



Model Detailed Project Report

GROUNDNUT OIL

Prepared by

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1. INTRODUCTION

GROUNDNUT OIL EXTRACTION



The groundnut or peanut is a species in the family Fabaceae (commonly known as the bean, pea or legume family). Groundnut oil, also known as peanut oil or arachis oil is a mild tasting vegetable oil derived from peanuts. Groundnut oil is a kind of light yellow transparent edible oil with clear color and lecture, pleasant fragrance and good taste, is relatively easy to digest. Groundnut oil contains more than 80% unsaturated fatty acids (including 41.2%oleic acid and 37.6%linoleic acid). It also contains 19.9% of palmitic acid, stearic acid, arachidic acid and other unsaturated fatty acids. The fatty acid composition of peanut oil is relatively good, therefore it is easy for human bodies to digest and absorb. The groundnut is an annual herbaceous plant growing 30 to 50 cm (1.0 to 1.6 ft) tall. The leaves are opposite, pinnate with flour leaflets (two opposite pairs; no teminal leaflet); each leaflet is 1 to 7 cm (% to 2% in) long and 1to 3 cm (% to 1 inch)across.Peanuts have high oil content (45% - 52%) compared too many other oil seed crops.

2. MARKET POTENTIAL:

The global groundnut oil market is highly congested with high level of competition among key players. Moreover, since there is no unique functionality of groundnut oil when compared to other vegetable oils, the demand is anticipated to remain stagnant throughout the forecast period.

Peanut oil is an edible vegetable oil that is derived from peanuts.

The peanut oil market size has the potential to grow by USD 1.90 billion during 2020-2024, and the market's growth momentum will accelerate during the forecast period.

Peanut or groundnut oil is a well-established product with a historically high use in several Asian foods and cuisines. It is used either as a base for cooking (cooking oil) or to enhance the flavor of the underlying food.



3. PRODUCT DESCRIPTION

3.1 PRODUCT BENEFITS

- The use of groundnut oil can make the body's cholesterol into bile acids and excreted, thereby reducing the plasma cholesterol levels.
- In addition, the peanut oil also contains sterol, wheat germ phenol, phospholipids, vitamin E, choline and other beneficial substances for human.
- Regular consumption of peanut oil can prevent the skin wrinkle aging, protect the vessel wall, prevent thrombosis, help prevent atherosclerosis and coronary artery disease.
- The choline in peanut oil can also improve the memory of the human brain and slow down brain function decline.

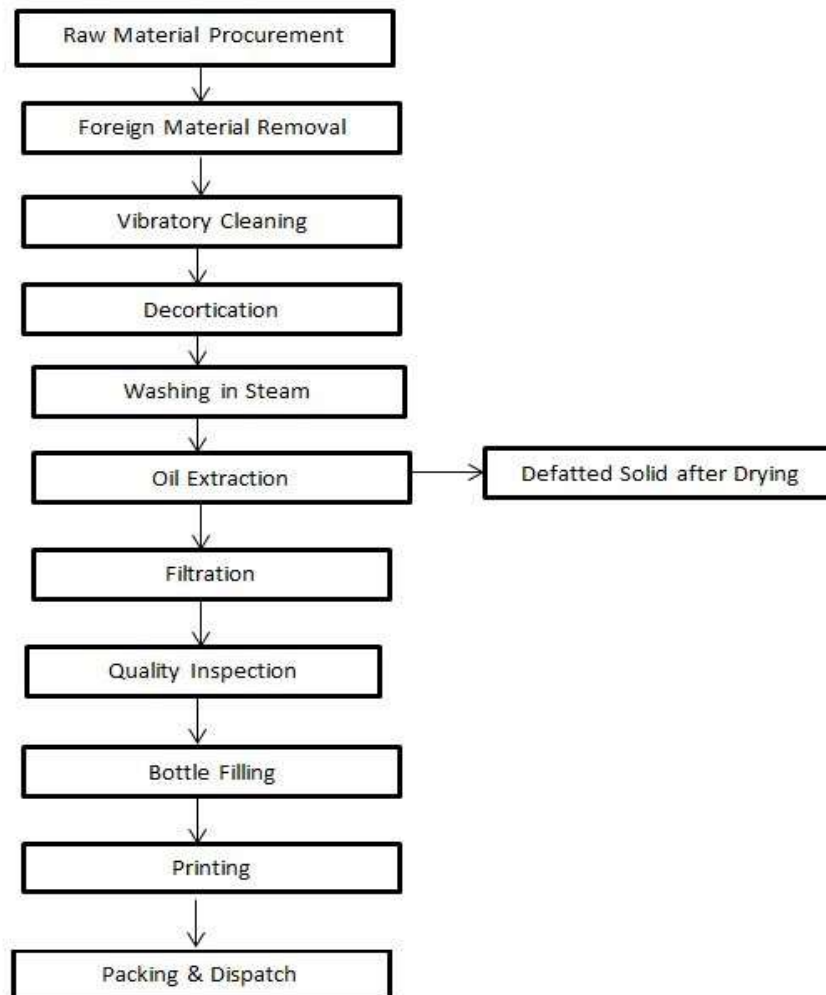
3.2 Raw Material

Groundnuts are the main raw material for manufacturing Groundnut butter: Cost per Kg is approx. Rs.80-85.

