



## **Model Detailed Project Report**

### **PETHA MANUFACTURING UNIT**

**Prepared by**

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## **1. INTRODUCTION**



Petha is a sweet product that is consumed widely in India. Petha is not cooked on a regular cooking fire, but only coal fire was used to prepare this sweet treat. Petha made in Agra has a Geographical Indication (GI) tag to certify its place of origin. With the passage of time, many varieties of Petha have come up in the market to cater to the demand and changing palate of the patrons. Nowadays, buyers can choose from the kesar petha (saffron), angoori petha (grapes), chocolate petha, paan petha, and so on. Coconut and dried fruit lovers can also have their share of the delicious Petha. Ash Gourd is used in the preparation of a dessert called petha, which is the most famous sweet of Agra, the place that also symbolized by Taj Mahal. Ash gourd is very important in Indian religious ceremonies. It is frequently found hanging from a rope in front of newly built houses, as it is believed to ward off evil spirits. This gourd is also ground to a coarse paste and made into vadiyaalu (similar to Papad). The gourd stays well for up to three to four months without any special storage facilities.

## **2. MARKET POTENTIAL:**

Agra's famous petha sweet industries as well as tourist guides, who went into near closure, are ecstatic. As the Taj Mahal re-opens, the petha industry has greatly benefited. Around 50 % of sales of Petha are due to agro-tourism. However, Petha seems to be just a processed sweet dish, but in Agra and other regions of the areas, it is the lifeline of economy. The sellers, the processor, the distributor are all directly or indirectly linked to Petha processing business and development. About 1500

cottage units produce 700-800 tons of Petha daily. As a result of its strong demand from tourists overseas, Petha also has strong export prospects. In today's world where businesses face a double challenge of tough competition and the short attention span of the consumer innovation is the only way to survive and thrive. Traditional sweet makers, famous for its translucent, soft candy, petha, have realized this, and are thus innovating the humble sweet in myriad ways. Presently 15 varieties of petha are manufactured in India. There is chocolate, paan, angoori, khus, orange, pineapple, coconut, dry fruits, and Kesar, among others. There is even a sandwich variety which is basically two layers of petha with a filling of khoya, cashew, and cardamom.

### **3. PRODUCT DESCRIPTION**

#### **3.1 PRODUCT BENEFITS**

- Petha is like nectar for a mental illness or a weakness of memory. A patient must eat 10–20-gram fruit pulp and also drink Petha juice. If anyone suffering from asthma, then he or she should eat Petha regularly as it is very beneficial for lungs.
- You can apply pulp of Petha and leaves on your stomach if you feel burning sensation in the body. Besides, one can prepare thandai from its seeds as well. To get rid of nose bleeding, one should drink Petha juice or eat its pulp. Also, you can apply its seed oil on your head.
- Petha removes intestinal problems as it contains a filament. So, it is very beneficial for pile patient and stops to get blood from piles.

- People who get swelling in the intestine as well as do not get appetite must drink two cups of Petha juice in the morning. As a result, your appetite will increase plus you get rid of intestine inflammation too.
- The pulp of Petha with its seeds are extremely beneficial in urinary disorders. You must use Petha and its seeds if you get intermittent urinary problem or stone. Apart from this, Petha intake is also useful in increase semen disease.

### **3.2 RAW MATERIAL**

Basic raw material requirement are as follows:

- Ash Gourd
- Water
- Lime
- Alum
- Citric Acid
- Sugar

### **3.3 MANUFACTURING PROCESS**

Petha Fruits (Ash Gourd) are directly procured from the farmer's field. Washing, Sorting, and peeling of Petha fruit is done manually. Then they are cut into pieces. The seed of the fruit is removed from the fruit by an SS knife Cutting them into small pieces. These pieces are pierced with nail-like spikes. Pierced pieces are then immersed in Lime Water for 2 hrs. Then these pieces are boiled in water with Alum. After they are boiled, the Pieces are finally immersed in boiling sugar syrup for an

hour. Finally, these petha are dried in trays for further packaging. Final packaging is done and sends to the market.

### **Processing technology of Petha**

➤ Fruit selection and harvesting of Ash Gourd

The fruits are directly procured from farmer field; the ash gourd to be candied must be of perfect maturity stage and is free of fibers.

➤ Peeling, Cutting & Seed Removal

The harvested wax gourd is washed and cleaned. The seeds are removed and it is then peeled and cut at an approximate dimension (cubical, cylindrical or spherical.), dimension and shape can vary according to choose.

➤ Piercing or Forking

After peeling and cutting operations, pieces of Ash Gourd are pierced with metal to ensure proper porosity. This would at last ensure proper entry of the sugar syrup.

➤ Soaking in lime water

The pierced/forked pieces of Petha are then dipped in lime water for around 2-3 hours. The proportion used is usually 20 kilograms of lime per 100 liters of water. This process helps to harden Petha to make it compact. The methodology behind the use of calcium in the fruit slices to create an intercellular bond and making it more textured and rigid.

➤ Washing in running water

After dipping Petha in lime water, it is washed constantly in clear running water to wash the calcium dipped bits in running water until the lime is completely washed away. In order to ensure the elimination of excess calcium ions, this is an essential and mandatory process.

➤ Dipping in chilled water

The petha is dipped in chilled water after being cleaned in running water to reduce exothermic reactions due to excess  $\text{Ca}^{2+}$  ions are minimized. This is done for half an hour or 1 hour.

➤ Hot water treatment

Now the fruits pieces are dip in hot water (80-90°C), to minimize the characteristic taste of gourds. This is done within 5-10 minutes.

