

PROJECT PROFILE ON CANNED JACKFRUIT

1. Product : Canned Jackfruit
2. NIC Code (1998) : 01134
3. Product Code : 12108
4. Production Capacity : Quantity-1 lakh Canned Jackfruit per year
(Valued Rs. 65.00 Lakhs)
5. Month & Year of Preparation : March 2011
6. Prepared by : Food Division
Micro, Small & Medium Enterprises
Development Institute
Margao, Goa-403 601

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A. INTRODUCTION:

The Jackfruit, botanically known as *Artocarpus heterophyllus* lam, is one of the popular fruits of India and is believed to be indigenous to our country. It is grown extensively in the West Coast, Assam, West Bengal, Orissa and Bihar. The name jack is said to be an adoption of Portuguese 'Jaca' which in turn is believed to have originated from Malayalam name of the fruit, 'Chakka'. Among the other Indian names of the fruit are: Panasa (Sanskrit and Telgu), Kathal (Hindi), Phanas (Marathi), Pala (Tamil), Halasu (Kannada)

Fully ripe jackfruit is sweet and has an exotic flavour. The bulbs (edible flakes) contain 7.5% sugar on dry weight basis and a fair amount of Carotene (Vitamin A). The seeds are rich in Carbohydrates and also a good source of Vitamins. Ripe fruits are utilized in the preparation of canned fruits, nectar and jams. Unripe fruits are also used for culinary preparations like chips, pickels etc.

B. PLANT CAPACITY PER ANNUM:

The unit has a capacity of 1.5 lakh jackfruit cans per year

C. MARKET & DEMAND ASPECTS

There is a prospective market for these products in India as well as outside the country. It is also learnt that there is a good export market potential for these items especially in Middle East countries. In view of the above, it is envisaged that there is good scope for setting up jackfruit processing units in jack growing areas. This will not only help the farmers to utilize the perishable raw material but also generate more employment opportunities in rural areas.

There are about twenty to twenty five units engaged in un-organized sector manufacturing jack chips and jackfruits preserve.

D. RAW MATERIALS

Raw material include Ripe Jackfruit, Sugar, Citric Acid and packing materials like Tin Can (425 g. fruit capacity), Carton, Labels, Wrapping material.

E. MANUFACTURING PROCESS AND SOURCE OF TECHNOLOGY

The crisp bulbs of the ripe Jackfruit are used for canning in Sugar syrup. Yield of bulbs varies from 20 to 30 per cent depending on the variety of fruit. After cutting the fruit in several pieces, the bulbs are removed manually. As the fruit contains highly sticky latex, small quantity of vegetable oil is applied on hands and then seeds are removed from bulbs. These bulbs are canned with a small quantity of citric acid as the pH value of this fruit is very high. The quality standards followed is as per FPO 1955 and PFA Act, 1954.

Canning technology can be sourced from Central Food Technological Research Institute, Mysore.

F. BASIS AND PRESUMPTION:

The selection of the project is subject to the availability of surplus quantity of crisp jackfruit from nearby area. This unit may work 6-8 months in a year and in the remaining months, other seasonal fruits such as pineapple, Guava etc can be canned.

1. The project is based on double shift and 250 working days in a year.
2. The capacity utilization of the project is considered to be 70%.
3. Depreciation of 5% and 10% considered for Building & Machinery respectively.
4. The cost of machinery, raw material, finished products, labour Charges and other input have been taken on the basis of local prevailing market.

G. PRODUCTION CAPACITY

Sl. No.	Item	Qty. (No. of Cans)	Value (Rs. in Lakhs)
1	Canned Jackfruit (425g net fruit wt.)	1,00,000	65.00

H. UTILITIES

Power, water and furnace oil / coke are the utilities required at a cost of one lakh rupees per year.

I. FINANCIAL ASPECTS

1. Fixed Capital:

a. Land & Building

	<u>Rs. in Lakhs</u>
i) Land 600 sq.m @ Rs 800 per sq.m.	: 4.80
ii) Land Development	: 0.30
iii) Building 400 sq.mtr. @ Rs.4000/- sq.m.	: 16.00
	21.10 lakhs

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b. Machinery & Equipment

S.No.	Description	Indigenous/ Imported	Quantity (Nos)	Value (Rs in lacs)
1	Open steam _____kettle	Indigenous	04	1.40
2	Washing Table (S.S)	Indigenous	04	1.00
3	Coal Fired		01	1.70

	Boiler of Cap. 100 Kg. steam/hr.	Indigenous		
4	Platform weighing scale of 1-100 kg.	Indigenous	01	0.60
5	Canning unit*	Indigenous	01 set	3.30
6	Other Accessories like spoon, knife etc.	Indigenous	L.S.	0.45
7	Testing equipment	Indigenous	L.S.	0.50
8	Electrification of Installation @ 10%			0.85
Total...				9.80
Pre-operative exp...				0.60
Grand Total..				10.40

Note:* Canning unit has semi auto matic Can reformer, Can Falanger, Exhoust Box and Double Seamer (Can sealer).