Groundnuts are a nutritious, hunger-satisfying, low-glycemic snack. Groundnuts in India are available throughout the year due to a two-crop cycle harvested in March and October. Ground Nuts are important protein crops in India grown mostly under rain-fed conditions. The awareness and concern for quality amongst the Indian groundnut shellers and processors are growing steadily.

Other than this plastic bottles and caps are required for packaging of groundnut oil.

3.3 MANUFACTURING PROCESS



A complete seed of Groundnut is called as pod and contains one to five kernels, which develops underground in a needlelike structure called as peg. In the first step, the healthy and mature seeds of ground nut are harvested from the authorized vendor and stored in the inventory.

In the next step, the foreign impurities like metal, plastics, husks etc. are separated from the kernels manually. Then place the kernels over the vibratory pre-cleaner machine to remove dirt, sand and stone particles. The Vibro sifter machine works on the principle of gyratory vibrations. The material is separated on the basis of their particle size. Once the motor gets energized, vibration is caused in the screen/sieve making the material to travel across the sieves according to its particle size.

After this, the cleaned groundnuts are fed into Groundnut Decorticator Machine using screw conveyors. Decortication of groundnut is a tedious and time consuming process. Groundnut decorticator is operated on the shearing action, blowering action and separating action. Firstly the groundnuts are fed to the machine. Then groundnuts come in contact with the two members, one is semi-circular net and another is roll shaft having soft wooden core. Semi-circular net is a stationary member while the roll shaft of wood is rotating member. When the groundnut comes in contact with these two members then the shearing action takes place there. Due to shearing action (crushing) the groundnuts get shelled and divided into two parts that is in the kernels and outer shell of the groundnuts. There clearance is provided between the net and roll shaft. The clearance provided depends upon the size of the groundnuts which is to be decorticated.

The kernels have to be prepared for efficient oil recovery by pressing. This is done by adjusting their moisture content and temperature, while keeping the seeds hot (say 90-95°C) for a period of 30-60 minutes. To perform this, the outer shells of groundnuts separated out in previous step are fed into the cross tube boiler and burned to generate steam. This steam is further utilized to heat the kernels for oil extraction. Kernels are stored in the containers and steam is processed at controlled pressure to treat the kernels.

In the next step, the kernels are fed into oil expeller. The steam is also fed through the expeller to maintain the temperature for oil extraction. The oil expeller crushes the peanut seeds to extract oil. The oil extracted is collected in the containers. The oil cake obtained after first compression has also some percentage of oil content remains in it. The cake is again fed into other oil expeller to remove the oil content present in it through conveyor. Steam is fed into the machine to maintain the temperature. The oil extracted is stored in the containers.

The crude oil obtained after crushing has impurities present in it. In the next step, the crude oil is fed into Filter machine. The pump feeds the crude oil from container through pump and transfers the oil to filter cloth. The filter cloth soaks the fine impurities present in the oil. The filtered oil is passed through the tap present in the machine and collected in the tray. From the machine tray it is collected into the container.

In the next step, the oil is tested for quality prospective regarding the presence of fatty acids in the edible oil as per the *fssai* norms. After this, the oil is filled into the bottles as per the required quantity using oil filling machine. It should be ensure that the bottle must be clean and dry before filling. The caps are mounted precisely to ensure proper sealing.

In the next step, the expiry date, specifications are printed over the bottle using printing machine. Printed labels of company information are pasted over the bottles. After this, the bottles are packed and dispatched as per the required quantity.


4. PROJECT COMPONENTS




4.1 Land



Land required 1500-1800 square feet approx.

Approximate rent for the same is Rs.30000-35000 per month.