➤ Boiling with Alum

Petha bits are boiled for one hour in water containing alum. This process is called, 'Josh Lena'. In order to preserve the standard of Petha, this is a very important step that must be performed cautiously and skillfully. This is achieved to maintain surface smoothness and reduce the effects of exothermic damage caused by excess calcium ions in the fruit tissues.

➤ Preparation of sugar syrup

70-80% of sugar is dissolved in water and is boiled at 100°C. After cooking for 5-10 minutes citric acid 2-3g is added / liter of water.

➤ Boiling with sugar syrup

The treated fruit pieces are dipped in boiling sugar syrup of suitable consistency. The sugar syrup and the fruit parts are boiled until the sugar syrup reaches a very high consistency (up to 80- 90 percent). To ensure consistent mixing, the petha is cooked properly and stirred periodically. After cooking properly Petha are covered with mesh overnight so that a sufficient amount of sugar enters into the innermost part of the fruit pieces.

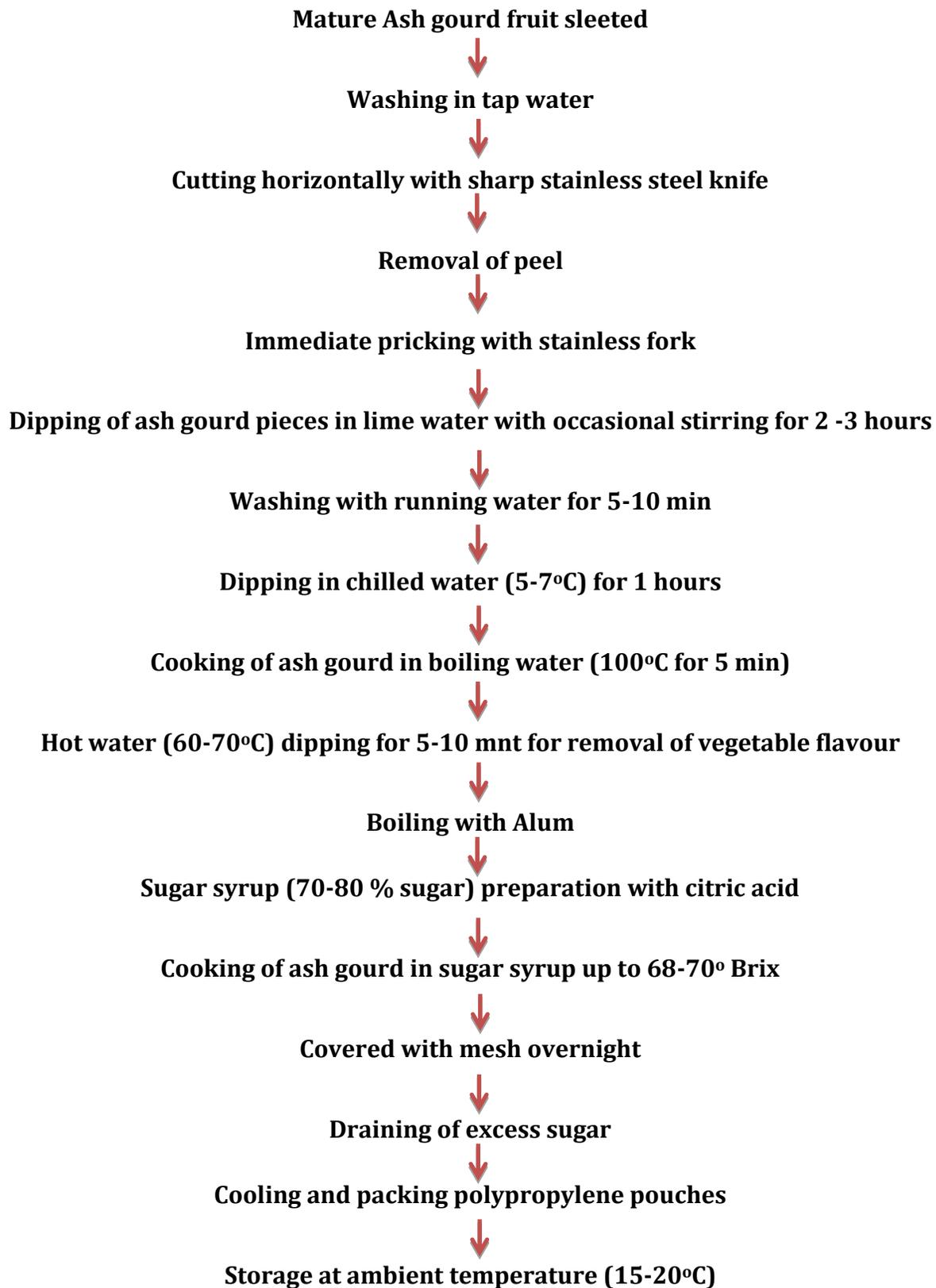
➤ Draining of excess sugar

The excess syrup is drained out. Then one then Rose petals, essence & flavoring agents such as saffron, are added to make different flavors of pethas. It is then cooled into assorted boxes and bins until it is packaged.

➤ Cooling and packing

After overnight soaking, the Petha are cooled and are packed airtight.

