## Model Detailed Project Report

## CORN PUFF MANUFACTURING UNIT

## Prepared by

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## 1. INTRODUCTION



Puffcorn or Corn puffs are puffed or extruded corn snacks made with Corn meal and baked. Products by the name of puffcorn (instead of the more generic term corn puff) in particular can be made to look similar to popcorn, although the latter is made from whole grains.

Puffcorn is an extruded puffed corn snack which belongs in the snack group products made with corn grits, rice, wheat, or other cereals. Puffcorn is often flavored with cheese, oil, Chili, Onion or garlic powder, and many other spices. Types of puffcorn can vary between specific length, higher bulk density, lower lightness, higher redness, lower yellowness, higher hardness, and lower sprin giness, gumminess and chewiness when using different percentage of oat flour.

## 2. MARKET POTENTIAL:

Puffed food has a primary role in human consumption. Consumer demand is increasing for puffed food due to various health benefits such as weight loss, therefore increasing the market share of puffed food market. Increasing demand for flavor food products is expected to increase the puffed food market over the forecast period. Consumers believe in ready to eat products which have high nutrients like popcorns and Cheetos. The growing puffed market attributed to the shift in consumer demand for various flavors and nutritious food.
Puffed food is segmented by category type, application and region. By category, puffin comes in wheat, rice, sorghum and ragi. Puffed wheat is prepared by heating wheat grains under pressure and the rapidly releasing pressure when the sup
erheated steam in the grain expands, then grain is puffed. It is good source of copper, protein and iron. Puffed rice used in breakfast cereal and snack foo ds served as popular food street food. It is made by heating rice kernels under high pressure in the presence of steam. Puffed food is segmented by applications as bakery Industry and Snack Industry.

## 3. PRODUCT DESCRIPTION

### 3.1 PRODUCT BENEFITS

> Reduces the Risk of Breast Cancer
> Makes Teeth \& Bones Strong
$>$ Aids in Weight Loss
$>$ Ensures a Healthy Digestive System.
$>$ Great for Those Having Diabetes.

### 3.2 RAW MATERIAL

Basic raw material requirement are as follows:

1. Milk
2. Citric Acid
3. Packing Material

### 3.3 MANUFACTURING PROCESS

Puffcorn, much like other puffed products such as cereals and crispbreads are processed by Extrusion cooking through an extruder. This is a thermodynamic process where the dough is passed through a tube and heated under a certain amount of pressure. The puffcorn dough product is then forced through a narrow
opening called a die, and as it gets released, the change in pressure and te mperature causes the product to puff out, giving the texture and consistency of puffcorn.

The different shapes and textures of puffcorn are manipulated by the die at the end of the extruder and the type of extruder used. Specific types of grain size of the starch required during processing also depends on the snack type itself, for example; if the puffcorn snack requires a fine structure with small pores an extruder with smaller granulation should be used whereas crispier puffcorn would require larger granulation.

## 4. PROJECT COMPONENTS

### 4.1 Land \& Building

The approximate total area required for complete small-scale factory setup is 1000-1200 Sq. ft. approximately smooth production

### 4.2 Plant \& Machinery

| Batch Mixer with S |
| :--- | :--- |
| crew feeder |\(\left|\begin{array}{l}This machine is designed for <br>

uniform blending of a wide variety <br>
of materials such as rice-corn <br>
grit, The ribbon blender channels <br>
material from the hopper sides <br>
through the center resulting in <br>
quick, even blending and easy <br>

material removal through the\end{array}\right|\)| center discharge hatch, and then on |
| :--- |
| to the attached discharge incline |
| Screw conveyor. |


| Puff Extruder | Puffing extruders are generally <br> designed to convert number two <br> grade dry-milled cornmeal (hull <br> and germ removed) into various <br> shapes and sizes of expanded snack <br> pieces. |
| :--- | :--- |
| Conveyor | The main purpose of a conveyor <br> system is to move objects from one <br> location to another. The design <br> allows for movement of objects <br> that are too heavy or too bulky for <br> humans to carry by hand. <br> Conveyor systems save time when <br> transporting items from one <br> location to another |
| Rotary roaster | Rotary dryers have been used to <br> dry seeds, corn gluten, distiller's <br> grains, and some ... rotary dryers <br> can also function as roasters for <br> nuts, sesame seeds, and cocoa ... <br> Heat can be introduced into the <br> subsurface by electrical resistance <br> heating, |


