

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSORE

SUPERIOR QUALITY OF WHITE PEPPER

INTRODUCTION

Pepper is the dried fruit of the perennial climbing vine, *Piper nigrum L* (Piperaceae), native to southern India. It is now cultivated in India, Indonesia, Malaysia, Sri Lanka, Vietnam and Brazil. Pepper is a popular spice used throughout the world in culinary preparations and processed food products. The annual world production of pepper is 2,12,000 tones of which black pepper and white pepper account for 1,68,700 and 43,500 tones respectively. Sarawak, Muntok and Brazilian white peppers are well known in trade.

White pepper is preferred over black pepper in certain preparations by virtue of its delicate aroma and absence of black particles. Ground white pepper is used in the production of mayonnaise and salad dressings where black particles are not desirable.

Recently, an enzyme-assisted process has been developed at the CFTRI, Mysore for the preparation of white pepper from fresh green pepper. A patent has been filed on this process. Salient features of the process are given below.

1. This is clean and hygienic process which delivers white pepper free from musty odour as compared to the traditional retting method
2. Product with creamy white colour is obtained without using objectionable bleaching agents or preservatives like sulfur dioxide
3. Under selected conditions of processing, the external energy input can minimize, and the process can be made adaptable to field / farm level operations.
4. As the de-skinning of the green berries is thorough, the protein of admixture of the final product i.e., white pepper with black dry berries, is almost eliminated.
5. The green skin can be retrieved as a by-product which can be used for making value added products such as green colorant, flavourant etc.,

MARKET POTENTIAL

The world trade in white pepper is of the order of 43,500 tones. India share in this trade is very small. The Spices Board promoted the production of white pepper at the farm level employing the traditional retting method as followed in the major white pepper producing countries. The present enzyme assisted process for making white pepper has potential for adoption at the farm level also besides its application at the factory level.

PROCESS

Freshly harvested green peppers of optimum maturity are destalked and cleaned. The treated and processed pepper is dehydrated, classified and packed.

RAW MATERIAL

Green pepper in bunches can be procured from the plantations of the state of Kerala and Karnataka. The enzyme can be procured from the reputed suppliers

EQUIPMENTS

The plant will consist of facilities for cleaning and de-stalking, steam kettles, soaking kettles, stainless steel vessels, tray drier, air classifier and boiler.

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

a)	Land & land development (1000 m ²)	350.00
b)	Building & civil construction (240 m ²)	1400.75
c)	Plant and machinery	1300.00
d)	Misc. fixed assets	100.00
e)	Pre-operative expenses	375.00
	Total fixed capital	3525.00
	Working capital margin	1040.00
	Total Project cost	4565.00
	Total working capital required at 8% of turnover	715.00

Means of finance

Promoters contribution	2296.25
Term loan	2343.75
Short term loan from Bank (WC)	2800.00

PRODUCTION CAPACITY

Capacity of the unit	: 1 tone (raw material /2 shifts/day)
Working	: 100 days per annum
Installed capacity utilization	: 70%
Product capacity	: 220 Kg / day

TECHNOLOGY/MANUFACTURING PROCESS – Availability

The technology for the manufacture of Superior quality of white pepper 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.