## Flow chart of Petha preparation



## 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

|                         |   |   |
|-------------------------|---|---|
| <b>Weighing machine</b> | Weighing scales are used to measure weight of product and raw materials.  |    |
| <b>Iron Karahi</b>      | Karahi serve for the Boiling, frying of different type of food. In Petha manufacturing this is used for boiling petha fruit. Which are often named Karahi dishes after the utensil.     |   |
| <b>Stove</b>            | Stove is heating device in which natural gas is used for fuel. Gas may be supplied to the burner prior to combustion at a pressure sufficient to induce a supply of air to mix with it. |  |

|   |  |   |
|---|--|---|
| <p><b>Water Storage Tank</b></p>                            | <p>Water tanks are used to provide storage of water for use in many applications, irrigation agriculture, fire suppression, food preparation as well as many other uses.</p> |  |
| <p><b>Material Handling equipments &amp; hand tools</b></p> | <p>Bins, Trays, Trolleys, knife etc.</p>   |  |

**Note:** Approx. Total Machinery cost shall be Rs 4.30 lakhs excluding GST and Transportation Cost.

#### **4.3 Power Requirement**

The borrower shall require power load of 2 KW which shall be applied with Power Corporation. However, for standby power arrangement the borrower shall purchase DG Set.

#### **4.4 Manpower Requirement**

8 Manpower are required for the Petha Manufacturing business:

Includes:

2 Skilled Labour

4 Unskilled Labour

4 Administrative Staffs

## 5. FINANCIALS

### 5.1 Cost of Project

| COST OF PROJECT      |              |
|----------------------|--------------|
|                      | (in Lacs)    |
| PARTICULARS          | Amount       |
| Land & Building      | Owned/Rented |
| Plant & Machinery    | 4.30         |
| Miscellaneous Assets | 1.20         |
| Working capital      | 1.89         |
| <b>Total</b>         | <b>7.39</b>  |

### 5.2 Means of Finance

| MEANS OF FINANCE               |             |
|--------------------------------|-------------|
| PARTICULARS                    | AMOUNT      |
| Own Contribution (min 10%)     | 0.74        |
| Subsidy @35% (Max. Rs 10 Lac)  | 1.93        |
| Term Loan @ 55%                | 3.03        |
| Working Capital (bank Finance) | 1.70        |
| <b>Total</b>                   | <b>7.39</b> |

### 5.3 Projected Balance Sheet

| <b>PROJECTED BALANCE SHEET</b> |                 |                 |                 |                 | (in Lacs)       |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>PARTICULARS</b>             | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b> |
| <b><u>Liabilities</u></b>      |                 |                 |                 |                 |                 |
| Capital                        |                 |                 |                 |                 |                 |
| opening balance                |                 | 1.95            | 3.04            | 3.56            | 3.52            |
| Add:- Own Capital              | 0.74            |                 |                 |                 |                 |
| Add:- Retained Profit          | 1.21            | 2.09            | 3.03            | 3.95            | 5.09            |
| Less:- Drawings                | -               | 1.00            | 2.50            | 4.00            | 5.00            |
| Closing Balance                | 1.95            | 3.04            | 3.56            | 3.52            | 3.60            |
| Term Loan                      | 2.69            | 2.02            | 1.34            | 0.67            | -               |
| Working Capital Limit          | 1.70            | 1.70            | 1.70            | 1.70            | 1.70            |
| Subsidy/grant                  | 1.93            | 1.93            | 1.93            | 1.93            | 1.93            |
| Sundry Creditors               | 0.26            | 0.30            | 0.34            | 0.38            | 0.43            |
| Provisions & Other Liab        | 0.40            | 0.50            | 0.60            | 0.72            | 0.86            |
| <b>TOTAL :</b>                 | <b>8.92</b>     | <b>9.48</b>     | <b>9.47</b>     | <b>8.91</b>     | <b>8.52</b>     |
| <b><u>Assets</u></b>           |                 |                 |                 |                 |                 |
| <b>Fixed Assets ( Gross)</b>   | 5.50            | 5.50            | 5.50            | 5.50            | 5.50            |
| Gross Dep.                     | 0.77            | 1.42            | 1.98            | 2.47            | 2.88            |
| <b>Net Fixed Assets</b>        | <b>4.74</b>     | <b>4.08</b>     | <b>3.52</b>     | <b>3.03</b>     | <b>2.62</b>     |
| Subsidy/grant                  | 1.93            | 1.93            | 1.93            | 1.93            | 1.93            |
| <b>Current Assets</b>          |                 |                 |                 |                 |                 |
| Sundry Debtors                 | 1.15            | 1.35            | 1.53            | 1.72            | 1.93            |
| Stock in Hand                  | 1.01            | 1.14            | 1.27            | 1.42            | 1.58            |
| Cash and Bank                  | 0.11            | 0.99            | 1.24            | 0.82            | 0.47            |
| <b>TOTAL :</b>                 | <b>8.92</b>     | <b>9.48</b>     | <b>9.47</b>     | <b>8.91</b>     | <b>8.52</b>     |

