

Project Profile: Flattened Rice Manufacturing



Project Profile 1: Flattened Rice Manufacturing

Introduction

The second-largest producer of paddy is India. Paddy, which is grown on more than 40 million hectares, is India's most important cereal crop. It has evolved into a staple dish for the population of India. Rice flakes can be used in a variety of cuisines by being combined with sweetness and spices. These are frequently eaten as breakfast because they are filling and light. In India, particularly in Kerala, paddy is abundant, therefore there is no scarcity of the raw material.

Products & Its Application

India consumes a lot of rice flakes since they are high in fibre and carbohydrates. Importantly, persons with diabetes, high blood pressure, etc. can also ingest it. It can become more wholesome and palatable in different parts of India by varying the recipes and adding sweetness, spices, veggies, etc.

Desired Qualification for Promoter

The promoter may have experience in selling consumer food products or having knowledge of sourcing good quality rice. Academic qualification in science or food technology may be advantageous to produce quality flattened rice.

Industry Outlook and Trends

Increasing processed food demand coupled with ready to eat healthy nutritional meals is expected to drive global cereal ingredients market over the forecast period. Cereal ingredients are expected to be preferred over other breakfast options including high calorie spreads, toasts, meat based dishes, breads and others owing to high nutritional value as compared to others. Huge and fast cereal ingredients market growth can be predicted in food ingredient sector in coming years. Major cereal ingredients includes wheat flakes, corn puffs, wheat chunk,

rice flakes, corn flakes, oat grit, corn chunks, barley puffs, rice chunks and others. Growing prevalence of health issues is expected to contribute towards the cereal ingredients market growth across the globe as developing cereal ingredient market is expected to diminish the health related issues majorly obesity based concern on global level. In addition, changing food habits mainly in developing regions is also expected to enhance market demand over the forecast period. Diet conscious and healthy eating habits of consumer are switching to cereal market. People are opting for healthy and nutritious foods over breads, pizzas and others. Increasing population coupled with widening natural and nutritive food demand over the processed food are predicted to uplift global cereal ingredients market growth in coming years. During grain extrusion process, there is a significant amount of protein disruption resulting into deteriorating cereal ingredient quality. This factor is expected to restrain the market over the forecast period. In addition, volatile prices of raw materials are also expected to act as major hindrance for the global cereal ingredients market growth.

Global cereal ingredient market is segmented on the basis of type and application. Type basis includes wheat along rice, oats, barley and corns. Wheat cereal ingredient can be further classified as wheat puff, wheat others, wheat Grit, wheat flake and wheat chunk, whereas rice cereal ingredients can be categorized as rice flake, rice puffs, rice grit, rice chunks and rice others. Oats cereal ingredients can be segmented into oats grit, oats flakes, oats puffs, oats chunks and others while barley cereal ingredients can be classified as barley puffs, barley chunks, barley grits, barley flakes and others. Corn cereal can be categorized as corn chunks, corn flakes, corn puffs, corn grits and others. Application basis is segmented into hot cereal and cold cereal.

Market Potential and Market Issues, If Any:

Due to its nutritional content, it is eaten by people from all social classes and with a variety of dietary preferences. It is a common product. A large wave of growth is projected as the market is predicted to grow by up to 15-18% annually thanks to modern retail's availability of new Indian and Western contemporary product recipes. Because there is such a high demand for rice flakes on the market, they have a fantastic market position. The market for food manufacturers can develop significantly with the application of several food standards including FSSAI, FSMS, ISI, and ISO standards and great/attractive packaging.

Raw Material Requirements

The most essential raw ingredient is paddy. The package must be of food-grade paper and HDPE with an inner liner. For the purpose of packaging spice in bunches, cardboard boxes are needed.