Total Fixed Capital (a+b) : 31.50 Lakhs

2. Working Capital (Per Month)

i) Manpower (PM)

<i>S.No.</i>	<i>Designation</i>	<i>No. of persons</i>	<i>Salary per Month Lakh(Rs.)</i>	<i>Total Salary Lakh (Rs.)</i>
1	Manager	01	0.10	0.10
2	Supervisors	02	0.06	0.12
3	Skilled Workers	04	0.05	0.20
4	Unskilled Workers	12	0.04	0.48
5	Office Clerk	01	0.05	0.05

6	Watchman	01	0.04	0.04
			Perks @ 15%...	0.15
			Total..	1.13

ii) Raw Materials (PM)

<i>S.No.</i>	<i>Description</i>	<i>Qty (Kg.)</i>	<i>Rate/Kg (Rs.)</i>	<i>Value (Rs.in lakh)</i>
1	Jack Fruit	20,000	10.00	2.00
2	Sugar	1500	30.00	0.45
3	Citric Acid	1000	30.00	0.30
4	Anti Oxidants	100	40.00	0.04
5	Metal Cans, Labels	9500 Nos	10.00	0.95
6	Carton, Labels	400 Nos	12.00	0.048
			Total	3.78
			Rounded Off	3.80

iii) Utilities (PM)

Sl.No.	Particulars	Amount (Rs.)
1	Power 10 KW	0.10
2	Water 2000 ltrs/day	0.01
3	Fuel	0.01
	Total	0.12

iv) Other Contingent Expenses (PM)

Sl. No.	Particulars	Amount Rs.in lakhs
1	Postage & Stationery	0.02
2	Telephone	0.01
3	Consumables Stores	0.02
4	Repair and Maintenance	0.02
5	Transport Charges	0.05
7	Insurance	0.02
8	Taxes	0.05

9	Sales Expenses	0.05
10	Other Miscellaneous Expenses	0.02
	Total	0.26

3. **Total Working Capital (per month) : 5.31 lakhs**
4. **Working Capital for 3 Months : 15.93 Lakhs**
5. **Total Capital Investment : 47.43 Lakhs**

FINANCIAL ANALYSIS

1. Cost of Production (Per Annum)

Total Recurring Cost Per Annum	42.48 lakhs
Depreciation on Building @ 5%..	0.80 lakhs
Depreciation on M/c & Equipment @ 10%..	0.90 lakhs
Interest on Total Investment @14 %	6.64 lakhs
Total cost of Production	50.82 lakhs
Say	50.82 lakhs

2. Sales Turnover (Per Annum)

Sl.No	Item	Qty (No. of Cans)	Value (Rs.in lakhs)
1	Canned Jackfruit (425g) @ Rs. 65/-	1,00,000	65.00

3. Net Profit (Per Annum):

$$\text{Sales Turnover} - \text{Cost of production} = \mathbf{14.18 \text{ lakhs}}$$

4. Net profit ratio on sales: $\frac{\text{Profit}}{\text{Turnover}} \times 100 = \mathbf{21.82 \%}$

5. Rate of Return on Investment:

$$\frac{\text{Profit}}{\text{Investment}} \times 100 = \mathbf{30 \%}$$

Total Investment

6. Break Even Analysis (B.E.P)

Fixed Cost (per annum):

Sl. No.	Description	Amount (Rs. in lacs)
1	Depreciation on Machinery & Equipment @ 10%.	0.90
2	Depreciation on Building @ 5%.	0.80
3	Insurance	0.24
5	Interest on Total investment @ 14%..	6.64
6	40% of Salary & Wages	5.42
7	40% of other expenses & utilities	1.73
	Total.....	15.73

$$\text{Break even point} : \frac{\text{Fixed cost}}{\text{Fixed Cost} + \text{Pro}} \times 100 = 53\%$$

J. Suppliers of Machinery & Raw Materials:

a) List of Plant & Machinery Suppliers

Indigenous

1. M/s.Bajaj Process pack Maschinen Private Limited
7/27, Jai Lakshmi industrial Estate, Site – IV, Sahibabad

Industrial

Area, Ghaziabad – 201001, U.P. Tele.: 0120-
2775119/4372848,

Mob.No. 09811024158, Email : sales@bajajmachines.com

2. M/s.Somani International, Mumabi
3. M/s.Thermax Ltd., (for boiler), Pune/ Ahmedabad
4. M/s.Swastik Tins Pvt. Ltd, (For Tin Cans)
Plot No. 60, TTC Industrial Area,
MIDC, Mahape, Navi Mumbai -4007010.
Tel: 022-27781549, www.info@swastiktin.com
5. M/s.Eee Cee and Co., (for sealing machine)
Anant Indl. Estate, Rakhial, Ahmedabad-23.
6. M/s.Avery (I) Ltd., (for weighing Scale)
Cama Chambers, Khanpur, Ahmedabad

b) Raw Materials Suppliers

Local Market.

K. Resource Centre of Technology:

Please contact

Head

Technology Transfer & Business Development

CFTRI

Mysore 570 020

Ph: +91-821-2514534

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L. List of Units Set Up by using this project Profile: No unit in Goa.

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