

## PROJECT PROFILE ON POTATO WAFERS

NAME OF THE PRODUCT : POTATO WAFERS.

QUALITY & STANDARD : PFA Regulations and BIS.

PRODUCTION CAPACITY :      Quantity - 120 M.T. (Per Annum)  
   Value - Rs.108 Lakh.

MONTH & YEAR OF PREPARATION : January, 2010

PREPARED BY : **P. K. SRIVASTAVA,**  
**Asstt. Director (Food)**  
**MSME - Development Institute,**  
Ministry of Micro, Small & Medium Enterprises,  
Government of India  
107, Industrial Estate, Kalpi Road,  
**Kanpur-208012.**

Tele. 2295070, 2295071 & 2295073 (EPBAX)

Tele. No. 2295072 (SENET & TRC)

Tele/Fax No.: 0512- 2240143

email: dcdi-kanpur@dcmsme.gov.in

Website: msmedikanpur.gov.in

## **A) INTRODUCTION**

In India around 12 million tonnes of potato is grown which is about 4% of the total world production. However, the per capita consumption of potatoes is low. It is estimated that 25% of the potatoes, which is spoiled due to various reasons such as transportation, type of packing, availability of cold storage capacities during harvesting season, glut in the market etc., could be saved by making various preserved potato products. Potato wafer is one of such products which has a great potential as this is considered as one of the traditional food of India. Potato wafers are needed to be made in a scientific manner and under hygienic conditions.

## **B) MARKET POTENTIAL**

The popularity of snacks food is growing fast day-by-day and potato wafers have emerged as a potential snack food. A number of organized as well as unorganized groups are already there, catering to the needs of tea stalls, restaurants, railway stations, tourist places etc. Still there is a huge demand to be met for these products in interior and remote places in different parts of the country.

### **C) BASIS & PRESUMPTIONS**

- I. This project is based on single shift basis and 300 working days in a year.
- II. The cost of machinery & equipment /materials indicated refer to a particular make and the prices are approximate and prevailing rate at the time of preparation of this profile.
- III. The cost of packaging, forwarding tax etc and installation electrification of machinery is taken @ 15%, non-refundable deposits, project cost, trial production, fees etc are considered under pre-operative expenses.
- IV. Depreciation has been taken as an –
  - a) On building @ 5%
  - b) On machinery & equipment @ 10%
  - c) On office furniture & fixture @ 20%
- V. Interest on total capital investment has been taken @ 14% per annum.
- VI. Minimum 40% of the total investment is required as margin money.
- VII. Pay back period of the project will be 7 years, with half yearly installments.
- VIII. Break even point has been calculated at the full capacity utilization.
- IX. For smooth functioning of unit, it is suggested that unit should have a good stock of quality raw material.

### **D) IMPLEMENTATION SCHEDULE:**

The following steps involve in the implementation of the project.

<b>Sl. No.</b>	<b>Activity</b>
----------------	-----------------

- |       |  |
|-------|--|
| I.    | Selection of Site.   |
| II.   | Form of Ownership.   |
| III.  | Feasibility Report.  |
| IV.   | Registration With DIC  |
| V.    | Arrangement of Finance   |
| VI.   | Construction of Factory Shed & Building  |
| VII.  | Plant Erection and Electrification   |
| VIII. | Recruitment of Manpower  |
| IX.   | Arrangement of raw materials including packaging materials.                      |
| X.    | Selection of marketing channel.  |
| XI.   | Miscellaneous power and water connection, Pollution Control Board clearance etc. |

Normally 1 year is required to implement the project.

## **E) TECHNICAL ASPECTS:**

### **(i) Process of Manufacture:**

#### **Potato Wafers**

The potatoes selected for wafers should be large oval shape free from disease and fully matured. It should have the minimum number of eyes to cut down the losses by trimming. They are washed thoroughly in water and peeled manually with stainless steel knife or by means of an abrasive potato peeling machine. The peelings are washed away with sprays of water. They are then trimmed and placed in water to prevent browning, they are sliced 0.4 to 0.5 cm. thick in a slicing machine. The slices are again placed in cold water. Whenever there is considerable delay in the subsequent operations of blanching, then slices are kept in water containing 0.05% Potassium metabisulphite to avoid oxidation. The slices are blanched for 3 to 5 minutes in boiling water and spread on trays at the rate of 4.88 kg. to 7.30 kg. per square metre of tray surface. The blanched chips are then subjected to hydro-extracting machine (centrifugal) to remove excess of water and fried at 190<sup>0</sup>c for 3-4 minutes fried potato wafers are then kept on the sieve to remove excess of oil, cooled and other ingredients like salts, spicy mixture is sprayed as per required taste, cooled potato wafers are then packed in polythene bags and sealed.