| Automatic collar T |  |
| :--- | :--- |
| ype cup filler Packi |  |
| ng Machine | Collar type cup filler machine is a <br> packing machine used for filling <br> and packing of cups. It has a collar <br> type structure hence the name. It <br> has several advantages primary of <br> which is low wastage of product. |
| Air Compressor | An air compressor is a pneumatic <br> device that converts power (using <br> an electric motor, diesel or <br> gasoline engine, etc.) into potential <br> energy stored in pressurized air <br> (i.e., compressed air). By one of <br> several methods, an air compressor <br> forces more and more air into a <br> storage tank, increasing the <br> pressure. |
| Nitrogen Generator | Nitrogen generators are used in <br> hypoxic air fire prevention systems <br> to produce air with a low oxygen <br> content which will suppress a fire. |

Note: Approx. Total Machinery cost shall be Rs 14.20 lakhs excluding GST and Transportation Cost.

### 4.3 Power Requirement

The borrower shall require power load of 30 KW which shall be applied with Power Corporation. However, for standby power arrangement the borrower shall purchase DG Set.

### 4.4 Manpower Requirement

13 Manpower are required for the Paneer Manufacturing business:
Includes:
1 Supervisor
1 Plant Operator
2 Skilled Labour
4 Unskilled Labour
4 Administrative Staffs
1 Accountant

## 5. FINANCIALS

### 5.1 Cost of Project

| PARTICULARS | AMOUNT | Own <br> Contribution | Bank <br> Finance |
| :--- | ---: | ---: | :---: |
| Land \& Building | Owned /rented |  |  |
| Plant \& Machinery | 14.20 | $3.00 \%$ | $75.00 \%$ |
| Furniture \& Fixtures and Other Assets | 1.20 | 0.30 | 10.65 |
| Working capital | 8.00 | 2.00 | 6.00 |
| Total | $\mathbf{2 3 . 4 0}$ | $\mathbf{5 . 8 5}$ | $\mathbf{1 7 . 5 5}$ |

### 5.2 Means of Finance

| PARTICULARS | AMOUNT |
| :--- | :---: |
| Own Contribution | 5.85 |
| Bank Loan | 11.55 |
| Working capital Limit | 6.00 |
| Total | $\mathbf{2 3 . 4 0}$ |

### 5.3 Projected Balance Sheet

| PROJECTED BALANCE SHEET |  |  |  |  | (in Lacs) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| Liabilities |  |  |  |  |  |
| Capital |  |  |  |  |  |
| opening balance |  | 6.30 | 7.83 | 10.35 | 13.04 |
| Add:- Own Capital | 5.85 |  |  |  |  |
| Add:- Retained Profit | 1.70 | 3.53 | 5.51 | 7.69 | 9.84 |
| Less:- Drawings | 1.25 | 2.00 | 3.00 | 5.00 | 8.00 |
| Closing Blance | 6.30 | 7.83 | 10.35 | 13.04 | 14.88 |
| Term Loan | 10.27 | 7.70 | 5.13 | 2.57 | - |
| Working Capital Limit | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| Sundry Creditors | 1.48 | 1.68 | 1.91 | 2.14 | 2.40 |
| TOTAL: | 24.04 | 23.21 | 23.38 | 23.75 | 23.28 |
| Assets |  |  |  |  |  |
| Fixed Assets ( Gross) | 15.40 | 15.40 | 15.40 | 15.40 | 15.40 |
| Gross Dep. | 2.25 | 4.17 | 5.80 | 7.20 | 8.39 |
| Net Fixed Assets | 13.15 | 11.23 | 9.60 | 8.20 | 7.01 |
| Current Assets |  |  |  |  |  |
| Sundry Debtors | 4.52 | 5.31 | 6.00 | 6.75 | 7.57 |
| Stock in Hand | 5.24 | 5.94 | 6.69 | 7.50 | 8.38 |
| Cash and Bank | 1.13 | 0.74 | 1.10 | 1.30 | 0.32 |
| TOTAL: | 24.04 | 23.21 | 23.38 | 23.75 | 23.28 |

