

Shelf stable jowar flour

1. Introduction:

Sorghum (*Sorghum bicolor* L.) or Jowar, as it is commonly called is usually grown in areas with low rainfall and poor irrigation facilities. Jowar constitutes one of the most important foods for millions of underprivileged sections of the population. In India Jowar is produced around 7 million tonnes annually. The grain is ground to flour and consumed in the form of rotis (unleavened pancake). Jowar is generally ground to whole grain flour as and when required in small quantities by traditional consumers. The major setback of storing of Jowar flour is the development of rancidity within few days of storage Jowar is rich in oil containing 3-4% and due to enzyme action the flour become rancid.

2. Market potential:

The process developed at CFTRI involves a standardized process where in a shelf stable Jowar flour is obtained, which has a storage period of 6-8 months. The rotis prepared from the process flour is soft and lighter in colour, the dough also has better rolling properties. With the increased shelf life and quality characteristics, the product can be manufactured and marketed as a regular commodity like maida, ragi flour etc.

3. Raw material:

All varieties of Jowar produced in the country can be processed.

4. Process:

Jowar grains → Cleaning & De-stoning → Special treatments → Polishing
Grinding → Sieving → Packaging →

5. Equipments:

Principal equipments: Cleaner/grader, Destoner, Conditioning units, Conveyors, Elevators, Dryer, Sifter, Polisher, Air classifier, Boiler, etc.

Auxiliary equipments: Material-handling units - trolleys, trucks, cranes, weighing scales etc

6. PROJECT COST - FIXED COST - WORKING CAPITAL (in Rs. '000)

a) Land	175.00
b) Building and civil construction	4100.00
c) Plant and machinery	2494.00
d) Auxiliary equipments	785.00
e) Other fixed assets	200.00
f) Pre-operative expenses	634.00
Total fixed capital	8388.00
Working capital margin	2385.00
Total Project cost	10773.00

Means of Finance

- Promoter's contribution	4958.00
- Long Term loan	5815.00

7. PRODUCTION CAPACITY

Capacity of the unit: 16000 Kg (raw material /16 hrs per day- 2 shifts)

Working: 300 days per annum

8. TECHNOLOGY/MANUFACTURING PROCESS - Availability

The technology for the manufacture of shelf stable Jowar flour has been developed at CFTRI, Mysore, using appropriate equipment for optimal product recovery of right quality. The CFTRI has the necessary expertise to provide technical assistance and guidance for setting up the project. The CFTRI can offer further technical assistance for project implementation under technical consultancy arrangements.