#### 5.4 **Projected Cash Flow**

| <b>PROJECTED CASH FLOW STATEMENT</b> |                 |                 |                 |                 | (in Lacs)       |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>PARTICULARS</b>                   | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b> |
| <b><u>SOURCES OF FUND</u></b>        |                 |                 |                 |                 |                 |

|                                   |              |             |             |             |             |
|-----------------------------------|--------------|-------------|-------------|-------------|-------------|
| Own Margin                        | 0.74         |             |             |             |             |
| Net Profit                        | 1.21         | 2.09        | 3.03        | 3.95        | 5.09        |
| Depreciation & Exp. W/off         | 0.77         | 0.66        | 0.56        | 0.48        | 0.42        |
| Increase in Cash Credit           | 1.70         | -           | -           | -           | -           |
| Increase in Term Loan             | 3.03         | -           | -           | -           | -           |
| Increase in Creditors             | 0.26         | 0.04        | 0.04        | 0.04        | 0.05        |
| Increase in Provisions & Oth lib  | 0.40         | 0.10        | 0.10        | 0.12        | 0.14        |
| Subsidy/grant                     | 1.93         |             |             |             |             |
| <b>TOTAL:</b>                     | <b>10.02</b> | <b>2.89</b> | <b>3.73</b> | <b>4.60</b> | <b>5.69</b> |
| <b><u>APPLICATION OF FUND</u></b> |              |             |             |             |             |
| Increase in Fixed Assets          | 5.50         |             |             |             |             |
| Increase in Stock                 | 1.01         | 0.13        | 0.14        | 0.14        | 0.17        |
| Increase in Debtors               | 1.15         | 0.20        | 0.18        | 0.19        | 0.21        |
| Repayment of Term Loan            | 0.34         | 0.67        | 0.67        | 0.67        | 0.67        |
| Subsidy/grant                     | 1.93         |             |             |             |             |
| Drawings                          |              | 1.00        | 2.50        | 4.00        | 5.00        |
| Taxation                          |              | -           | -           | -           | -           |
| <b>TOTAL :</b>                    | <b>9.92</b>  | <b>2.00</b> | <b>3.49</b> | <b>5.01</b> | <b>6.05</b> |
| Opening Cash & Bank Balance       | -            | 0.11        | 0.99        | 1.24        | 0.82        |
| Add : Surplus                     | 0.11         | 0.89        | 0.24        | (0.41)      | (0.36)      |
| Closing Cash & Bank Balance       | <b>0.11</b>  | <b>0.99</b> | <b>1.24</b> | <b>0.82</b> | <b>0.47</b> |

## 5.5 Projected Profitability

| <b>PROJECTED PROFITABILITY STATEMENT</b> |                 |                 |                 |                 | <b>(in Lacs)</b> |
|--|-----------------|-----------------|-----------------|-----------------|------------------|
| <b>PARTICULARS</b>                       | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b>  |
| Capacity Utilisation %                   | <b>60%</b>      | <b>65%</b>      | <b>70%</b>      | <b>75%</b>      | <b>80%</b>       |
| <b><u>SALES</u></b>                      |                 |                 |                 |                 |                  |
| <b>Gross Sale</b>                        |                 |                 |                 |                 |                  |
| Petha                                    | 22.97           | 26.92           | 30.50           | 34.30           | 38.51            |
| <b>Total</b>                             | <b>22.97</b>    | <b>26.92</b>    | <b>30.50</b>    | <b>34.30</b>    | <b>38.51</b>     |
| <b>COST OF SALES</b>                     |                 |                 |                 |                 |                  |
| Raw Material Consumed                    | 11.23           | 12.79           | 14.45           | 16.20           | 18.24            |
| Electricity Expenses                     | 0.48            | 0.55            | 0.63            | 0.73            | 0.80             |
| Depreciation                             | 0.77            | 0.66            | 0.56            | 0.48            | 0.42             |
| Wages & labour                           | 6.00            | 6.60            | 7.26            | 7.99            | 8.78             |
| Repair & maintenance                     | 0.57            | 0.67            | 0.76            | 0.86            | 0.96             |
| <b>Cost of Production</b>                | <b>19.05</b>    | <b>21.27</b>    | <b>23.67</b>    | <b>26.26</b>    | <b>29.21</b>     |
| <b>Add: Opening Stock /WIP</b>           | -               | 0.64            | 0.71            | 0.79            | 0.88             |
| <b>Less: Closing Stock /WIP</b>          | 0.64            | 0.71            | 0.79            | 0.88            | 0.97             |
| Cost of Sales                            | 18.42           | 21.20           | 23.59           | 26.17           | 29.11            |
| <b>GROSS PROFIT</b>                      | <b>4.55</b>     | <b>5.72</b>     | <b>6.91</b>     | <b>8.13</b>     | <b>9.40</b>      |
|  | <b>19.82%</b>   | <b>21.25%</b>   | <b>22.67%</b>   | <b>23.71%</b>   | <b>24.42%</b>    |
| Salary to Staff                          | 1.20            | 1.32            | 1.45            | 1.60            | 1.76             |
| Interest on Term Loan                    | 0.30            | 0.26            | 0.19            | 0.11            | 0.04             |
| Interest on working Capital              | 0.19            | 0.19            | 0.19            | 0.19            | 0.19             |
| Rent                                     | 1.20            | 1.32            | 1.45            | 1.60            | 1.76             |

|                    |              |              |              |               |               |
|--------------------|--------------|--------------|--------------|---------------|---------------|
| selling & adm exp  | 0.46         | 0.54         | 0.61         | 0.69          | 0.58          |
| <b>TOTAL</b>       | <b>3.34</b>  | <b>3.63</b>  | <b>3.89</b>  | <b>4.18</b>   | <b>4.32</b>   |
| NET PROFIT         | 1.21         | 2.09         | 3.03         | 3.95          | 5.09          |
|                    | <b>5.26%</b> | <b>7.77%</b> | <b>9.92%</b> | <b>11.52%</b> | <b>13.21%</b> |
| Taxation           | -            | -            | -            | -             | -             |
| PROFIT (After Tax) | 1.21         | 2.09         | 3.03         | 3.95          | 5.09          |