### 5.4 Projected Cash Flow

| PARTICULARS | $\begin{gathered} \text { 1st } \\ \text { year } \end{gathered}$ | $\begin{gathered} \text { 2nd } \\ \text { year } \end{gathered}$ | $\begin{gathered} \hline \text { 3rd } \\ \text { year } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { 4th } \\ \text { year } \\ \hline \end{gathered}$ | 5th year |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SOURCES OF FUND |  |  |  |  |  |
| Own Margin | 5.85 |  |  |  |  |
| Net Profit | 1.70 | 3.53 | 5.54 | 7.84 | 10.09 |
| Depreciation \& Exp. W/off | 2.25 | 1.92 | 1.64 | 1.40 | 1.19 |
| Increase in Cash Credit | 6.00 | - | - | - | - |
| Increase In Term Loan | 11.55 | - | - | - | - |
| Increase in Creditors | 1.48 | 0.20 | 0.22 | 0.24 | 0.26 |
| TOTAL: | 28.83 | 5.66 | 7.40 | 9.47 | 11.54 |
| APPLICATION OF FUND |  |  |  |  |  |
| Increase in Fixed Assets | 15.40 |  |  |  |  |
| Increase in Stock | 5.24 | 0.70 | 0.75 | 0.80 | 0.88 |
| Increase in Debtors | 4.52 | 0.78 | 0.69 | 0.75 | 0.82 |
| Repayment of Term Loan | 1.28 | 2.57 | 2.57 | 2.57 | 2.57 |
| Drawings | 1.25 | 2.00 | 3.00 | 5.00 | 8.00 |
| Taxation | - | - | 0.03 | 0.14 | 0.25 |
| TOTAL: | 27.69 | 6.05 | 7.04 | 9.27 | 12.52 |
| Opening Cash \& Bank Balance | - | 1.13 | 0.74 | 1.10 | 1.30 |
| Add: Surplus | 1.13 | (0.39) | 0.36 | 0.20 | (0.98) |
| Closing Cash \& Bank Balance | 1.13 | 0.74 | 1.10 | 1.30 | 0.32 |

### 5.5 Projected Profitability

| PROJECTED PROFITABILITY STATEMENT |  |  |  | (in Lacs) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PARTICULARS | 1st year | 2nd <br> year | $\begin{gathered} \hline \text { 3rd } \\ \text { year } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { 4th } \\ \text { year } \\ \hline \end{gathered}$ | 5th year |
| Capacity Utilisation \% | 60\% | 65\% | 70\% | 75\% | 80\% |
| SALES |  |  |  |  |  |
| Gross Sale |  |  |  |  |  |
| Corn Puff | 90.48 | 106.12 | 120.00 | 135.06 | 151.36 |
| Total | 90.48 | 106.12 | 120.00 | 135.06 | 151.36 |
| COST OF SALES |  |  |  |  |  |
| Raw Material Consumed | 63.36 | 72.07 | 81.65 | 91.80 | 102.91 |
| Electricity Expenses | 4.32 | 4.75 | 5.23 | 5.75 | 6.32 |
| Depreciation | 2.25 | 1.92 | 1.64 | 1.40 | 1.19 |
| Wages \& labour | 9.30 | 10.23 | 11.25 | 12.38 | 13.62 |
| Repair \& maintenance | 1.81 | 2.65 | 3.00 | 3.38 | 3.78 |
| Cost of Production | 81.04 | 91.63 | 102.76 | 114.70 | 127.83 |
| Add: Opening Stock /WIP | - | 2.70 | 3.05 | 3.43 | 3.82 |
| Less: Closing Stock /WIP | 2.70 | 3.05 | 3.43 | 3.82 | 4.26 |
| Cost of Sales | 78.34 | 91.27 | 102.39 | 114.30 | 127.39 |
| GROSS PROFIT | 12.14 | 14.85 | 17.61 | 20.76 | 23.97 |
|  | 13.42\% | 13.99\% | 14.67\% | 15.37\% | 15.84\% |
| Salary to Staff | 5.10 | 5.61 | 6.17 | 6.79 | 7.47 |
| Interest on Term Loan | 1.14 | 1.00 | 0.72 | 0.44 | 0.15 |


