

PROJECT PROFILE ON EXTRUDED POTATO CHIPS

1. Product : Extruded Potato Chips
2. NIC Code (1998) : 15499
3. Product Code : 12485
4. Production Capacity : Qty:-130 MT Extruded Potato Chips (P.A)
(Valued Rs.221 lakhs)
5. Month & Year of Preparation: March 2011
6. Prepared by : Food Division
Micro, Small & Medium Enterprises
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A. Introduction:

India is having good production of Potato. This vegetable is mainly used for making curry across India. Fried Potato Chips are also popular especially when multinational Company entered Indian market. Basically Potato carries enormous amount of Starch , some Protein , little fat and rich in mineral, vitamin.

Extruded products are not much popular in India. This product attracted products like fried Potato Chips, Dehydrated Potato Chips and Coloured Potato Flour can be manufactured..

B. Plant Capacity per annum

Plant capacity is 150 tones a year

C. Market

Potato is converted into different commercial products and marketed in India by large scale MNCs, Medium scale & Small Scale local units. The demand for Potato products such as Potato Chips & other products goes up every year due to growth in purchase power of people.

D. Raw materials

Raw material;s used are Dehydrated Potato Flour,Modified Starch, Palm Oil,Chilly Powder,Refined Salt, Spice Powder ,Salisilic Acid, Anti-Oxdants,Other Chemicals (Mono sodium glutamate, Bicarbonate, Food Colours, Flavours and preservatives)

E. Manufacturing Process and Source of Technology

Extruded Potato snacks are developed in western countries. Dehydrated potato flour, modified starch, palm oil, and other ingredients are mixed into a mixer in pre-decided quantity up to required dough-consistency. It is then extruded through cooker-extruder to produce chips, cubes, sticks and granules of required size and shape. Extruded snacks are allowed to dry in a belt drier to required moisture-level. The dried products are either fried or packed. Frying is carried out in a fryer where chips are deep-fat fried. Salt,

flavouring, colours and preservatives are added during mixing. Hence, no need to add these ingredients during frying. Fryer must be semi-automatic or automatic type in which one can achieve desired frying temperature and recirculation of oil is possible. Fried chips are cooled and packed.

Technology can be had from Central Food Technological Research Institute, Mysore.

C. Basis and Presumptions:

1. The project is based on single shift and 300 working days in a year.
2. The capacity utilization of the project is considered to be 70%.
3. The building and Land are as per local rates
4. The cost of raw material, finished products input have been taken based on local prevailing market.

G. Production Capacity per annum:

Sl.No.	Item	Qty.	Value (Rs.in lakhs)
1	Extruded Potato Chips	130 MT	221.00

H. Utilities

A yearly expenditure of about Rs. 1.40 lakhs is needed towards utilities such as Power, Water and fuel.

I. FINANCIAL ASPECTS

1. Fixed Capital

a. Land & Building

	<u>Amount(Rs. Lakhs)</u>
i) Land 1,000 sq.m @ 800 sq.m. :	8.00
ii) Land Development :	0.50
iii) Building 700 sq.mtr. @ Rs.4000/- sq.m. :	<u>28.00</u>

b. Machinery & Equipment

<i>S.No.</i>	<i>Description</i>	<i>Indigenous/ Imported</i>	<i>Quantity (Nos)</i>	<i>Value (Rs in lakhs)</i>
1	Twin screw cooker extruder	Imported	One set	138.00 (FOB inclusive of Import Duty)
2	Belt Drier	”		
3	Frying Machine	”		
4	Pre-conditioner	”		
5	Mixer	”		
	Packing, forwarding, Sea freight, Insurance 10% of value			13.00
			Sub Total...	151.00
6	Steam Boiler (100 Kg/hr)		1 No.	1.70
7	Micro Pulverizer		2 Nos.	1.00
8	Packing Machine		1 No.	2.10
9	Storage equipments		L.S.	0.70
10	Steam line and Water line fittings		L.S.	1.20
11	Weighing scale (1 Ton & 50Kg. cap.)		2 Nos.	0.80
12	Laboratory equipment		L.S.	0.70
13	Electrical Installation @ 10%		L.S.	15.00
14	Pre-operative expenses			0.70
				174.90
			Rounded Off..	175.00

Total Fixed Capital : 211.50 lakhs

2. Working Capital per Month

i) Man Power

<i>S.No.</i>	<i>Designation</i>	<i>No. of</i>	<i>Salary per</i>	<i>Total</i>
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		<i>persons</i>	<i>Month (Rs in lakhs.)</i>	<i>Salary PM (Rs in lakhs.)</i>
1	Manager	01	0.15	0.15
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	02	0.04	0.08
Perks @ 15%...				0.16
Total..				1.24

ii) Raw Materials per month:

<i>S.No.</i>	<i>Description</i>	<i>Qty</i>	<i>Rate(Rs in lakhs/MT)</i>	<i>Value (Rs.in lakh)</i>
1	Dehydrated Potato Flour	9 Ton	0.35	3.15
2	Modified Starch	1 Ton	0.30	0.30
3	Palm Oil	1 Ton	0.70	0.70
4	Chilly Powder	0.2 Ton	1.80	0.36
5	Refined Salt	0.5 Ton	0.09	0.05
6	Spice Powder	0.2 Ton	1.70	0.34
7	Mongol/ Fatty Acid	40 Kgs	0.003	0.12
8	Salicylic Acid	10 Kg.	0.005	0.05
9	Anti Oxidants	40 Kgs	0.005	0.20
10	Other Chemicals (Mono sodium glutamate sodium Bicarbonate, Food Colors, Flavors and preservatives)	L.S.		0.30
11	Packaging Material			1.50
Total				7.07

iii) Utilities (per month)

Sl.No.	Particulars	Amount (Rs.)
1	Power 35 KW	0.30
2	Water 3000 ltrs/day	0.02
3	Fuel	0.02
Total...		0.34

iv) Other Contingent Expenses

Sl. No.	Particulars	Amount Rs.in lacs
1	Postage & Stationery	0.05
2	Telephone	0.01
3	Consumables Stores	0.05
4	Repair and Maintenance	0.05
5	Transport Charges	0.05
7	Insurance	0.05
8	Taxes	0.05
9	Sales Expenses	0.05
10	Other Miscellaneous Expenses	0.02
Total...		0.38

Working Capital (per month)

9.03 lakhs

3. Total Capital Investment

FIXED CAPITAL	211.50 Lakhs
Working Capital for 3 months	27.09 Lakhs
Total Capital...	238.59 Lakhs

5. Cost of Production (per annum)

Total Recurring Cost Per Annum	108.36 lakhs
Depreciation on Building @ 5%..	1.40 lakhs
Depreciation on M/c & equipment @ 10%	15.93 lakhs
Interest on Total Investment @14 %	33.40 lakhs
Total cost of Production	159.09 lakhs

6. Turnover (per annum)

Sl.No	Item	Qty (Tons)	Value (Rs.in lakhs)
1	Extruded Potato Snacks @ Rs. 170 per Kg.	130	221

7. Net Profit (per annum) :

$$\text{Profit: Sales} - \text{Cost of production} = \mathbf{61.91 \text{ lakhs}}$$

$$\text{Net profit ratio} = \frac{\text{Profit}}{\text{Turnover}} \times 100 = \mathbf{28 \%}$$

8. Rate of Return on Investment :

$$\frac{\text{Profit}}{\text{Total Investment}} \times 100 = \mathbf{25.95 \%}$$

Break even analysis:

Fixed Cost (per annum)

Sl. No.	Description	Amount (Rs. in lacs)
1	Depreciation on Machinery & Equipment @ 10%..	15.93
2	Depreciation on Building @ 5%.	1.40
3	Insurance	0.60
5	Interest on Total investment @ 14%	33.40
6	40% of Salary & Wages	5.95
7	40% of other expenses & utilities	3.22
	Total	60.50

$$\text{Break even point} : \frac{\text{Fixed cost}}{\text{Fixed Cost} + \text{Profit}} \times 100 = \mathbf{49 \%}$$

H. Suppliers of Machinery & Raw Materials:

a) List of Plant & Machinery Suppliers

Foreign

1. Wenger International Inc. USA
2. A.P.V. Baker, UK

Indigenous

1. M.K.Extrusion Solution, G 17/47, Sector –15, Rohni, Delhi,
011- 27894505, 09810529282, E Mail: mkextrusion@yahoo.in
2. S.K.Engineering, B-28, Sector-10, Noida, UP. Tel. 0120- 3048457,
09811098837 Email : skew786@gmail.com
3. Thermax Ltd., (for boiler), Pune/ Ahmedabad
4. Kaps Enggs. (for pulverizer)
GIDC Industrial Estate, Makarpura, Baroda
5. Eee Cee and Co., (for sealing machine)
Anant Indl. Estate, Rakhial, Ahmedabad-23.
6. Avery (I) Ltd., (for weighing Scale)
Cama Chambers, Khanpur, Ahmedabad
7. Winnder Technology, Indore
8. Somani International, Mumabi

b) Raw Materials Suppliers

Local Market.

I. Resource Centre for Technology

Please contact, Head, Technology Transfer Division, Central Food Technological Research Institute, Mysore -570 020

J. List of units set up using this Project

No unit so far established in Goa with Extrusion Technology.