## 5.6 Production and Yield

| <b><u>COMPUTATION OF PRODUCTION OF PETHA</u></b> |       |      |
|--|-------|------|
| <b>Items to be Manufactured</b>                  |       |      |
| Petha  |       |      |
| Machine capacity Per hour                        | 10    | KG   |
| Total Working Hours                              | 8     |      |
| Machine capacity Per Day                         | 80    |      |
| working days in amonth                           | 25    | Days |
| working days per annum                           | 300   |      |
| machine capacity per annum                       | 24000 | KG   |

| <b>Production of Petha</b> |                 |           |
|----------------------------|-----------------|-----------|
| <b>Production</b>          | <b>Capacity</b> | <b>KG</b> |
| 1st year                   | 60%             | 14,400    |
| 2nd year                   | 65%             | 15,600    |
| 3rd year                   | 70%             | 16,800    |
| 4th year                   | 75%             | 18,000    |
| 5th year                   | 80%             | 19,200    |

| <b>Raw Material Cost</b> |                             |                      |                             |
|--------------------------|-----------------------------|----------------------|-----------------------------|
| <b>Year</b>              | <b>Capacity Utilisation</b> | <b>Rate (per KG)</b> | <b>Amount (Rs. in lacs)</b> |
| 1st year                 | 60%                         | 78.00                | 11.23                       |
| 2nd year                 | 65%                         | 82.00                | 12.79                       |
| 3rd year                 | 70%                         | 86.00                | 14.45                       |
| 4th year                 | 75%                         | 90.00                | 16.20                       |
| 5th year                 | 80%                         | 95.00                | 18.24                       |

## **5.7 Sales Revenue**

| <b><u>COMPUTATION OF SALE</u></b> |                 |                 |                 |                 |                 |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>Particulars</b>                | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b> |
| Op Stock                          | -               | 480             | 520             | 560             | 600             |
| Production                        | 14,400          | 15,600          | 16,800          | 18,000          | 19,200          |
| Less : Closing Stock              | 480             | 520             | 560             | 600             | 640             |
| <b>Net Sale</b>                   | <b>13,920</b>   | <b>15,560</b>   | <b>16,760</b>   | <b>17,960</b>   | <b>19,160</b>   |
| sale price per KG                 | 165.00          | 173.00          | 182.00          | 191.00          | 201.00          |
| <b>Sales (in Lacs)</b>            | <b>22.97</b>    | <b>26.92</b>    | <b>30.50</b>    | <b>34.30</b>    | <b>38.51</b>    |

## **5.8 Working Capital Assessment**

| <b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b> |                 |                 |                 |                 | (in Lacs)       |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>PARTICULARS</b>  | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b> |
| <b><u>Finished Goods</u></b>                              |                 |                 |                 |                 |                 |
|   | 0.64            | 0.71            | 0.79            | 0.88            | 0.97            |
| <b><u>Raw Material</u></b>                                |                 |                 |                 |                 |                 |
|   | 0.37            | 0.43            | 0.48            | 0.54            | 0.61            |
| <b>Closing Stock</b>                                      | <b>1.01</b>     | <b>1.14</b>     | <b>1.27</b>     | <b>1.42</b>     | <b>1.58</b>     |

| <b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b> |               |                   |             |                     |             |
|---|---------------|-------------------|-------------|---------------------|-------------|
| <b>TRADITIONAL METHOD</b>                         |               |                   |             |                     | (in Lacs)   |
| <b>Particulars</b>                                | <b>Amount</b> | <b>Own Margin</b> |             | <b>Bank Finance</b> |             |
| Finished Goods & Raw Material                     | 1.01          |                   |             |                     |             |
| Less : Creditors                                  | 0.26          |                   |             |                     |             |
| <b>Paid stock</b>                                 | <b>0.75</b>   | <b>10%</b>        | <b>0.07</b> | <b>90%</b>          | <b>0.67</b> |
| <b>Sundry Debtors</b>                             | <b>1.15</b>   | <b>10%</b>        | <b>0.11</b> | <b>90%</b>          | <b>1.03</b> |
|   | <b>1.90</b>   |                   | <b>0.19</b> |                     | <b>1.71</b> |
| <b>MPBF</b>                                       |               |                   |             |                     | <b>1.71</b> |
| <b>WORKING CAPITAL LIMIT DEMAND (from Bank)</b>   |               |                   |             |                     | <b>1.70</b> |
| <b>Working Capital Margin</b>                     |               |                   |             |                     | <b>0.19</b> |

## 5.9 Power, Salary & Wages Calculation

| <b>Utility Charges (per month)</b> |              |                    |
|------------------------------------|--------------|--------------------|
| <b>Particulars</b>                 | <b>value</b> | <b>Description</b> |
| Power connection required          | 2            | KWH                |
| consumption per day                | 16           | units              |
| Consumption per month              | 400          | units              |
| Rate per Unit                      | 10           | Rs.                |
| power Bill per month               | 4,000        | Rs.                |

| <b><u>BREAK UP OF LABOUR CHARGES</u></b> |                                    |                            |                         |
|--|------------------------------------|----------------------------|-------------------------|
| <b>Particulars</b>                       | <b>Wages<br/>Rs. per<br/>Month</b> | <b>No of<br/>Employees</b> | <b>Total<br/>Salary</b> |
| Skilled (in thousand rupees)             | 10,000                             | 2                          | 20,000                  |
| Unskilled (in thousand rupees)           | 7,500                              | 4                          | 30,000                  |
| <b>Total salary per month</b>            |                                    |                            | <b>50,000</b>           |
| <b>Total annual labour charges</b>       | <b>(in lacs)</b>                   |                            | <b>6.00</b>             |

| <b><u>BREAK UP OF STAFF SALARY CHARGES</u></b> |                                     |                            |                         |
|--|-------------------------------------|----------------------------|-------------------------|
| <b>Particulars</b>                             | <b>Salary<br/>Rs. per<br/>Month</b> | <b>No of<br/>Employees</b> | <b>Total<br/>Salary</b> |
| Administrative Staff                           | 5,000                               | 2                          | 10,000                  |
| <b>Total salary per month</b>                  |                                     |                            | <b>10,000</b>           |
| <b>Total annual Staff charges</b>              | <b>(in lacs)</b>                    |                            | <b>1.20</b>             |

