

# **KHAKHARA SEMI AUTOMETIC PLANT**

## **1. INTRODUCTION:**

At present mostly Khakhara are made by hand, using traditional methods. This process requires a lot of time and consumes a lot of oil or ghee and gas. We need to depend on workers. In addition, the quality cannot be maintained uniformly because there arises difference from hand-to-hand of different workers. Moreover, this process is not so hygienic. Therefore hand-made khakhara are not so hygienic and taste & quality are not easy to maintain. The production cost is also very high. Whereas the Khakhra made from Semi-Automatic Machine are hygienic, and of good quality. Uniform taste and quality is maintained in machine. The production cost is also comparatively low.

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

Khakhara is a thin cracker common in the Gujarati and Rajasthani cuisines of western India, especially among Jains. It is made from mat bean, wheat flour and oil. It is served usually during breakfast.

Khakhara is made in several varieties, such as methi (fenugreek), Khakhara is made in several varieties, such as methi (fenugreek), jeera (cumin), bajri, pudina, garlic and ajwain, among others. Mungdiis a sweet type of khakhra.

It is a terrific tea time snack! It is very versatile and can be eaten as chips with a dip, topped with stuff and as chat.

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

Do not require any specific qualification.

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

Khakhra is one of the popular vegetarian roasted thin cracker bread or snack from the Gujarati cuisine. Khakhra is a common Gujarati Indian bread or snack item served during breakfast or snack time. Khakhra is simple to prepare and is made from whole wheat flour adding other ingredients and spices.

Khakhra is a crispy chapatti or roti. There are several varieties of Khakhra like the methi, jeera, bajri, garlic, math and masala flavors. Khakhra is usually eaten with chutney, pickles, ghee or yoghurt. The Khakhra is a favorite ethnic food of the vegetarian Gujarati people and popular in north western India region too.

It is a good non-fried item and can also be made with or without oil. In the state of Gujarat there are a number of commercial manufacturers or small scale industries catering to a variety of Khakhra and being sold to other states of India.

The Khakhra is more like a readymade roasted papad. They are also tailor-made range according to the taste of the customers and also for diabetic patients preparing the karela khakhra or methi khakhra and many more. It's a very crispy, crunchy, mouthwatering tasty nutritious and a light snack.

Easy to carry and most of the people of Gujarat carry these as snack during train travel. As preparing of Khakhra is very simple, I would always recommend all to prepare fresh Khakhra coz they would be more hygienic and nutritious.

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

### **Snack Market in India:**

India is one of the largest snack markets in the Asia-Pacific region. India contributes three percent to the total Asia-Pacific snack market revenue. The snack food market in India is valued at Rs. 1530 crore and is one of the largest markets in the world, out of which potato chips holds the major market share of around 85%. The Indian snacks market is worth around US\$ 3 billion, with the organized segment taking half the market share, and has an annual growth rate

of 15-20 per cent. The unorganized snacks market is worth US\$ 1.56 billion, with a growth rate of 7-8 per cent per year. There are approximately 1,000 types of snacks and another 300 types of savories being sold in the Indian market today.

Potato chips and potato-based items are the most popular products with more than 85 per cent share of the salty snack market. In the organized potato chips market, PepsiCo's Lays and Haldiram's are some of the leading players. There is a big market for snacks in India as urban Indian consumers eat ready-made snacks 10 times more than their rural counterparts. Indians in the western regions eat the maximum amount of snacks, followed by the people in northern region. There is a widespread recognition in India that consumers are likely to replace light meals with snacks.

### **The Indian Snack Market:**

The Indian Snacks in India, the local fare offers a wide variety of snack options, ranging from roasted banana wafers and soya chaklis (crispy savory spirals) to samosas (pastries filled with potatoes/peas). These namkeens (snacks) are typically eaten as a side dish with meals or make great accompaniments to tea, coffee, and other beverages. Of course, these snacks vary by region, with each having its own special recipe. The snack food industry in India is highly fragmented, with the market dominated by made-at-home snacks or savories sold by local vendors. Because of expanding nuclear families and an increase in the number of female professionals, India has witnessed a significant rise in the demand for ready-to-eat snacks.