|  |  |  |  |  |  |
| :--- | :---: | :--- | :---: | :---: | :---: |
| Interest on working Capital | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| Rent | 1.80 | 1.98 | 2.18 | 2.40 | 2.64 |
| Selling \& adm exp | 1.81 | 2.12 | 2.40 | 2.70 | 3.03 |
| TOTAL | 10.44 | $\mathbf{1 1 . 3 1}$ | $\mathbf{1 2 . 0 7}$ | $\mathbf{1 2 . 9 2}$ | 13.88 |
| NET PROFIT | 1.70 | 3.53 | 5.54 | 7.84 | 10.09 |
|  | $1.88 \%$ | $3.33 \%$ | $4.62 \%$ | $\mathbf{5 . 8 0 \%}$ | $6.67 \%$ |
| Taxation |  |  | 0.03 | 0.14 | 0.25 |
| PROFIT (After Tax) | 1.70 | 3.53 | 5.51 | 7.69 | 9.84 |

### 5.6 Production and Yield

| COMPUTATION OF PRODUCTION OF CORN PUFF |  |  |
| :--- | ---: | :--- |
| Items to be Manufactured |  |  |
| Corn Puff |  |  |
|  | 50.00 | kg |
| Machine Production capacity per Hour | 8 |  |
| Working hours in a day | 400.00 | kg |
| Production Per Day | 25 |  |
| No of Working Days in Month | 300 | kg |
| No of Working Days in a Year | 120,000 |  |
| Machine capacity per annum | $4,800,000$ | pouches of 25 gm |


| Production of Corn Puff |  |  |
| :--- | ---: | ---: |
| Production | Capacity | pouches of 25 gm |
| 1st year | $60 \%$ | $2,880,000.00$ |
| 2nd year | $65 \%$ | $3,120,000.00$ |
| 3rd year | $70 \%$ | $3,360,000.00$ |
| 4th year | $75 \%$ | $3,600,000.00$ |
| 5th year | $80 \%$ | $3,840,000.00$ |


| Raw Material Cost |  |  |  |
| :---: | :---: | :---: | :---: |
| Year | Capacity <br> Utilisation | Rate <br> (per pouch) | Amount <br> (Rs. in lacs) |
| 1st year | $60 \%$ | 2.20 | 63.36 |
|  |  |  |  |
| 2nd year | $65 \%$ | 2.31 | 72.07 |
| 3rd year | $70 \%$ | 2.43 | 81.65 |
| 4th year | $75 \%$ | 2.55 | 91.80 |
| 5th year | $80 \%$ | 2.68 | 102.91 |

### 5.7 Sales Revenue

| COMPUTATION OF SALE |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Particulars | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| Op Stock |  | - | $96,000.00$ | $104,000.00$ | $112,000.00$ |
| 120,000.00 |  |  |  |  |  |
| Production | $2,880,000.00$ | $3,120,000.00$ | $3,360,000.00$ | $3,600,000.00$ | $3,840,000.00$ |
| Less : Closing Stock | $96,000.00$ | $104,000.00$ | $112,000.00$ | $120,000.00$ | $128,000.00$ |
| Net Sale | $\mathbf{2 , 7 8 4 , 0 0 0 . 0 0}$ | $\mathbf{3 , 1 1 2 , 0 0 0 . 0 0}$ | $\mathbf{3 , 3 5 2 , 0 0 0 . 0 0}$ | $\mathbf{3 , 5 9 2 , 0 0 0 . 0 0}$ | $\mathbf{3 , 8 3 2 , 0 0 0 . 0 0}$ |
| Avg sale price per | 3.25 | 3.41 | 3.58 | 3.76 | 3.95 |
| pouch | 90.48 | 106.12 | 120.00 | 135.06 | 151.36 |
| Sales (in Lacs) |  |  |  |  |  |