4.2 Plant & Machinery

| S. N. | Machine | Machine Description | Image |
|-------|-------------------------------|---|--|
| 1. | Vibratory Pre-cleaner machine | This machine is used to remove foreign impurities like husk, stone, plastics from the harvested peanuts. The Vibro sifter machine works on the principle of gyratory vibrations. The material is separated on the basis of their particle size. |  |

| | | | |
|----|--------------------------------|--|--|
| 2. | Groundnut Decorticator Machine | This machine divides the groundnut into two parts that is in the kernels and outer shell of the groundnuts by shearing action. |  |
| 3. | Cross Tube Boiler | The feed water is fed to the cross drum through feed water inlet. Then this water comes down through the down-comer pipe and enters into inclined water tube placed in hot chamber. Here, the water becomes hot and steam is produced in the water which comes into steam chamber. |  |
| 4. | Groundnut oil expeller | This machine is used to crush the groundnut kernels to produce oil. The expelling unit consists of a screw expellant shaft. Rotary screw arrangement is made in the machine for crushing the |  |

| | | | |
|----|------------------------|--|--|
| | | <p>groundnut. The heating of groundnut seeds is achieved by generated heat, which heats the surrounding of seeds passage.</p> | |
| 5. | Oil Filter Press | <p>An industrial filter press is a tool used in separation processes, specifically to separate solids and liquids. The machine stacks many filter elements and allows the filter to be easily opened to remove the filtered solids, and allows easy cleaning or replacement of the filter media.</p> |  |
| 6. | Bottle filling machine | <p>This machine is used to fill oil within the bottles at sufficient pressure in required quantity.</p> |  |

| | | | |
|----|--------------------------------|--|--|
| 7. | Other machineries & equipments | Oil collection tank, pump, screw conveyor, bins etc. |  |
|----|--------------------------------|--|--|

Note: Cost of machinery is approx. Rs.800000 excluding GST and other transportation cost.

4.3 Misc. Assets

| S.N. | Item Description | Rate |
|------|---|----------|
| 1 | Electricity connection and other fittings | 1,00,000 |
| 2 | Furniture and equipment's | 50,000 |

4.4 Power Requirement

The borrower shall require power load of 50 HP which shall be applied with Power Corporation. However, for standby power arrangement the borrower shall also purchase DG Set.

4.5 Manpower Requirement

5-6 Manpower are required for the Ground nut oil unit.

Includes:

2 Skilled Labour

3 Unskilled Labour

3 Helper

1 Accountant

5. FINANCIALS

5.1 Cost of Project

| COST OF PROJECT | | | |
|---------------------------------------|--------------|------------------|--------------|
| (in Lacs) | | | |
| PARTICULARS | AMOUNT | Own Contribution | Bank Finance |
| | | 25.00% | 75.00% |
| Land & Building | | Owned /rented | |
| Plant & Machinery | 8.00 | 2.00 | 6.00 |
| Furniture & Fixtures and Other Assets | 1.50 | 0.38 | 1.13 |
| Working capital | 6.67 | 1.67 | 5.00 |
| Total | 16.17 | 4.04 | 12.13 |

5.2 Means of Finance

| MEANS OF FINANCE | |
|-----------------------|--------------|
| PARTICULARS | AMOUNT |
| Own Contribution | 4.04 |
| Bank Loan | 7.13 |
| Working capital Limit | 5.00 |
| Total | 16.17 |

5.3 Projected Balance Sheet

| (in Lacs) | | | | | |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| PROJECTED BALANCE SHEET | | | | | |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| <u>Liabilities</u> | | | | | |
| Capital | | | | | |
| opening balance | | 4.60 | 5.97 | 7.64 | 9.87 |
| <i>Add:- Own Capital</i> | 4.04 | | | | |
| Add:- Retained Profit | 1.36 | 2.87 | 4.66 | 6.73 | 9.40 |
| Less:- Drawings | 0.80 | 1.50 | 3.00 | 4.50 | 6.50 |
| Closing Balance | 4.60 | 5.97 | 7.64 | 9.87 | 12.77 |
| Term Loan | 6.33 | 4.75 | 3.17 | 1.58 | - |
| Working Capital Limit | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Sundry Creditors | 2.80 | 3.33 | 3.90 | 4.51 | 5.16 |
| Provisions & Other Liab | 0.50 | 0.63 | 0.75 | 0.90 | 1.08 |
| TOTAL : | 19.24 | 19.68 | 20.45 | 21.86 | 24.01 |
| <u>Assets</u> | | | | | |
| Fixed Assets (Gross) | 9.50 | 9.50 | 9.50 | 9.50 | 9.50 |
| Gross Dep. | 1.35 | 2.51 | 3.49 | 4.34 | 5.06 |
| Net Fixed Assets | 8.15 | 7.00 | 6.01 | 5.16 | 4.44 |
| Current Assets | | | | | |
| Sundry Debtors | 3.45 | 4.21 | 4.92 | 5.70 | 6.55 |
| Stock in Hand | 6.05 | 7.17 | 8.37 | 9.66 | 11.02 |
| Cash and Bank | 1.59 | 1.30 | 1.15 | 1.35 | 2.00 |
| TOTAL : | 19.24 | 19.68 | 20.45 | 21.86 | 24.01 |