### **The Namkeen Market:**

The branded salty snacks market (size: Rs 1200 crores) is 40% of the total market (size: Rs 300 crores). The branded segment is growing at the rate of 25% per annum. There is no branded Khakhara in the market, only unbranded ones. Providing a branded khakhara in different flavors and packaging with seal of quality will give us the first mover advantage. As western India consumes the

maximum snacks, selling Khakhara is going to prove fruitful in the long run till the brand makes a niche for itself.

### **The need of the hour - From the consumer's point of view:**

Khakhara is an easily available ready to eat snack. It should not be too costly It should not contain high calories or should not be fried. It is something to munch on when hungry but should not be heavy on the stomach or lead to loss of appetite. It should be tasty and crunchy. It should not be perishable and easy to store. It should be branded.

### **Target Audience:**

- i. **Demographic profile:** All age groups.
- ii. **Psychographic profile:** People who love to eat home- made snacks which are crispy and crunchy. They are health conscious and stay away from fried and oily junk food. They are always on the move so like munching on small tit bits in between meals. They are quality and brand conscious. They don't have enough time to prepare the snacks at home. They either live alone because of their jobs or studies or live in a nuclear family where the couple is extremely busy. They still relish the home made snacks but end up buying alternatives from the market.

### **Competition:**

- i. **Frito Lay India (a subsidiary of PepsiCo):** It has Lays and Kurkure in the market.
- ii. **ITC:** It has Bingo which is trying hard to compete with Kurkure. It has a Khakra based flavor under the name of Bingo Mad Angles.
- iii. **Haldiram Foods:** It has the widest distribution network of Namkeens in India. Its air tight packaging also makes it the most sought after snack in the Namkeen category.
- iv. **SM Foods:** It has two main brands: Peppy and Piknik.

## **Market Campaign:**

Media Message: The basic media message will concentrate on bringing out the health factor and home-made taste of the product to capture the attention of the target audience, and break through the clutter.

The campaign will take a comic route to connect with the audience as humor interests everybody irrespective of age, gender and social background. This will help in creating a single message for the scattered target audience.

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

Basic raw materials required for Khakhara is: Wheat flour (and/or refined flour), Salt, Masala, Oil, Water or Milk.

## **7. MANUFACTURING PROCESS:**

To make Khakhara, the dough is converted into thin sheets. The sheets are cut in round shapes. They are baked on the Hot Plate and later roasted in the roasting machine to reduce the moisture content fully. Properly packed Khakhra have a longer shelf life.

Machines involved in making Khakhara:

### **1. Dough Making Machine:**

To prepare the dough for Khakhara by mixing flour with salt and water.

### **2. Extruder for Khakhara:**

To extrude the dough for Khakhra into small dough balls for making thin sheets.

### **3. Sheet Making & Cutting Machine:**

To form very thin sheets of dough of the required thickness and cut them into round shapes.

4. Hot Plate:

To cook and bake the Khakhara till golden brown.

5. Roasting Machine:

To roast the baked Khakhara, reducing its moisture content and preparing it for packing.

6. Vacuum Packing Machine

To pack the Khakhra into suitable printed vacuumed packets.

## 8. MANPOWER REQUIREMENT:

The enterprise requires 8 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
1	Un Skilled Workers	8,000.00	32,000.00	4	4	4	4	4
2	Accountant	8,000.00	8,000.00	1	1	1	1	1
3	Store Keeper	6,000.00	6,000.00	1	1	1	1	1
4	Production Supervisor	9,000.00	9,000.00	1	1	1	1	1
5	Security Personnel	6,500.00	6,500.00	1	1	1	1	1
6	Manager	20,000.00	20,000.00	1	1	1	1	1
7	Skilled Labour	10,000.00	20,000.00	2	2	2	2	2
	<b>Total</b>		101,500.00	11	11	11	11	11