## 5.10 DSCR

| <b><u>CALCULATION OF D.S.C.R</u></b> |                 |                 |                 |                 |                 |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>PARTICULARS</b>                   | <b>1st year</b> | <b>2nd year</b> | <b>3rd year</b> | <b>4th year</b> | <b>5th year</b> |
| CASH ACCRUALS                        | 1.97            | 2.75            | 3.59            | 4.43            | 5.50            |
| Interest on Term Loan                | 0.30            | 0.26            | 0.19            | 0.11            | 0.04            |
| <b>Total</b>                         | <b>2.27</b>     | <b>3.01</b>     | <b>3.78</b>     | <b>4.55</b>     | <b>5.54</b>     |
| <b><u>REPAYMENT</u></b>              |                 |                 |                 |                 |                 |
| Instalment of Term Loan              | 0.34            | 0.67            | 0.67            | 0.67            | 0.67            |
| Interest on Term Loan                | 0.30            | 0.26            | 0.19            | 0.11            | 0.04            |
| <b>Total</b>                         | <b>0.63</b>     | <b>0.93</b>     | <b>0.86</b>     | <b>0.79</b>     | <b>0.71</b>     |
| <b>DEBT SERVICE COVERAGE RATIO</b>   | <b>3.58</b>     | <b>3.22</b>     | <b>4.39</b>     | <b>5.79</b>     | <b>7.78</b>     |
| <b>AVERAGE D.S.C.R.</b>              | <b>4.95</b>     |                 |                 |                 |                 |

## 5.11 Depreciation

| <b><u>COMPUTATION OF DEPRECIATION</u></b> |                              |                     | (in Lacs)    |
|---|------------------------------|---------------------|--------------|
| <b>Description</b>                        | <b>Plant &amp; Machinery</b> | <b>Miss. Assets</b> | <b>TOTAL</b> |
| Rate of Depreciation                      | <b>15.00%</b>                | <b>10.00%</b>       |              |
| <b>Opening Balance</b>                    | -                            | -                   | -            |
| Addition                                  | 4.30                         | 1.20                | 5.50         |
| <b>Total</b>                              | <b>4.30</b>                  | <b>1.20</b>         | <b>5.50</b>  |

|                           |             |             |             |
|---------------------------|-------------|-------------|-------------|
| Less : Depreciation       | 0.65        | 0.12        | 0.77        |
| <b>WDV at end of Year</b> | <b>3.66</b> | <b>1.08</b> | <b>4.74</b> |
| Additions During The Year | -           | -           | -           |
| Total                     | 3.66        | 1.08        | 4.74        |
| Less : Depreciation       | 0.55        | 0.11        | 0.66        |
| <b>WDV at end of Year</b> | <b>3.11</b> | <b>0.97</b> | <b>4.08</b> |
| Additions During The Year | -           | -           | -           |
| Total                     | 3.11        | 0.97        | 4.08        |
| Less : Depreciation       | 0.47        | 0.10        | 0.56        |
| <b>WDV at end of Year</b> | <b>2.64</b> | <b>0.87</b> | <b>3.52</b> |
| Additions During The Year | -           | -           | -           |
| Total                     | 2.64        | 0.87        | 3.52        |
| Less : Depreciation       | 0.40        | 0.09        | 0.48        |
| <b>WDV at end of Year</b> | <b>2.24</b> | <b>0.79</b> | <b>3.03</b> |
| Additions During The Year | -           | -           | -           |
| Total                     | 2.24        | 0.79        | 3.03        |
| Less : Depreciation       | 0.34        | 0.08        | 0.42        |
| <b>WDV at end of Year</b> | <b>1.91</b> | <b>0.71</b> | <b>2.62</b> |

## 5.12 Repayment schedule

| REPAYMENT SCHEDULE OF TERM LOAN |                 |        |          |       |          |           |                 |        |
|---------------------------------|-----------------|--------|----------|-------|----------|-----------|-----------------|--------|
|                                 |                 |        |          |       |          |           | Interest        | 11.00% |
| Year                            | Particulars     | Amount | Addition | Total | Interest | Repayment | Closing Balance |        |
| ist                             | Opening Balance |        |          |       |          |           |                 |        |
|                                 | 1st month       | -      | 3.03     | 3.03  | -        | -         | 3.03            |        |
|                                 | 2nd month       | 3.03   | -        | 3.03  | 0.03     | -         | 3.03            |        |
|                                 | 3rd month       | 3.03   | -        | 3.03  | 0.03     | -         | 3.03            |        |
|                                 | 4th month       | 3.03   | -        | 3.03  | 0.03     | -         | 3.03            |        |
|                                 | 5th month       | 3.03   | -        | 3.03  | 0.03     | -         | 3.03            |        |
|                                 | 6th month       | 3.03   | -        | 3.03  | 0.03     | -         | 3.03            |        |

