CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSORE – 570 020

IMPROVED MAIZE FLOUR

(Process code – CCP 2650)

INTRODUCTION

CFTRI has developed a technology for to production of ***improved flour*** from coarse grains viz. maize and sorghum etc. The product viz. the improved flour, obtained from this process has mainly advantages over the whole meal flour that is commonly made by traditional consumes of these grains at home which involves grinding of the whole grain to flour tin plate mills or chakki mills, The flour so obtained has the draw back of deteriorating fast due to hydrolytic and oxidative rancidity on account of considerable proportion of fat in the Flour.

The habitual consumers at home use the flour for making roti. Due to absence of gluten, the flour when mixed with normal water does not give dough that is visco-elastic (similar to that of wheat flour dough). In order to impart some sheetability properties, flour is normally mixed with hot water and then kneaded thoroughly. In spite of this, a roller pin, as practiced for the wheat dough, cannot roll the dough easily. Instead, the traditional consumers try to flatten it by repeatedly tapping with palm of he hand while rotating it at the same time. This involves a knack and experience, and it is not easy to make good rotis with the maize flour. On account of these characteristics of the flour, consumption of maize, and its utilization for preparation of rotis, is not popular among the nontraditional users, if a flour is made available to the common consumer, from which can easily rollable dough can be obtained by an addition of normal tap water, it is expected that it will have wide popularity among the traditional as well as the nontraditional consumers of the grain. Such product namely improved flour would also provide value addition to the grain and diversification of the products based on it.

In the CFTRI technology, maize grits obtained by dry milling process are used which have low fibre and low oil content. On account of this the shelf stability of products made from these grits is better. This flour has all the desirable properties to render it suitable for rolling it into thin sheet as is common for the preparation of wheat roti or chapati.

PROCESS DESCRIPTION

Cleaning → Grinding → Sieving → Extrusion cooking → Drying → Grinding → Sieving → Mixing → Packing

PLANT & MACHINERY

Principal equipments

Grinder, Sifter, Extruder, Drier, Mixer, Packaging machinery etc.

Auxiliary equipments

Working tables, Vessels, Weighing scales etc.

PROJECT ECONOMICS

Capacity	:	2.5 Ton of prepared raw material per shift/day
Working days	:	300
Number of shifts	:	2/day

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

a)	Land & land development 2000 (Sq. Mt.)	300.00
b)	Building & construction 940 (Sq. Mt.)	3760.00
c)	Plant & Equipments	1950.00
d)	Preliminary & preoperative expenses	100.00
e)	Other fixed assets	200.00
	Total fixed cost	**6310.00**
	Working capital (15 days)	450.00
	Total project cost	**6760.00**
	Means of finance	
	Term loan -	4732.50
	Promoter contribution -	2027.50