### **(ii) Quality Control and Standards:**

Product must meet PFA regulations. However, BIS Specifications are as follows:

IS: 4626: 1978 for Dehydrated Potatoes

IS: 254:1974 Test for determining preservation

### **(iii) Motive Power: 20 HP**

**(iv) Production Capacity (Per Annum):**

Quantity: : 120 M. T. Per Annum

Value : Rs. 108 Lakhs

**(v) Pollution Control:**

The unit will not create any pollution problems. However, entrepreneur should obtain NOC from concerned State Pollution Control Board.

**(vi) Energy Conservation:**

Suitable measures should be adopted to use appropriate amount of fuel and electricity

**F) FINANCIAL ASPECTS:**

**A) Fixed Capital:**

**(i) Land & Building:**

1. Land 300 Sq. Mtr. @ Rs. 2000/- per sq. Mtr. **Rs. 6.00 lakhs**

2. **Built Up Area**

Production Hall, raw materials & finished goods stores,  
laboratory, Office etc. 200 Sq. Mtrs.

Cost of construction @ Rs. 8000/- per sq. mtr. **Rs. 16.00 lakhs**

**Total: Rs. 22.00 lakhs**

**(ii) Machinery & Equipment:**

Sl. No	Particulars of Machines	Qty. (Nos.)	Amount (Rs.)
1.	Washing Tank (6'X3'X3') @Rs.50,000/-	2	1,00,000/-
2.	Gas Chulha with Gas Cylinder	2 Sets	40,000/-
3.	Potato Peeler (Body and chamber of stainless steel) (Cap. Per charge 15 Kg taking 3 – 4 minutes complete with motor).	1	50,000/-
4.	Power operated slicing machine with arrangement to adjust the thickness of slices with motor.	1	70,000/-
5.	Hydro Extractor to extract excess of moisture with motor.	1	35,000/-
6.	Deep Fat Fryer (oil tank of stainless steel, electricity heated, temp. control switch).	1	70,000/-
7.	Polyethylene Bag Sealing Machine @Rs.15,000/-	1	30,000/-
8.	Salting Drum	1	25,000/-
9.	Automatic Pouch Packing Machine	1	2,50,000/-
10.	Miscellaneous equipment – weighing Balance with measures of different capacity, Storage Drum, Kadahi, Tubs, Trays, Knives, Peeler, Polyethylene sheets etc.	LS	75,000/-
11.	Laboratory Equipments	LS	1,00,000/-
		<b>Total:</b>	<b>8,45,000/-</b>
	Erection & Electrification @ 10%	LS	85,000/-
		<b>Total:</b>	<b>9,30,000/-</b>

**Rs. 9.30 Lakhs****(iii) Furniture & Fixtures:****Rs. 1.70 Lakhs****(iv) Pre-operative Expenses:**

Establishment Cost, legal expenses. (Consultancy fee, start up expenses, Interest during construction period, Trial run expenses).	Rs. 1.00 Lakhs
<b>Total Fixed Capital ( i + ii + iii + iv):</b>	<b>Rs. 34.00 Lakhs</b>

**B) Working Capital (Per Month):****(i) Salary & Wages:**

Sl. No.	Designation	No.	Rate	Total (Rs.)
1.	Manager	1	15000/-	15,000/-
2.	Sales Supervisor	1	6000/-	6,000/-
3.	Computer Operator	1	6000/-	6,000/-
4.	Skilled Workers	1	6000/-	6,000/-
5.	Un-skilled Workers	6	4000/-	24,000/-
	<b>Total:</b>			<b>57,000/-</b>
	Perquisites @ 15%			8,550/-
	<b>Total:</b>			<b>65,550/-</b>
	<b>Say:</b>			<b>66,000/-</b>

**(ii) Raw Material:**

Sl. No.	Item	Qty.(MT)	Rate (Rs./MT)	Value (Rs.)
1.	Potatoes (Sugar Free)	40	6,000/-	2,40,000/-
2.	Refined Oil	4	55,000/-	2,20,000/-
3.	Flavours, Chemicals Spices etc.	LS		25,000/-
4.	Packing materials	LS		50,000/-
	<b>Total:</b>			<b>5,35,000/-</b>