|            |                 |      |   |      |             |             |      |
|------------|-----------------|------|---|------|-------------|-------------|------|
|            | 7th month       | 3.03 | - | 3.03 | 0.03        | 0.06        | 2.97 |
|            | 8th month       | 2.97 | - | 2.97 | 0.03        | 0.06        | 2.91 |
|            | 9th month       | 2.91 | - | 2.91 | 0.03        | 0.06        | 2.86 |
|            | 10th month      | 2.86 | - | 2.86 | 0.03        | 0.06        | 2.80 |
|            | 11th month      | 2.80 | - | 2.80 | 0.03        | 0.06        | 2.74 |
|            | 12th month      | 2.74 | - | 2.74 | 0.03        | 0.06        | 2.69 |
|            |                 |      |   |      | 0.30        | 0.34        |      |
| <b>2nd</b> | Opening Balance |      |   |      |             |             |      |
|            | 1st month       | 2.69 | - | 2.69 | 0.02        | 0.06        | 2.63 |
|            | 2nd month       | 2.63 | - | 2.63 | 0.02        | 0.06        | 2.58 |
|            | 3rd month       | 2.58 | - | 2.58 | 0.02        | 0.06        | 2.52 |
|            | 4th month       | 2.52 | - | 2.52 | 0.02        | 0.06        | 2.46 |
|            | 5th month       | 2.46 | - | 2.46 | 0.02        | 0.06        | 2.41 |
|            | 6th month       | 2.41 | - | 2.41 | 0.02        | 0.06        | 2.35 |
|            | 7th month       | 2.35 | - | 2.35 | 0.02        | 0.06        | 2.30 |
|            | 8th month       | 2.30 | - | 2.30 | 0.02        | 0.06        | 2.24 |
|            | 9th month       | 2.24 | - | 2.24 | 0.02        | 0.06        | 2.18 |
|            | 10th month      | 2.18 | - | 2.18 | 0.02        | 0.06        | 2.13 |
|            | 11th month      | 2.13 | - | 2.13 | 0.02        | 0.06        | 2.07 |
|            | 12th month      | 2.07 | - | 2.07 | 0.02        | 0.06        | 2.02 |
|            |                 |      |   |      | <b>0.26</b> | <b>0.67</b> |      |
| <b>3rd</b> | Opening Balance |      |   |      |             |             |      |
|            | 1st month       | 2.02 | - | 2.02 | 0.02        | 0.06        | 1.96 |
|            | 2nd month       | 1.96 | - | 1.96 | 0.02        | 0.06        | 1.90 |

|            |                 |      |   |      |             |             |      |
|------------|-----------------|------|---|------|-------------|-------------|------|
|            | 3rd month       | 1.90 | - | 1.90 | 0.02        | 0.06        | 1.85 |
|            | 4th month       | 1.85 | - | 1.85 | 0.02        | 0.06        | 1.79 |
|            | 5th month       | 1.79 | - | 1.79 | 0.02        | 0.06        | 1.74 |
|            | 6th month       | 1.74 | - | 1.74 | 0.02        | 0.06        | 1.68 |
|            | 7th month       | 1.68 | - | 1.68 | 0.02        | 0.06        | 1.62 |
|            | 8th month       | 1.62 | - | 1.62 | 0.01        | 0.06        | 1.57 |
|            | 9th month       | 1.57 | - | 1.57 | 0.01        | 0.06        | 1.51 |
|            | 10th month      | 1.51 | - | 1.51 | 0.01        | 0.06        | 1.46 |
|            | 11th month      | 1.46 | - | 1.46 | 0.01        | 0.06        | 1.40 |
|            | 12th month      | 1.40 | - | 1.40 | 0.01        | 0.06        | 1.34 |
|            |                 |      |   |      | <b>0.19</b> | <b>0.67</b> |      |
| <b>4th</b> | Opening Balance |      |   |      |             |             |      |
|            | 1st month       | 1.34 | - | 1.34 | 0.01        | 0.06        | 1.29 |
|            | 2nd month       | 1.29 | - | 1.29 | 0.01        | 0.06        | 1.23 |
|            | 3rd month       | 1.23 | - | 1.23 | 0.01        | 0.06        | 1.18 |
|            | 4th month       | 1.18 | - | 1.18 | 0.01        | 0.06        | 1.12 |
|            | 5th month       | 1.12 | - | 1.12 | 0.01        | 0.06        | 1.06 |
|            | 6th month       | 1.06 | - | 1.06 | 0.01        | 0.06        | 1.01 |
|            | 7th month       | 1.01 | - | 1.01 | 0.01        | 0.06        | 0.95 |
|            | 8th month       | 0.95 | - | 0.95 | 0.01        | 0.06        | 0.90 |
|            | 9th month       | 0.90 | - | 0.90 | 0.01        | 0.06        | 0.84 |
|            | 10th month      | 0.84 | - | 0.84 | 0.01        | 0.06        | 0.78 |
|            | 11th month      | 0.78 | - | 0.78 | 0.01        | 0.06        | 0.73 |