5.4 Projected Cash Flow

| (in Lacs) | | | | | |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| PROJECTED CASH FLOW STATEMENT | | | | | |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| <u>SOURCES OF FUND</u> | | | | | |
| Own Margin | 4.04 | | | | |
| Net Profit | 1.36 | 2.87 | 4.66 | 6.94 | 10.06 |
| Depreciation & Exp. W/off | 1.35 | 1.16 | 0.99 | 0.85 | 0.72 |
| Increase in Cash Credit | 5.00 | - | - | - | - |
| Increase In Term Loan | 7.13 | - | - | - | - |
| Increase in Creditors | 2.80 | 0.53 | 0.57 | 0.61 | 0.65 |
| Increase in Provisions & Oth lib | 0.50 | 0.13 | 0.13 | 0.15 | 0.18 |
| TOTAL : | 22.18 | 4.68 | 6.35 | 8.54 | 11.61 |
| <u>APPLICATION OF FUND</u> | | | | | |
| Increase in Fixed Assets | 9.50 | | | | |
| Increase in Stock | 6.05 | 1.12 | 1.20 | 1.29 | 1.37 |
| Increase in Debtors | 3.45 | 0.76 | 0.71 | 0.78 | 0.85 |
| Repayment of Term Loan | 0.79 | 1.58 | 1.58 | 1.58 | 1.58 |
| Drawings | 0.80 | 1.50 | 3.00 | 4.50 | 6.50 |
| Taxation | - | - | - | 0.20 | 0.66 |
| TOTAL : | 20.59 | 4.97 | 6.49 | 8.35 | 10.96 |
| Opening Cash & Bank Balance | - | 1.59 | 1.30 | 1.15 | 1.35 |
| Add : Surplus | 1.59 | (0.29) | (0.15) | 0.19 | 0.66 |
| Closing Cash & Bank Balance | 1.59 | 1.30 | 1.15 | 1.35 | 2.00 |

5.5 Projected Profitability

| (in Lacs) | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| PROJECTED PROFITABILITY STATEMENT | | | | | |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| Capacity Utilisation % | 40% | 45% | 50% | 55% | 60% |
| <u>SALES</u> | | | | | |
| Gross Sale | | | | | |
| Groundnut Oil | 95.70 | 116.73 | 136.16 | 157.43 | 180.67 |
| Groundnut cake | 7.92 | 9.65 | 11.55 | 13.61 | 15.84 |
| Total | 103.62 | 126.39 | 147.71 | 171.04 | 196.51 |
| COST OF SALES | | | | | |
| Raw Material Consumed | 84.00 | 99.90 | 117.00 | 135.30 | 154.80 |
| Electricity Expenses | 3.65 | 4.20 | 4.82 | 5.55 | 6.10 |
| Depreciation | 1.35 | 1.16 | 0.99 | 0.85 | 0.72 |
| Wages & labour | 5.28 | 5.81 | 6.39 | 7.03 | 7.73 |
| Repair & maintenance | 1.04 | 1.26 | 1.48 | 1.71 | 1.97 |
| Packaging cost | 2.11 | 2.92 | 3.40 | 3.94 | 4.52 |
| Cost of Production | 97.42 | 115.24 | 134.08 | 154.37 | 175.84 |
| Add: Opening Stock /WIP | - | 3.25 | 3.84 | 4.47 | 5.15 |
| Less: Closing Stock /WIP | 3.25 | 3.84 | 4.47 | 5.15 | 5.86 |
| Cost of Sales | 94.17 | 114.65 | 133.45 | 153.69 | 175.12 |
| GROSS PROFIT | 9.45 | 11.74 | 14.26 | 17.35 | 21.38 |
| Salary to Staff | 1.68 | 1.85 | 2.03 | 2.24 | 2.46 |
| Interest on Term Loan | 0.70 | 0.62 | 0.44 | 0.27 | 0.09 |
| Interest on working Capital | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |

| | | | | | |
|--------------------|-------------|-------------|-------------|--------------|--------------|
| Rent | 3.60 | 3.96 | 4.36 | 4.79 | 5.27 |
| selling & adm exp | 1.55 | 1.90 | 2.22 | 2.57 | 2.95 |
| TOTAL | 8.08 | 8.87 | 9.60 | 10.41 | 11.32 |
| NET PROFIT | 1.36 | 2.87 | 4.66 | 6.94 | 10.06 |
| Taxation | | | | 0.20 | 0.66 |
| PROFIT (After Tax) | 1.36 | 2.87 | 4.66 | 6.73 | 9.40 |

