

## DEHYDRATED BITTER GOURD

### INTRODUCTION

Bitter gourd (*Momordica charantia*), which is commonly known as karela, is consumed through out the Asian subcontinent for culinary and medicinal properties. The green fruits of momordica are a good source of Vitamin C and provide some Vitamin A, phosphorus and iron. *Momordica charantia* is a fast growing, trailing or climbing with thin stems and tendrils. The fruit though bitter is wholesome and esteemed as vegetable. The tender fruits may be sliced and preserved after drying for use in the off-season, which are eaten as vegetable in stew or are pickled. Steeping the fruit in salt water and cooking after scraping the skin reduces bitterness.

The dehydrated bitter gourds in the form of cubes, rings may be used for various curry preparations and brown bitter gourd is used for making bitter gourd tea. The main purpose of dehydration of bitter gourd is to extend the shelf life and reduce bulk storage, transportation and packaging.

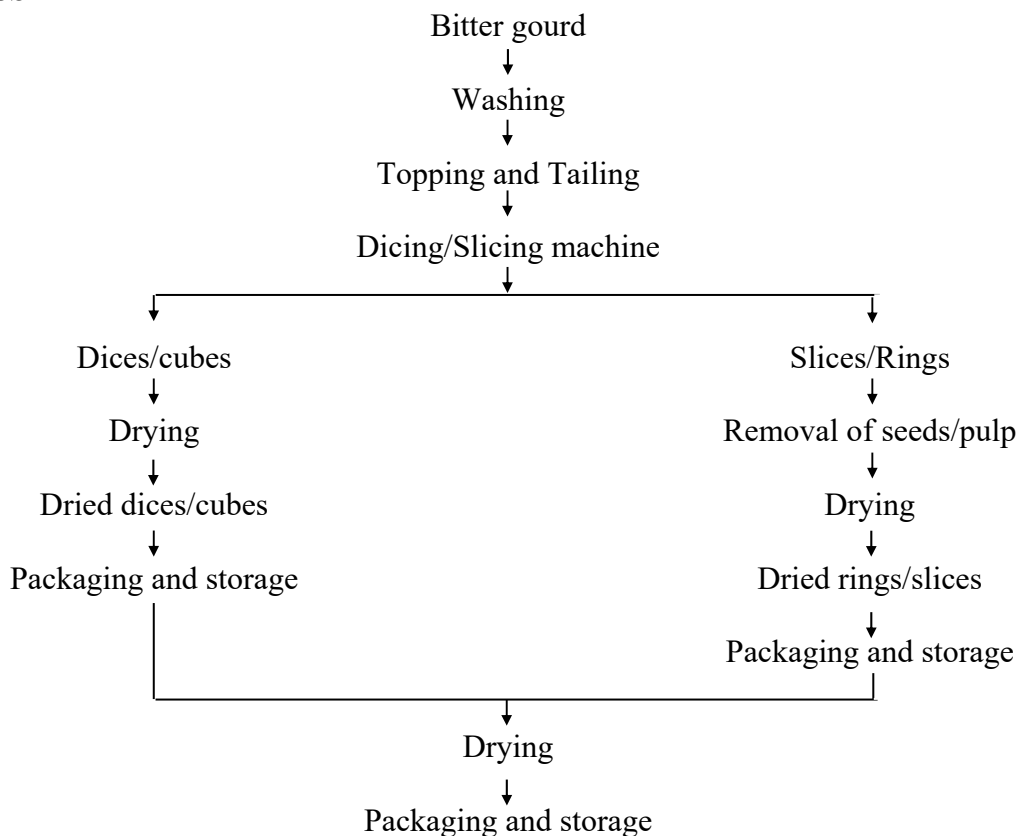
### MARKET POTENTIAL

Bitter gourd like dehydrated slices, rings and cubes are having good market potential both internally as well as export and they are likely to have good market potential like other vegetable products.

### RAW MATERIAL

Bitter gourd and water

### PROCESS



## EQUIPMENTS

**Principal equipments:** Tunnel dryer, Continuous conveyor dryer, Infra red dryer, Cubing/slicing machine, Boiler, Heat sealer, Steam jacketed kettles, Digital balance, Washing tanks and Autoclave/pressure cooker

**Auxiliary equipments:** Chemical balance, Top loading balance, Refrigerator, Mixer-grinder, Distillation unit, Rectangular water bath, Hot plate, Incubator, Potato dicing machine, Stainless steel vessel, Autoclave and Hot air oven

**Apparatus/glassware:** Burettes, Volumetric flask, Measuring cylinders, Conical flask, Glass stoppered conical flask, Beakers, Thermometers, Petri-dishes, Porcelain dishes, test tubes, Tripod stand, iron stand with clamps, boss heads, tongs enamel trays and bushes

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

a)	Land & Land development (4000 m <sup>2</sup> )	200.00
b)	Building 600 m <sup>2</sup>	1800.00
c)	Plant and machinery	2500.00
d)	Miscellaneous fixed assets	50.00
e)	Pre-operative expenses	150.00
	Total Fixed Capital	4700.00
f)	Working capital margin	600.00
	Total Project cost	5300.00
	Working capital loan from Bank	900.00

### Means of Finance

- Promoter's contribution	1900.00
- Term loan	3400.00
- Short term loan	900.00

## PRODUCTION CAPACITY

Capacity of the unit: 1600 Kg (raw material /16 hrs per day, 2 shift) Yield 115 Kg per day

Working: 200 days per annum

Optimum capacity utilization: 70%

## TECHNOLOGY/MANUFACTURING PROCESS – Availability

The technology for the dehydration of bitter gourd 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.

Note: CFTRI does not guarantee the performance of the machine. Indenter may kindly confirm the performance, etc., from the fabricator of the machine, before a decision is taken to purchase the same.