## 9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 13 months' time as detailed below:

<b>Sr. No.</b>	<b>Activity</b>	<b>Time Required (in months)</b>
1	Acquisition of premises	3.00
2	Construction (if applicable)	5.00
3	Procurement & installation of Plant & Machinery	2.00
4	Arrangement of Finance	2.00
5	Recruitment of required manpower	1.00
	Total time required <i>(some activities shall run concurrently)</i>	13.00

## **10. COST OF PROJECT:**

The project shall cost ₹ 19.25 lacs as detailed below:

<b>Sr. No.</b>	<b>Particulars</b>	<b>INR in Lacs</b>
1	Land	7.50
2	Building	3.20
3	Plant & Machinery	2.37
4	Furniture, Electrical Installations	1.00
5	Other Assets including Preliminary / Pre-operative expenses	0.24
6	Margin for Working Capital	4.95
	<b>Total</b>	<b>19.25</b>

## **11. MEANS OF FINANCE:**

Bank term loans are assumed @ 60% of fixed assets. The proposed funding pattern is as under:

<b>Sr. No.</b>	<b>Particulars</b>	<b>INR in Lacs</b>
1	Promoter's contribution	4.81
2	Bank Finance	14.44
	<b>Total</b>	<b>19.25</b>

## **12. WORKING CAPITAL CALCULATION:**

The project requires working capital of 4.95 lacs as detailed below:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	2.48	0.25	0.62	1.86
2	Receivables	1.24	0.25	0.31	0.93
3	Overheads	1.24	100%	1.24	0.00
4	Creditors	-		0.00	0.00
	<b>Total</b>	4.95		2.17	2.78

### 13. LIST OF MACHINERY REQUIRED:

Sr. No.	Particulars	UO M	Qty	Rate (INR)	Value
					(INR in Lacs)
1	Dough Kneading Machine	NOS	1	INR 6,500.00	0.07
2	Dough cutting Machine		1	INR 40,000.00	0.40
3	Semi-automatic Khakhara Roasting Unit		1	INR 190,000.00	1.90
	<i>sub-total Plant &amp; Machinery</i>				<b>2.37</b>
	<b>Furniture / Electrical installations</b>				
a)	Office furniture	LS	1	50000	0.50
b)	Stores Almirah	LS	1	0	0.00
c)	Computer & Printer	L. S.	1	50000	0.50
	<i>sub total</i>				<b>1.00</b>
	<b>Other Assets</b>				
a)	preliminary and preoperative				0.24
	<i>sub-total Other Assets</i>				0.24
	<b>Total</b>				<b>3.60</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. 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,  
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	INR In Lacs	43.20	50.40	57.60	64.80	72.00
3	Raw Materials & Other direct inputs	INR In Lacs	15.83	18.47	21.11	23.75	26.39
4	Gross Margin	INR In Lacs	27.37	31.93	36.49	41.05	45.61
5	Overheads except interest	INR In Lacs	12.10	12.85	14.37	14.82	15.12
6	Interest @ 10 %	INR In Lacs	1.44	1.44	0.96	0.72	0.58
7	Depreciation @ 30 %	INR In Lacs	1.66	1.18	0.83	0.59	0.53
8	<b>Net Profit before tax</b>	INR In Lacs	<b>12.17</b>	<b>16.45</b>	<b>20.33</b>	<b>24.92</b>	<b>29.38</b>

The basis of profitability calculation:

This unit will have 60 Ton /Annum capacity. 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 litre. 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 34.42% of projected capacity as detailed below:

Sr.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	72.00
2	Variable costs	₹. In Lacs	26.39
3	Fixed costs incl. interest	₹. In Lacs	15.70
4	BEP = $FC/(SR-VC) \times 100$ =	% of capacity	34.42 %

### 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, Retailers 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 center associated with the retail chain of outlets with facilities like cold room/ cold storage/ ripening chamber.

## **18. TRAINING CENTERS AND COURSES**

There are few specialized 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

Udyamimitra portal (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.

Source:- Udyami Mitra/Sidbi