Manufacturing Process

Graded, sorted paddy is stored in wooden drums or tanks. Boiling water is poured on the paddy. It is allowed to soak for about 30 hours. The paddy is removed from water a couple of hours before the commencement of work. Every time about 25 kg. Of paddy, duly roasted in contact with fine sand tills two or three grains burst, is fed into the flaking machine after removing sand. The rollers of the flaking machine are adjusted according to the fineness of the flakes desired. In a short time the paddy is pressed into fine flakes. By pressing scrapers against the rim all flakes are collected near the centre of the drum and are removed by hand. The sorted and graded flakes thus obtained are packed in suitable polythene lined jute bags.

Manpower Requirement

For the production of peanut butter following category of manpower will be required for day to day production.

Sr.No.	Designation	No. of employees required	Amount (Per Person)	Total
1	Unskilled Labour	2	9,000	18,000
2	Production Manager	1	25,000	25,000
3	Skilled Labour	2	12,000	24,000
4	Accountant	1	16,000	16,000
5	Office Assistant	1	7,000	7,000
Total				90,000

Implementation Schedule

The project can be commissioned within eight months of tying up of finance. There is no complicated machinery and equipment required and space required is also small. Therefore, implementation time is eight months.

List of Machinery

Sr. No.	Plant & Machinery / Equipments
1	Flaking Machine
2	Roasting Machine
3	Furnace
4	Paddy Soaking Tank
5	Storage Tank
6	Packing, Filling and Sealing Machine
7	Weighing Scale
8	Material Handling Equipment

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, 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

Cost of Project

The cost of project as per market rate of factory building, machinery, and miscellaneous items, preliminary and pre-operative expenses works out as under:

Sr. No.	Particulars	Amount
1	Land(rent)	30,000
2	Plant & Machinery	4,50,000
3	Furniture & Electrical Installations	90,000
4	Miscellaneous	40,000
Total		6,10,000

Means of Finance

Based on the present norms of bank, means of finance is worked out as under:

Sr. No.	Particulars	Amount
1	Promoter's contribution	2,06,500
2	Bank Finance	4,93,500
Total		7,00,000

Break-Even Analysis

Sr. No.	Particulars	Details
1	Fixed Investment (A)	610000
2	Loan	493500
3	Interest Rate @7.5% on Loan (B)	37012.5
4	Capital Investment	206500

5	Depreciation @10% on Capital investment (C)	20650
6	Total Fixed cost (D = A+B+C)	667663
7	Variable Cost (E)	60000
8	Manpower cost (F)	90000
9	Total Variable cost (G = E+F)	150000
10	Number of Units Sold/Month (H)	40000
11	Average Variable cost (I = G/H)	3.75
12	Selling price per unit (J)	40
13	Contribution margin (K = J-I)	36.25
14	Beak Even Point in Units (D/K)	18418

Assumptions

- Interest rate is assumed at the rate of 7.5% p.a.
- Depreciation on capital investment i.e. machinery would be 10% p.a.
- Unit can produce 40000 units of packets p.m. at full capacity then it would be at breakeven when they will sell 18418 units of Flatenned Rice packet of 500gm.
- Variable cost comprises of the raw material price p.m. and electricity and other administrative/utility expenses.

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 Labeling
- B. Signage and Customer Notices
- C. Licensing Registration and Health and Sanitary Permits

Backward & Forward Integration

The program's goal is to deliver efficient and seamless backward and forward integration for the processed food sector by filling in the supply chain's gaps in terms of raw material availability and connections to the market. The programme offers financial support for the establishment of main processing/collection centres at farm gates and contemporary retail stores at the entrance, as well as connectivity through insulated/refrigerated transport.

The programme is applicable to both horticultural and non-horticultural perishable goods, including fruits, vegetables, dairy products, meat, poultry, fish, ready-to-eat foods, honey, coconut, spices, and mushrooms. The Scheme would make it possible to connect farmers with processors and the market to guarantee that agricultural produce would fetch fair prices.

Training Centers/Courses

For food processing industry training and short term courses are available at Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu and Central Food Technological Institute, Mysore, Karnataka and Ground Nut Research Centre, Junagarh, Gujarat.

Udyamimitra portal (ink: www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship development programs help to run businesses successfully and are available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.