### 5.8 Working Capital Assessment




### 5.9 Power, Salary \& Wages Calculation

| Utility Charges (per <br> month) |  |  |
| :--- | ---: | :--- |
| Particulars | value | Description |
| Power connection required | 30 | KWH |
| consumption per day | 240 | units |
|  | 6,000 | units |
| Consumption per month | 10 | Rs. |
| Rate per Unit | 60,000 | Rs. |
| power Bill per month |  |  |


| BREAK UP OF LABOUR CHARGES |  |  |  |
| :---: | :---: | :---: | :---: |
| Particulars | Wages <br> Rs. per <br> Month | No of <br> Employees | Total <br> Salary |
| Supervisor | 15,000 | 1 | 15,000 |
| Plant operator | 12,500 | 1 | 12,500 |
| Skilled (in thousand rupees) | 10,000 | 2 | 20,000 |
| Unskilled (in thousand rupees) | 7,500 | 4 | 30,000 |
| Total salary per month |  |  | 77,500 |
| Total annual labour charges | (in lacs) |  | 9.30 |


| BREAK UP OF STAFF SALARY CHARGES |  |  |  |
| :--- | :---: | :--- | :--- |
| Particulars | Salary <br> Rs. per <br> Month | No of | Total |
|  | 12,500 | 1 | Employees | Salary | Accountant |
| :--- |
| Administrative Staffs |
| Total salary per month |
| Total annual Staff charges |

### 5.10 Financial Ratio Analysis

| FINANCIAL INDICATORS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| TURNOVER | 90.48 | 106.12 | 120.00 | 135.06 | 151.36 |
| GROSS PROFIT | 12.14 | 14.85 | 17.61 | 20.76 | 23.97 |
| G.P. RATIO | 13.42\% | 13.99\% | 14.67\% | 15.37\% | 15.84\% |
| NET PROFIT | 1.70 | 3.53 | 5.54 | 7.84 | 10.09 |
| N.P. RATIO | 1.88\% | 3.33\% | 4.62\% | 5.80\% | 6.67\% |
| CURRENT ASSETS | 10.89 | 11.98 | 13.79 | 15.55 | 16.27 |
| CURRENT LIABILITIES | 7.48 | 7.68 | 7.91 | 8.14 | 8.40 |
| CURRENT RATIO | 1.46 | 1.56 | 1.74 | 1.91 | 1.94 |
| TERM LOAN | 10.27 | 7.70 | 5.13 | 2.57 | - |
| TOTAL NET WORTH | 6.30 | 7.83 | 10.35 | 13.04 | 14.88 |
| DEBT/EQUITY | 1.63 | 0.98 | 0.50 | 0.20 | - |
| TOTAL NET WORTH | 6.30 | 7.83 | 10.35 | 13.04 | 14.88 |
| TOTAL OUTSIDE LIABILITIES | 17.75 | 15.38 | 13.04 | 10.71 | 8.40 |
| TOL/TNW | 2.82 | 1.96 | 1.26 | 0.82 | 0.56 |
| PBDIT | 5.68 | 7.05 | 8.50 | 10.27 | 12.03 |
| INTEREST | 1.74 | 1.60 | 1.32 | 1.04 | 0.75 |


| INTEREST COVERAGE <br> RATIO | $\mathbf{3 . 2 7}$ | $\mathbf{4 . 4 1}$ | $\mathbf{6 . 4 5}$ | $\mathbf{9 . 9 2}$ | $\mathbf{1 5 . 9 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
| WDV | 13.15 | 11.23 | 9.60 | 8.20 | 7.01 |
| TERM LOAN | 10.27 | 7.70 | 5.13 | 2.57 |  |
| FACR | $\mathbf{1 . 2 8}$ | $\mathbf{1 . 4 6}$ | $\mathbf{1 . 8 7}$ | $\mathbf{3 . 1 9}$ | $\mathbf{-}$ |

### 5.11 DSCR

CALCULATION OF D.S.C. R

| PARTICULARS | 1st <br> year | 2nd <br> year | 3rd <br> year | 4th <br> year | 5th <br> year |
| :--- | :---: | :---: | :---: | :---: | :---: |
| CASH ACCRUALS |  |  |  |  |  |
| Interest on Term Loan | 3.95 | 5.45 | 7.15 | 9.09 | 11.03 |
| Total | 1.14 | 1.00 | 0.72 | 0.44 | 0.15 |
|  | 5.08 | 6.45 | 7.87 | 9.53 | 11.18 |
| REPAYMENT |  |  |  |  |  |
| Instalment of Term Loan | 1.28 | 2.57 | 2.57 | 2.57 | 2.57 |
| Interest on Term Loan | 1.14 | 1.00 | 0.72 | 0.44 | 0.15 |
|  |  |  |  |  |  |
| Total | 2.42 | 3.57 | 3.28 | 3.00 | 2.72 |
|  |  |  |  |  |  |
| DEBT SERVICE COVERAGE RATIO | $\mathbf{2 . 1 0}$ | $\mathbf{1 . 8 1}$ | $\mathbf{2 . 4 0}$ | $\mathbf{3 . 1 7}$ | $\mathbf{4 . 1 1}$ |
| AVERAGE D.S.C.R. |  |  |  |  | $\mathbf{2 . 6 8}$ |