|            |                   |      |   |        |             |             |      |
|------------|-------------------|------|---|--------|-------------|-------------|------|
|            | 12th month        | 0.73 | - | 0.73   | 0.01        | 0.06        | 0.67 |
|            |                   |      |   |        | <b>0.11</b> | <b>0.67</b> |      |
| <b>5th</b> | Opening Balance   |      |   |        |             |             |      |
|            | 1st month         | 0.67 | - | 0.67   | 0.01        | 0.06        | 0.62 |
|            | 2nd month         | 0.62 | - | 0.62   | 0.01        | 0.06        | 0.56 |
|            | 3rd month         | 0.56 | - | 0.56   | 0.01        | 0.06        | 0.50 |
|            | 4th month         | 0.50 | - | 0.50   | 0.00        | 0.06        | 0.45 |
|            | 5th month         | 0.45 | - | 0.45   | 0.00        | 0.06        | 0.39 |
|            | 6th month         | 0.39 | - | 0.39   | 0.00        | 0.06        | 0.34 |
|            | 7th month         | 0.34 | - | 0.34   | 0.00        | 0.06        | 0.28 |
|            | 8th month         | 0.28 | - | 0.28   | 0.00        | 0.06        | 0.22 |
|            | 9th month         | 0.22 | - | 0.22   | 0.00        | 0.06        | 0.17 |
|            | 10th month        | 0.17 | - | 0.17   | 0.00        | 0.06        | 0.11 |
|            | 11th month        | 0.11 | - | 0.11   | 0.00        | 0.06        | 0.06 |
|            | 12th month        | 0.06 | - | 0.06   | 0.00        | 0.06        | -    |
|            |                   |      |   |        | <b>0.04</b> | <b>0.67</b> |      |
|            | DOOR TO DOOR      | 60   |   | MONTHS |             |             |      |
|            | MORATORIUM PERIOD | 6    |   | MONTHS |             |             |      |
|            | REPAYMENT PERIOD  | 54   |   | MONTHS |             |             |      |

### 5.13 Break Even Point Analysis

| <b>BREAK EVEN POINT ANALYSIS</b>    |          |           |            |           |          |
|-------------------------------------|----------|-----------|------------|-----------|----------|
| <b>Year</b>                         | <b>I</b> | <b>II</b> | <b>III</b> | <b>IV</b> | <b>V</b> |
| <b>Net Sales &amp; Other Income</b> | 22.97    | 26.92     | 30.50      | 34.30     | 38.51    |

|   |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|
| Less : Op. WIP Goods                          | -            | 0.64         | 0.71         | 0.79         | 0.88         |
| Add : Cl. WIP Goods                           | 0.64         | 0.71         | 0.79         | 0.88         | 0.97         |
|   |              |              |              |              |              |
| <b>Total Sales</b>                            | <b>23.60</b> | <b>26.99</b> | <b>30.58</b> | <b>34.39</b> | <b>38.61</b> |
|   |              |              |              |              |              |
| <b>Variable &amp; Semi Variable Exp.</b>      |              |              |              |              |              |
| Raw Material Consumed                         | 11.23        | 12.79        | 14.45        | 16.20        | 18.24        |
| Electricity Exp/Coal Consumption at 85%       | 0.41         | 0.47         | 0.54         | 0.62         | 0.68         |
| Wages & Salary at 60%                         | 4.32         | 4.75         | 5.23         | 5.75         | 6.32         |
| Selling & administrative Expenses 80%         | 0.37         | 0.43         | 0.49         | 0.55         | 0.46         |
| Interest on working Capital                   | 0.187        | 0.187        | 0.187        | 0.187        | 0.187        |
| Repair & maintenance                          | 0.57         | 0.67         | 0.76         | 0.86         | 0.96         |
| Packaging                                     | -            | -            | -            | -            | -            |
| <b>Total Variable &amp; Semi Variable Exp</b> | <b>17.09</b> | <b>19.30</b> | <b>21.65</b> | <b>24.16</b> | <b>26.86</b> |
| <b>Contribution</b>                           | <b>6.51</b>  | <b>7.69</b>  | <b>8.93</b>  | <b>10.23</b> | <b>11.75</b> |
|   |              |              |              |              |              |
| <b>Fixed &amp; Semi Fixed Expenses</b>        |              |              |              |              |              |
| Electricity Exp/Coal Consumption at 15%       | 0.07         | 0.08         | 0.10         | 0.11         | 0.12         |
| Wages & Salary at 40%                         | 2.88         | 3.17         | 3.48         | 3.83         | 4.22         |
| Interest on Term Loan                         | 0.30         | 0.26         | 0.19         | 0.11         | 0.04         |
| Depreciation                                  | 0.77         | 0.66         | 0.56         | 0.48         | 0.42         |
| Selling & administrative Expenses 20%         | 0.09         | 0.11         | 0.12         | 0.14         | 0.12         |
| Rent  | 1.20         | 1.32         | 1.45         | 1.60         | 1.76         |
| <b>Total Fixed Expenses</b>                   | <b>5.31</b>  | <b>5.60</b>  | <b>5.91</b>  | <b>6.27</b>  | <b>6.66</b>  |
|   |              |              |              |              |              |
| <b>Capacity Utilization</b>                   | <b>60%</b>   | <b>65%</b>   | <b>70%</b>   | <b>75%</b>   | <b>80%</b>   |
| <b>OPERATING PROFIT</b>                       | <b>1.21</b>  | <b>2.09</b>  | <b>3.03</b>  | <b>3.95</b>  | <b>5.09</b>  |
| <b>BREAK EVEN POINT</b>                       | <b>49%</b>   | <b>47%</b>   | <b>46%</b>   | <b>46%</b>   | <b>45%</b>   |
| <b>BREAK EVEN SALES</b>                       | <b>19.23</b> | <b>19.65</b> | <b>20.22</b> | <b>21.10</b> | <b>21.90</b> |
|   |              |              |              |              |              |

## **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 Petha is 80 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 10 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 2 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.