material is fresh ginger. The requirement during the season, even at 100 %, will be 30 tons, and procurement should not be a problem. Bags made from food-grade plastic shall be required for inner packing and large-size bags for outer packing.

- Fresh ginger
- Lime
- Polythene

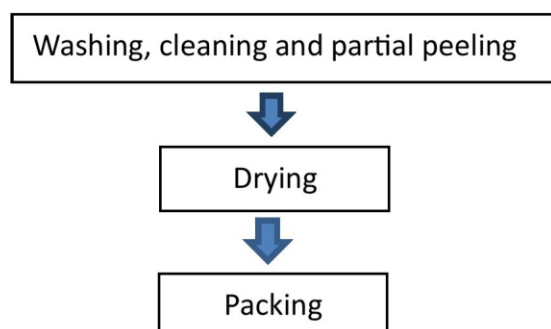
Ginger to be of fresh and good quality

7. MANUFACTURING PROCESS

Fresh ginger is cleaned thoroughly to remove soil and dirt. The outer skin is peeled with the help of a stainless-steel knife. The ginger is then washed and soaked in limewater for 12 hours, then dried. This process is repeated two or three times to get a dried moisture level of 10-12 percent. The product is then packed in polythene-lined gunny bags.

Ginger is washed and cleaned in water, and then the skin of the ginger is peeled partially with the help of a peeling machine. It is then dried in an electrically operated tray drier at a temperature of about 60oC. Even if ginger is to be used for extraction purposes, this temperature is advisable as the oil content of ginger is not affected till 800C. Drying time is 24 hours in cross-flow type drier and 14 hours in through-flow drier. Dried ginger slices are packed in polythene bags and sealed. The average yield after drying is around 25%.

CFTRI, Mysore, has developed the technical know-how successfully. The process flow chart is as follows:



8. MANPOWER REQUIREMENT

Sr. No	Particulars	No.	No of month in year	Wages/Salaries per month (Rs. In Lakhs)	Annual Expense (Rs. In Lakhs)
1	Self-employed (Owner)	1	-	-	-
2	Skilled Labor (Processing)	2	6	0.12	0.72
3	Semi-skilled Labor	3	6	0.06	1.08
4	General Labor (Packaging)	1	12	0.1	1.2
Total					3.00

9. IMPLEMENTATION SCHEDULE

Sr. No.	Activity	Time Required (in months)
1	E M Registration & approval	1
2	Financial/Loan from Banker or Financial Institutions	2
3	Power connection/Building construction Six months	1
4	Machinery procurement & Trial run.	2
5	Recruitment of Staff & Labor	1
6	Actual commercial production	1
Total		8

10. COST OF PROJECT

Sr. No	Particulars	Annual Expenses (Rs. in lakhs)
1	Land	-
2	Building (Rented)	0.30

3	Plant & Machinery	1.65
4	Equipment and Furniture Exp.	0.50
5	Misc. Fixed Asset	0.02
6	Preoperative & Preliminary Exp.	0.05
7	Working Capital	80.25
	Total Project Cost	82.77

11. MEANS OF FINANCE

Sr. No.	Particulars	Annual Expenses (Rs. in lakhs)
1	Promoter's contribution	33.11
2	Bank Finance	49.66
	Total	82.77

LIST OF MACHINERY & EQUIPMENT

A. MACHINERY

Sr. No	Particulars	Unit	Price per Unit (Rs. in lakhs)	Total Amount (Rs. in lakhs)
1	Farming Tools	0	0.050	0.050
2	Ginger Peeling Machine (Automatic)	2	0.500	0.500
3	Electrically-operated Tray Drier-48 trays	1	0.700	0.700
4	Weighing-scales, sealing machine, etc.	1	0.200	0.200
5	Washing Tank			0.200
Total Amount.				1.450

B. FURNITURE & EQUIPMENT

Sr. No	Particulars	Unit	Price per Unit (Rs. in lakhs)	Total Amount (Rs. in lakhs)
1	Chair, Table and Work Tables	-	0.00	0.20
Total Rs.				0.50

The availability of raw materials and equipment from local manufacturers is a promising advantage for the entrepreneur. Choosing the right mix of products and suitable machinery and tooling to facilitate modern and flexible processes is essential. Here are some of the suppliers of business equipment an entrepreneur can consider:

1. Shiv Shakti enterprises

No. 666/2, Street No. - 8, Chander Lok, Shahdara,

Delhi, India

2. Super Engineering Works

C-263, C Block, Sector 10, Noida, Uttar Pradesh 201301

3. Micro tech Engineering

Snap Story, Block V, Krishan Vihar, Delhi, 110083

4. B.S. Engineering works

Superior Selections, Block RZ, Khayal, Vishnu Garden, New Delhi, Delhi, 110018

Besides these, online platforms such as India Mart, Trade Mart, Amazon, Flipkart, etc., can also be explored for online ordering.

12. SALES REALISATION

Sr. No	Product	Sales in Percentage	INR
1	Bleached and Dehydrated Ginger	25.0%	18000000
	Total	100.00%	18000000

13. PROFITABILITY CALCULATION

Sr. No	Particulars	Annual Expenses (Rs. in lakhs)
A.	Sales realisation	180.00
B.	Cost of production	
i)	Raw materials	120.00
ii)	Utilities	0.75
iii)	Manpower Cost (Salaries/wages)	3.00
iv)	Administrative expenses	0.60
v)	Packaging Cost	2.00
vi)	Material Lost Cost	0.20
vii)	Selling & distribution expenses	1.20
viii)	Repairs & maintenance	0.00
ix)	Rent	0.30
x)	Interest	6.12
xi)	Misc. expenses	0.00
	Total (B)	134.17
	Gross profit/loss (A – B)	45.83
	Less: Depreciation	0.24
C.	PBIT	45.59
D	Income-tax	-
E	Net profit/loss	45.59
F.	Repayment (Annual)	-5.70

G	Retained surplus (E-F)	51.29
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14. BREAK-EVEN ANALYSIS

Fixed cost	
Land & Building Rent	0.30
Depriciation	0.24
Interest	6.12
Manpower	0.90
Total Fixed cost	7.56
Variable cost	
Raw materials	120.00
Utilities	0.75
ManPower	2.10
Administrative expenses	0.60
Selling & distribution expenses	1.20
Total Variable cost	124.65
Contribution margin	31%
Break-Even Point in Value	2.34

15. STATUTORY/GOVERNMENT APPROVALS

For a dehydrated kiwi business, the following licenses and approvals are required:

1. FSSAI License: Ensure compliance with food safety regulations.
2. Trade License: Obtain from the local municipal authority.
3. GST Registration: For the sale of goods and services.
4. MSME Registration: To avail of government subsidies and support.

16. TRAINING CENTERS AND COURSES

Entrepreneurs looking to enter kiwi farming and dehydration can pursue relevant courses at the following institutes:

1. FCI Institute of Management, Dehradun, Uttarakhand.
2. National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Haryana.

Uttarakhand farmers can capitalize on the growing demand for dehydrated fruits and secure a sustainable and profitable business by cultivating kiwi and engaging in dehydration.

The Swayam portal (link: <https://swayam.gov.in/>) can also be accessed for enhanced learning on business commerce, accounting, production, marketing, and areas of entrepreneurship.

Entrepreneurship programs that help run businesses successfully are also available from institutes like the Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer

Only a few machine manufacturers are mentioned in the profile, although many 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.