5.6 Production and Yield

| COMPUTATION OF PRODUCTION OF GROUNDNUT OIL | | |
|---|---------|----------|
| Items to be Manufactured | | |
| Groundnut Oil | | |
| Production capacity per DAY | 300 | KG |
| Working hours in a day | 8 | |
| No of Working Days in Month | 25 | |
| No of Working Days in a Year | 300 | |
| machine capacity per annum | 90,000 | KG |
| Production per Annum | 99000 | Liter |
| Raw material | | |
| Peanut oil minimum extraction rate taken | 30% | of input |
| Raw material required | 300,000 | KG |
| wastage | 15% | |
| Groundnut cake | 165,000 | KG |

| Production of Groundnut Oil | | |
|-----------------------------|----------|--------|
| Production | Capacity | KG |
| 1st year | 40% | 39,600 |
| 2nd year | 45% | 44,550 |
| 3rd year | 50% | 49,500 |
| 4th year | 55% | 54,450 |
| 5th year | 60% | 59,400 |

| Raw Material Cost | | | |
|-------------------|-------------------------|------------------|-------------------------|
| Year | Capacity Utilisation | Rate (per KG) | Amount (Rs. in lacs) |
| 1st year | 40% | 70.00 | 84.00 |
| 2nd year | 45% | 74.00 | 99.90 |
| 3rd year | 50% | 78.00 | 117.00 |
| 4th year | 55% | 82.00 | 135.30 |
| 5th year | 60% | 86.00 | 154.80 |

5.7 Sales Revenue

| <u>COMPUTATION OF SALE (GROUNDNUT OIL)</u> | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|
| Particulars | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| Op Stock | - | 1,320 | 1,485 | 1,650 | 1,815 |
| Production | 39,600 | 44,550 | 49,500 | 54,450 | 59,400 |
| Less : Closing Stock | 1,320 | 1,485 | 1,650 | 1,815 | 1,980 |
| Net Sale | 38,280 | 44,385 | 49,335 | 54,285 | 59,235 |
| sale price per Liter | 250.00 | 263.00 | 276.00 | 290.00 | 305.00 |
| Sales (in Lacs) | 95.70 | 116.73 | 136.16 | 157.43 | 180.67 |

| COMPUTATION OF SALE (Groundnut cake) | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| Particulars | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| Production | 66,000 | 74,250 | 82,500 | 90,750 | 99,000 |
| Net Sale | 66,000 | 74,250 | 82,500 | 90,750 | 99,000 |
| sale price per Liter | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 |
| Sales (in Lacs) | 7.92 | 9.65 | 11.55 | 13.61 | 15.84 |

5.8 Working Capital Assessment

| COMPUTATION OF CLOSING STOCK & WORKING CAPITAL | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| (in Lacs) | | | | | |
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| <u>Finished Goods</u> | | | | | |
| | 3.25 | 3.84 | 4.47 | 5.15 | 5.86 |
| <u>Raw Material</u> | | | | | |
| | 2.80 | 3.33 | 3.90 | 4.51 | 5.16 |
| Closing Stock | 6.05 | 7.17 | 8.37 | 9.66 | 11.02 |

| COMPUTATION OF WORKING CAPITAL REQUIREMENT | | | | | |
|---|---------------|-------------------|-------------|---------------------|-------------|
| TRADITIONAL METHOD | | | | (in Lacs) | |
| Particulars | Amount | Own Margin | | Bank Finance | |
| Finished Goods & Raw Material | 6.05 | | | | |
| Less : Creditors | 2.80 | | | | |
| Paid stock | 3.25 | 25% | 0.81 | 75% | 2.44 |
| Sundry Debtors | 3.45 | 25% | 0.86 | 75% | 2.59 |
| | 6.70 | | 1.68 | | 5.03 |
| WORKING CAPITAL LIMIT DEMAND (from Bank) | | | | | |
| | | | | 5.00 | |

5.9 Power, Salary & Wages Calculation

| Utility Charges (per month) | | |
|------------------------------------|--------------|--------------------|
| Particulars | value | Description |
| Power connection required | 38 | KWH |
| consumption per day | 304 | units |
| Consumption per month | 7,600 | units |
| Rate per Unit | 10 | Rs. |
| power Bill per month | 76,000 | Rs. |

BREAK UP OF LABOUR CHARGES

| Particulars | Wages | No of | Total |
|------------------------------------|------------------|-----------|---------------|
| | Rs. per Month | Employees | Salary |
| Skilled (in thousand rupees) | 13,000 | 2 | 26,000 |
| Unskilled (in thousand rupees) | 9,000 | 2 | 18,000 |
| Total salary per month | | | 44,000 |
| Total annual labour charges | (in lacs) | | 5.28 |