**(iii) Utilities:**

1.	Water	2,000/-
2.	Fuel	25,000/-
3.	Electricity	20,000/-
	<b>Total:</b>	<b>47,000/-</b>

**(iv) Other Contingent Expenses (P.M.):**

1	Consumable Stores	2,000/-
2	Maintenance and Repairs	2,000/-
3	Transportation & Travelling	7,500/-
4	Insurance	1,500/-
5	Other Expenses	5,000/-
6	Advertisement & Publicity	5,000/-
	<b>Total:</b>	<b>23,000/-</b>

**(v) Working Capital / Total Recurring Expenditure (P.M.):**

1.	Salary & Wages	66,000/-
2.	Raw Materials	5,35,000/-
3.	Utilities	47,000/-
4.	Other Contingent Expenses	23,000/-
	<b>Total:</b>	<b>6,71,000/-</b>

**(vi) Total working capital for 3 months  $6,71,000 \times 3 = \text{Rs. } 20,13,000/-$**

**= Rs. 20.13 Lakhs**

**C) TOTAL CAPITAL INVESTMENT:**

**(Rs. In Lakhs)**

I.	Fixed Capital	34.00
II.	Working Capital for 3 months	20.13
	<b>Total:</b>	<b>54.13</b>



## **FINANCIAL ANALYSIS:**

### **i) Cost of Production (Per annum)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Value (Rs. In Lakhs)</b>
1.	Total Recurring Expenditure /Cost	80.52
2.	Depreciation on Building @ 5%	0.80
3.	Depreciation on machinery and equipment @ 10%	0.85
4.	Depreciation on Furniture @ 20%	0.34
5.	Interest on Total Capital Investment @ 14%	7.58
<b>Total: -</b>		<b>90.09</b>

### **ii) Turnover (Per Annum)**

<b>Item</b>	<b>Value (Rs. In Lakhs)</b>
Potato Wafers 120 MT @ Rs. 100/- Kg.	<b>120.00</b>
Less -Sales Commission: LS @10%	<b>12.00</b>
<b>Net Sales</b>	<b>108.00</b>

### **iii) NET PROFIT (Per annum) Before Taxation:**

Turn Over	(-)	Cost of Production	<b>=</b>	<b>Rs. 17.91 Lakhs</b>
1,08,00,000/-	(-)	90.09,000/-		

**iv) NET PROFIT RATIO: (Per Annum): 16.58%**

**v) RATE OF RETURN (Per Annum): 33.08%**

**vi) BREAK EVEN POINT: 47%**

### **Names & Addresses of Machinery & Equipment Suppliers:**

1. M/s. WintechTaparia Ltd., 208, The Horizon, South Tukoganj, Indore - 452001  
Tel : +91 731 4065690/2523950, Website: [wintechtaparia.com](http://wintechtaparia.com)  
Email Id : [sales@wintechtaparia.com](mailto:sales@wintechtaparia.com)
2. 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](mailto:sales@bajajmachines.com)
3. M/s Somani International Corporation, 1510, Maker Chamber, V. Nariman Point, Mumbai – 400 021.
4. M/s Raylons Metal Works, Kondivita Lane, Post Box – 17425, J. B. Nagar, P.O. Andheri (East), Mumbai – 400 057.
5. M/s K. S. J. Foods & Services (P) Ltd., 7/87, Vishnu Prasad, Mahant Road, Vile Parle, Mumbai – 400 057.
6. M/s Mather and Platt (India) Ltd., 805806, Ansal Bhavan, 16, Kasturba Gandhi Marg, New Delhi – 110 001.

### **Names & Addresses of Chemical Suppliers:**

1. M/s S. B. Mehta & Associates, 2-B, Ganga Vihar, 94, Kazi Sayed Street, Mumbai – 400 021.
2. M/s Balaji Dychem, 5, Prajulla Bhavan, 130, Khare Ghat Road, Dadar, Mumbai – 400 057.
3. M/s Sesu Trading Corporation, R. N. 2, 4<sup>th</sup> floor, Si Chambers, 367369.
4. M/s T. Ali Mohaammad & Co., 144/45, Sarang Street, Near M. J. Phule Market, Mumbai- 440 003.
5. M/s S. S. enterprises, 299, Katra Para, tilak Nagar, Delhi – 110 006.
6. M/s Devendra Cottage Industries, Sector-22-c, Chandigarh.
7. M/s Citurgia Bio-Chemical Limited, Neville House, J. N. Heredia Marg, Ballard Estate, Mumbai – 400 033.

\*\*\*\*\*