

## **Baked beans, Mixed vegetables curry and rice based convenience products in Aluminium cans**

### **INTRODUCTION**

Preservation of foods by thermal processing is a conventional method being followed by food processing industries. However, the equipment used are either highly sophisticated with computer controls or of manual type without any controls or sometimes with only temperature control. This needs careful attention as even few minutes of over processing will affect the sensory qualities and if under processed, the product is not commercially sterile and the safety of such a product is not ensured. In view of this an on-line sterilization monitoring system has been developed. A few food products have been preserve during this on-line retort control system. These are ready-to-serve product thermally processed after packing in rigid container like easy to open flip top aluminium with suitable food grade lacquering.

### **USES**

These products can be used during travel, by defense personnel or during emergency ration and as similar to any convenience based specialty products. As consumers demand lesser preparation times coupled with high nutrition and good taste, the ready-to-eat products as convenience and value added products is leading the way. Mixed vegetable curry can be used as an adjunct for food like chapatti, naans, phulca etc. Spiced pongal & vegetable pulao can be used as RTE products.

### **MARKETING**

There are about 3000 small-scale units, engaged in the canning industry who can potential benefit from this technology. As of now, only multi-nationals and industries that can afford huge investment, are processing, as they are cost prohibitive. The proposed technology development will help more entrepreneurs to diversify to this area, utilizing their existing system. This will popularize convenience products. Also, it has the potential to outreach to other international markets. For the consumer, ready-to-eat food of different varieties will be available off the shelf. All it would require is warming it directly within the container for serve temperature.

With fast changing trends in lifestyles, characterized by dual income families and higher standards of living, consumers' demand products that save time in preparation, yet are delicious and cost effective. With the ever-increasing awareness of novel high quality processed foods, demand for convenience products based on rice is also on the increase.

### **RAW MATERIAL**

Vegetables, Spices, Rice, Dhal etc.

### **PROCESS**

Process consists of mixing of ingredients (vegetables, spices, milled rice, green dhal) followed by partial cooking then filled into the containers, sealed and sterilized. Sterilized cans are cooled to room temperature and stored.

## PLANT & MACHINERY

Major equipments required are Retort fitted with online retort control system, Jacketed kettles, Continuous cooker, Double sieving machine, Boiler, Slicer etc.

### PROJECT COST – FIXED COST – WORKING CAPITAL (in Rs. ‘000) (Estimate for a model project)

a)	Land & Land development (625 m <sup>2</sup> )	156.00
b)	Building and civil works (440 m <sup>2</sup> )	1764.00
c)	Plant and machinery	2100.00
d)	Auxiliary equipments	50.00
e)	Miscellaneous fixed assets	150.00
f)	Pre-operative expenses	442.00
	Total fixed capital	<b>4662.00</b>
	Working capital margin	2394.00
	Total Project cost	<b>7056.00</b>

#### Means of finance

- Promoters contribution	3559.50
- Term loan	3496.50

### PRODUCTION CAPACITY- (estimate)

Products	: a) Baked beans in tomato sauce b) Mixed vegetable curry c) Rice based convenience products
Suggested economic capacity:	3000 Kg/day (10,000 cans with 300gm pack)/product
Working	: 300 days/year
Capacity	: 900 MT /annum (each product)
Optimum utilization capacity:	70%

### TECHNOLOGY/MANUFACTURING PROCESS – Availability

The technology for the manufacture of Baked beans, Mixed vegetables curry and rice based convenience products in Aluminium cans 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**

<p><b>THE DIRECTOR, CFTRI, MYSORE-570 020</b> <b>PHONE: 0821-2514534, FAX: 0821-2515453</b> <b>E-MAIL: <a href="mailto:ttd@cftri.res.in">ttd@cftri.res.in</a>; WebPage: <a href="http://www.cftri.com">www.cftri.com</a></b></p>
--