BREAK UP OF Staff Salary CHARGES

| Particulars | Salary | No of | Total |
|-----------------------------------|------------------|-----------|---------------|
| | Rs. per Month | Employees | Salary |
| helper | 7,000 | 2 | 14,000 |
| Total salary per month | | | 14,000 |
| Total annual Staff charges | (in lacs) | | 1.68 |

5.10 Depreciation

| COMPUTATION OF DEPRECIATION | | | (in Lacs) |
|------------------------------------|------------------------------|------------------|--------------|
| Description | Plant & Machinery | Furniture | TOTAL |
| Rate of Depreciation | 15.00% | 10.00% | |
| Opening Balance | - | - | - |
| Addition | 8.00 | 1.50 | 9.50 |
| Total | 8.00 | 1.50 | 9.50 |
| Less : Depreciation | 1.20 | 0.15 | 1.35 |
| WDV at end of Year | 6.80 | 1.35 | 8.15 |
| Additions During The Year | - | - | - |
| Total | 6.80 | 1.35 | 8.15 |
| Less : Depreciation | 1.02 | 0.14 | 1.16 |
| WDV at end of Year | 5.78 | 1.22 | 7.00 |
| Additions During The Year | - | - | - |
| Total | 5.78 | 1.22 | 7.00 |
| Less : Depreciation | 0.87 | 0.12 | 0.99 |
| WDV at end of Year | 4.91 | 1.09 | 6.01 |
| Additions During The Year | - | - | - |
| Total | 4.91 | 1.09 | 6.01 |
| Less : Depreciation | 0.74 | 0.11 | 0.85 |
| WDV at end of Year | 4.18 | 0.98 | 5.16 |
| Additions During The Year | - | - | - |
| Total | 4.18 | 0.98 | 5.16 |
| Less : Depreciation | 0.63 | 0.10 | 0.72 |
| WDV at end of Year | 3.55 | 0.89 | 4.44 |

5.11 Repayment schedule

| REPAYMENT SCHEDULE OF TERM LOAN | | | | | | | |
|---------------------------------|-----------------|--------|----------|-------|----------|-----------|-----------------|
| | | | | | | Interest | 11.00% |
| Year | Particulars | Amount | Addition | Total | Interest | Repayment | Closing Balance |
| 1st | Opening Balance | | | | | | |
| | 1st month | - | 7.13 | 7.13 | - | - | 7.13 |
| | 2nd month | 7.13 | - | 7.13 | 0.07 | - | 7.13 |
| | 3rd month | 7.13 | - | 7.13 | 0.07 | - | 7.13 |
| | 4th month | 7.13 | - | 7.13 | 0.07 | | 7.13 |
| | 5th month | 7.13 | - | 7.13 | 0.07 | | 7.13 |
| | 6th month | 7.13 | - | 7.13 | 0.07 | | 7.13 |
| | 7th month | 7.13 | - | 7.13 | 0.07 | 0.13 | 6.99 |
| | 8th month | 6.99 | - | 6.99 | 0.06 | 0.13 | 6.86 |
| | 9th month | 6.86 | - | 6.86 | 0.06 | 0.13 | 6.73 |
| | 10th month | 6.73 | - | 6.73 | 0.06 | 0.13 | 6.60 |
| | 11th month | 6.60 | - | 6.60 | 0.06 | 0.13 | 6.47 |
| | 12th month | 6.47 | - | 6.47 | 0.06 | 0.13 | 6.33 |
| | | | | | 0.70 | 0.79 | |
| 2nd | Opening Balance | | | | | | |
| | 1st month | 6.33 | - | 6.33 | 0.06 | 0.13 | 6.20 |
| | 2nd month | 6.20 | - | 6.20 | 0.06 | 0.13 | 6.07 |
| | 3rd month | 6.07 | - | 6.07 | 0.06 | 0.13 | 5.94 |
| | 4th month | 5.94 | - | 5.94 | 0.05 | 0.13 | 5.81 |
| | 5th month | 5.81 | - | 5.81 | 0.05 | 0.13 | 5.67 |
| | 6th month | 5.67 | - | 5.67 | 0.05 | 0.13 | 5.54 |
| | 7th month | 5.54 | - | 5.54 | 0.05 | 0.13 | 5.41 |
| | 8th month | 5.41 | - | 5.41 | 0.05 | 0.13 | 5.28 |
| | 9th month | 5.28 | - | 5.28 | 0.05 | 0.13 | 5.15 |
| | 10th month | 5.15 | - | 5.15 | 0.05 | 0.13 | 5.01 |
| | 11th month | 5.01 | - | 5.01 | 0.05 | 0.13 | 4.88 |
| | 12th month | 4.88 | - | 4.88 | 0.04 | 0.13 | 4.75 |
| | | | | | 0.62 | 1.58 | |
| 3rd | Opening Balance | | | | | | |
| | 1st month | 4.75 | - | 4.75 | 0.04 | 0.13 | 4.62 |
| | 2nd month | 4.62 | - | 4.62 | 0.04 | 0.13 | 4.49 |
| | 3rd month | 4.49 | - | 4.49 | 0.04 | 0.13 | 4.35 |
| | 4th month | 4.35 | - | 4.35 | 0.04 | 0.13 | 4.22 |
| | 5th month | 4.22 | - | 4.22 | 0.04 | 0.13 | 4.09 |
| | 6th month | 4.09 | - | 4.09 | 0.04 | 0.13 | 3.96 |
| | 7th month | 3.96 | - | 3.96 | 0.04 | 0.13 | 3.83 |

