

MAIZE FLAKES

INTRODUCTION

At present, maize is converted into semolina and flour, and used for preparation of upma, porridge, roti, etc. By flaking the maize, its use is enhanced. Maize flakes make an excellent fried snack as well as other breakfast item as in the case of rice, wheat or jowar flakes. The flakes obtained by this continuous process are of excellent quality without damaged edges. There is hardly any breakage at all and the yield is at least 68% on cleaned maize.

The flakes make excellent crispy fried chewda. As the grain is de-branned, de-germed, and aspirated before being flaked, the flakes are free of all bran and germ specs. They are free of any sand particles also. The flakes produced thus can be an excellent raw material for manufacture of vitaminised maize flakes (enriched maize flakes), coated with vitamins and nutrients with suitable addition of flavouring and taste agents making it a 'Ready-to-eat' breakfast food. The product can be consumed in its ready form or along with milk, curd, hot water, etc., as a staple breakfast. It can be prepared in a variety of traditional ways as bhath, upma, chewda, chow-chow, gravy etc., as quick cooked/fried food.

RAW MATERIAL – Sources

The main raw material used in the manufacture of Maize

INSTALLED CAPACITY

Suggested economic unit

Capacity - 653 tonnes/annum (2 shifts/day)

Working capacity - 300 days/annum

Optimum capacity utilization – 70%

TECHNOLOGY/MANUFACTURING - Availability

Maize → Cleaning/Destoning → Soaking → Draining → Roasting → Resting → De-branning/Degerming → Flaking → Shifting → Drying → Packing

PLANTS AND MACHINERY

Principal equipments: Grain cleaner, De-stoner, Boiler, Vibratory feeder, Elevator, Rotary brushing unit, Polisher (abrasive & Friction), Separator, Flaker, Grader, Vibro fluidized bed drier, Heat sealer.

Auxiliary equipments: Hand & Platform Trolley, Moisture meter, Oven, Hydraulic, Pallet truck & Weighing machine

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

a)	Land (2000 sq. mt)	160.00
b)	Building (430 sq. mt)	1643.00
c)	Plant and machinery	4353.00
d)	Miscellaneous fixed assets	452.00
e)	Pre-operative expenses	200.00
	Total fixed capital	6808.00
	Working capital margin	200.00
	Total Project cost	7008.00

ANY OTHER SPECIAL FEATURES

During the manufacture of the maize flakes, about 6% of germ, 16% of bran and flour, 7% of fine grits and about 3% of broken flakes are obtained in this method as by-products. The bran and flour obtained during the process can be used as animal feed. The broken maize flakes could be used in preparation of traditional food products.

TECHNOLOGY/MANUFACTURING PROCESS – Availability

The technology for the manufacture of maize flakes 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.

For Technology and Technical assistance please contact

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