### 5.12 Depreciation

| COMPUTATION OF DEPRECIATION |  |  | (in Lacs) <br> TOTAL |
| :---: | :---: | :---: | :---: |
| Description | Plant \& Machinery | Furniture |  |
| Rate of Depreciation | 15.00\% | 10.00\% |  |
| Opening Balance | - | - | - |
| Addition | 14.20 | 1.20 | 15.40 |
| Total | 14.20 | 1.20 | 15.40 |
| Less: Depreciation | 2.13 | 0.12 | 2.25 |
| WDV at end of Year | 12.07 | 1.08 | 13.15 |
| Additions During The Year | - | - | - |
| Total | 12.07 | 1.08 | 13.15 |
| Less: Depreciation | 1.81 | 0.11 | 1.92 |
| WDV at end of Year | 10.26 | 0.97 | 11.23 |
| Additions During The Year | - | - | - |
| Total | 10.26 | 0.97 | 11.23 |
| Less : Depreciation | 1.54 | 0.10 | 1.64 |
| WDV at end of Year | 8.72 | 0.87 | 9.60 |
| Additions During The Year | - | - | - |
| Total | 8.72 | 0.87 | 9.60 |
| Less : Depreciation | 1.31 | 0.09 | 1.40 |
| WDV at end of Year | 7.41 | 0.79 | 8.20 |
| Additions During The Year | - | - | - |
| Total | 7.41 | 0.79 | 8.20 |
| Less : Depreciation | 1.11 | 0.08 | 1.19 |
| WDV at end of Year | 6.30 | 0.71 | 7.01 |
| Additions During The Year | - | - | - |


|  |  |  |  |
| :--- | :---: | :--- | :--- |
| Total | 6.30 | 0.71 | 7.01 |
| Less : Depreciation | 0.95 | 0.07 | 1.02 |
| WDV at end of Year | $\mathbf{5 . 3 6}$ | $\mathbf{0 . 6 4}$ | $\mathbf{5 . 9 9}$ |
| Less : Depreciation | 0.80 | 0.06 | 0.87 |
| WDV at end of Year | $\mathbf{4 . 5 5}$ | $\mathbf{0 . 5 7}$ | $\mathbf{5 . 1 3}$ |
| Less : Depreciation | 0.68 | 0.06 | 0.74 |
| WDV at end of Year | $\mathbf{3 . 8 7}$ | $\mathbf{0 . 5 2}$ | $\mathbf{4 . 3 9}$ |

### 5.13 Repayment schedule

| REPAYMENT SCHEDULE OF TERM LOAN |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Interest | 11.00\% |
| Year | Particulars | Amount | Addition | Total | Interest | Repayment | Closing Balance |
| ist | Opening Balance |  |  |  |  |  |  |
|  | 1st month | - | 11.55 | 11.55 | - | - | 11.55 |
|  | 2nd month | 11.55 | - | 11.55 | 0.11 | - | 11.55 |
|  | 3rd month | 11.55 | - | 11.55 | 0.11 | - | 11.55 |
|  | 4th month | 11.55 | - | 11.55 | 0.11 |  | 11.55 |
|  | 5th month | 11.55 | - | 11.55 | 0.11 |  | 11.55 |
|  | 6th month | 11.55 | - | 11.55 | 0.11 |  | 11.55 |
|  | 7th month | 11.55 | - | 11.55 | 0.11 | 0.21 | 11.34 |
|  | 8th month | 11.34 | - | 11.34 | 0.10 | 0.21 | 11.12 |
|  | 9th month | 11.12 | - | 11.12 | 0.10 | 0.21 | 10.91 |