| | | | | | | |
|-------------------|-----------------|--------|------|-------------|-------------|------|
| 8th month | 3.83 | - | 3.83 | 0.04 | 0.13 | 3.69 |
| 9th month | 3.69 | - | 3.69 | 0.03 | 0.13 | 3.56 |
| 10th month | 3.56 | - | 3.56 | 0.03 | 0.13 | 3.43 |
| 11th month | 3.43 | - | 3.43 | 0.03 | 0.13 | 3.30 |
| 12th month | 3.30 | - | 3.30 | 0.03 | 0.13 | 3.17 |
| | | | | 0.44 | 1.58 | |
| 4th | Opening Balance | | | | | |
| 1st month | 3.17 | - | 3.17 | 0.03 | 0.13 | 3.03 |
| 2nd month | 3.03 | - | 3.03 | 0.03 | 0.13 | 2.90 |
| 3rd month | 2.90 | - | 2.90 | 0.03 | 0.13 | 2.77 |
| 4th month | 2.77 | - | 2.77 | 0.03 | 0.13 | 2.64 |
| 5th month | 2.64 | - | 2.64 | 0.02 | 0.13 | 2.51 |
| 6th month | 2.51 | - | 2.51 | 0.02 | 0.13 | 2.37 |
| 7th month | 2.37 | - | 2.37 | 0.02 | 0.13 | 2.24 |
| 8th month | 2.24 | - | 2.24 | 0.02 | 0.13 | 2.11 |
| 9th month | 2.11 | - | 2.11 | 0.02 | 0.13 | 1.98 |
| 10th month | 1.98 | - | 1.98 | 0.02 | 0.13 | 1.85 |
| 11th month | 1.85 | - | 1.85 | 0.02 | 0.13 | 1.72 |
| 12th month | 1.72 | - | 1.72 | 0.02 | 0.13 | 1.58 |
| | | | | 0.27 | 1.58 | |
| 5th | Opening Balance | | | | | |
| 1st month | 1.58 | - | 1.58 | 0.01 | 0.13 | 1.45 |
| 2nd month | 1.45 | - | 1.45 | 0.01 | 0.13 | 1.32 |
| 3rd month | 1.32 | - | 1.32 | 0.01 | 0.13 | 1.19 |
| 4th month | 1.19 | - | 1.19 | 0.01 | 0.13 | 1.06 |
| 5th month | 1.06 | - | 1.06 | 0.01 | 0.13 | 0.92 |
| 6th month | 0.92 | - | 0.92 | 0.01 | 0.13 | 0.79 |
| 7th month | 0.79 | - | 0.79 | 0.01 | 0.13 | 0.66 |
| 8th month | 0.66 | - | 0.66 | 0.01 | 0.13 | 0.53 |
| 9th month | 0.53 | - | 0.53 | 0.00 | 0.13 | 0.40 |
| 10th month | 0.40 | - | 0.40 | 0.00 | 0.13 | 0.26 |
| 11th month | 0.26 | - | 0.26 | 0.00 | 0.13 | 0.13 |
| 12th month | 0.13 | - | 0.13 | 0.00 | 0.13 | - |
| | | | | 0.09 | 1.58 | |
| DOOR TO DOOR | 60 | MONTHS | | | | |
| MORATORIUM PERIOD | 6 | MONTHS | | | | |
| REPAYMENT PERIOD | 54 | MONTHS | | | | |