### 5.14 Break Even Point Analysis

| BREAK EVEN POINT ANALYSIS |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Year | I | II | III | IV | V |


| Net Sales \& Other Income | 90.48 | 106.12 | 120.00 | 135.06 | 151.36 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Less : Op. WIP Goods | - | 2.70 | 3.05 | 3.43 | 3.82 |
| Add : Cl. WIP Goods | 2.70 | 3.05 | 3.43 | 3.82 | 4.26 |
| Total Sales | 93.18 | 106.47 | 120.37 | 135.46 | 151.80 |
| Variable \& Semi Variable Exp. |  |  |  |  |  |
| Raw Material Consumed | 63.36 | 72.07 | 81.65 | 91.80 | 102.91 |
| Electricity Exp/Coal Consumption at 85\% | 3.67 | 4.04 | 4.44 | 4.89 | 5.38 |
| Wages \& Salary at 60\% | 8.64 | 9.50 | 10.45 | 11.50 | 12.65 |
| Selling \& adminstrative Expenses 80\% | 1.45 | 1.70 | 1.92 | 2.16 | 2.42 |
| Interest on working Capital | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Repair \& maintenance | 1.81 | 2.65 | 3.00 | 3.38 | 3.78 |
| Total Variable \& Semi Variable Exp | 79.53 | 90.57 | 102.07 | 114.32 | 127.74 |
| Contribution | 13.65 | 15.91 | 18.31 | 21.13 | 24.06 |
| Fixed \& Semi Fixed Expenses |  |  |  |  |  |
| Electricity Exp/Coal Consumption at 15\% | 0.65 | 0.71 | 0.78 | 0.86 | 0.95 |
| Wages \& Salary at 40\% | 5.76 | 6.34 | 6.97 | 7.67 | 8.43 |
| Interest on Term Loan | 1.14 | 1.00 | 0.72 | 0.44 | 0.15 |
| Depreciation | 2.25 | 1.92 | 1.64 | 1.40 | 1.19 |
| Selling \& adminstrative Expenses 20\% | 0.36 | 0.42 | 0.48 | 0.54 | 0.61 |
| Rent | 1.80 | 1.98 | 2.18 | 2.40 | 2.64 |
| Total Fixed Expenses | 11.96 | 12.37 | 12.77 | 13.30 | 13.97 |
| Capacity Utilization | 60\% | 65\% | 70\% | 75\% | 80\% |
| OPERATING PROFIT | 1.70 | 3.53 | 5.54 | 7.84 | 10.09 |
| BREAK EVEN POINT | 53\% | 51\% | 49\% | 47\% | 46\% |
| BREAK EVEN SALES | 81.60 | 82.81 | 83.93 | 85.23 | 88.13 |

$\square$

## 6. LICENSE \& APPROVALS

- Obtain the GST registration.
- Additionally, obtain the Udyog Aadhar registration Number.
- Fire/pollution license as required.
- FSSAI License
- Factory License
- Choice of a Brand Name of the product and secure the name with Trademark if required.


## 7. ASSUMPTIONS

1. Production Capacity of Corn Puff is 400 kg per day. First year, Capacity has been taken @ 60\%.
2. Working shift of 8 hours per day has been considered.
3. Raw Material stock is for 12 days and Finished goods Closing Stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 15 days.
5. Credit period by the Sundry Creditors has been provided for 7 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at $11 \%$.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 30 KW .
10. Increase in sales and raw material costing has been taken @ 5\% on a yearly basis.

## Limitations of the Model DPR and Guidelines for Entrepreneurs

## Limitations of the Model DPR

i. This model DPR has provided only the basic standard components and methodology to be adopted by an entrepreneur while submitting a proposal under the Formalization of Micro Food Processing Enterprises Scheme of MoFPI.
ii. This is a model DPR made to provide general methodological structure not for specific entrepreneur/crops/location. Therefore, information on the entrepreneur, forms and structure (proprietorship/partnership/cooperative/ FPC/joint stock company) of his business, details of proposed DPR, project location, raw material base/contract sourcing, entrepreneurs own SWOT analysis, detailed market research, rationale of the project for specific location, community advantage/benefit from the project, employment generation and many more detailed aspects not included.
iii. The present DPR is based on certain assumptions on cost, prices, interest, capacity utilization, output recovery rate and so on. However, these assumptions in reality may vary across places, markets and situations; thus the resultant calculations will also change accordingly.