5.12 Financial Indicators

| FINANCIAL INDICATORS | | | | | |
|--------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| TURNOVER | 103.62 | 126.39 | 147.71 | 171.04 | 196.51 |
| GROSS PROFIT | 9.45 | 11.74 | 14.26 | 17.35 | 21.38 |
| G.P. RATIO | 9.12% | 9.29% | 9.65% | 10.14% | 10.88% |
| NET PROFIT | 1.36 | 2.87 | 4.66 | 6.94 | 10.06 |
| N.P. RATIO | 1.32% | 2.27% | 3.16% | 4.05% | 5.12% |
| CURRENT ASSETS | 11.09 | 12.68 | 14.45 | 16.70 | 19.57 |
| CURRENT LIABILITIES | 8.30 | 8.96 | 9.65 | 10.41 | 11.24 |
| CURRENT RATIO | 1.34 | 1.42 | 1.50 | 1.60 | 1.74 |
| TERM LOAN | 6.33 | 4.75 | 3.17 | 1.58 | - |
| TOTAL NET WORTH | 4.60 | 5.97 | 7.64 | 9.87 | 12.77 |
| DEBT/EQUITY | 1.38 | 0.80 | 0.41 | 0.16 | - |
| TOTAL NET WORTH | 4.60 | 5.97 | 7.64 | 9.87 | 12.77 |
| TOTAL OUTSIDE LIABILITIES | 14.63 | 13.71 | 12.82 | 11.99 | 11.24 |
| TOL/TNW | 3.18 | 2.29 | 1.68 | 1.22 | 0.88 |
| PBDIT | 3.96 | 5.19 | 6.64 | 8.60 | 11.43 |
| INTEREST | 1.25 | 1.17 | 0.99 | 0.82 | 0.64 |
| INTEREST COVERAGE RATIO | 3.17 | 4.45 | 6.69 | 10.51 | 17.74 |
| WDV | 8.15 | 7.00 | 6.01 | 5.16 | 4.44 |
| TERM LOAN | 6.33 | 4.75 | 3.17 | 1.58 | - |
| FACR | 1.29 | 1.47 | 1.90 | 3.26 | - |

5.13 DSCR

| <u>CALCULATION OF D.S.C.R</u> | | | | | |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| PARTICULARS | 1st year | 2nd year | 3rd year | 4th year | 5th year |
| | | | | | |
| CASH ACCRUALS | 2.71 | 4.02 | 5.65 | 7.58 | 10.13 |
| Interest on Term Loan | 0.70 | 0.62 | 0.44 | 0.27 | 0.09 |
| Total | 3.41 | 4.64 | 6.09 | 7.85 | 10.22 |
| | | | | | |
| <u>REPAYMENT</u> | | | | | |
| Instalment of Term Loan | 0.79 | 1.58 | 1.58 | 1.58 | 1.58 |
| Interest on Term Loan | 0.70 | 0.62 | 0.44 | 0.27 | 0.09 |
| | | | | | |
| Total | 1.49 | 2.20 | 2.03 | 1.85 | 1.68 |
| | | | | | |
| DEBT SERVICE COVERAGE RATIO | 2.29 | 2.11 | 3.01 | 4.24 | 6.09 |
| AVERAGE D.S.C.R. | 3.55 | | | | |

5.14 Break Even Point Analysis

| BREAK EVEN POINT ANALYSIS | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|
| Year | I | II | III | IV | V |
| | | | | | |
| Net Sales & Other Income | 103.62 | 126.39 | 147.71 | 171.04 | 196.51 |
| Less : Op. WIP Goods | - | 3.25 | 3.84 | 4.47 | 5.15 |
| Add : Cl. WIP Goods | 3.25 | 3.84 | 4.47 | 5.15 | 5.86 |
| | | | | | |
| Total Sales | 106.87 | 126.98 | 148.34 | 171.72 | 197.22 |
| | | | | | |
| Variable & Semi Variable Exp. | | | | | |
| Raw Material Consumed | 84.00 | 99.90 | 117.00 | 135.30 | 154.80 |
| Electricity Exp/Coal Consumption at 85% | 3.10 | 3.57 | 4.10 | 4.72 | 5.19 |
| Wages & Salary at 60% | 4.18 | 4.59 | 5.05 | 5.56 | 6.11 |
| Selling & administrative Expenses 80% | 1.24 | 1.52 | 1.77 | 2.05 | 2.36 |
| Interest on working Capital | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| Repair & maintenance | 1.04 | 1.26 | 1.48 | 1.71 | 1.97 |
| Packaging cost | 2.11 | 2.92 | 3.40 | 3.94 | 4.52 |
| Total Variable & Semi Variable Exp | 96.21 | 114.31 | 133.36 | 153.82 | 175.49 |
| Contribution | 10.66 | 12.67 | 14.99 | 17.89 | 21.73 |
| | | | | | |
| Fixed & Semi Fixed Expenses | | | | | |
| Electricity Exp/Coal Consumption at 15% | 0.55 | 0.63 | 0.72 | 0.83 | 0.92 |
| Wages & Salary at 40% | 2.78 | 3.06 | 3.37 | 3.71 | 4.08 |

| | | | | | |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|
| Interest on Term Loan | 0.70 | 0.62 | 0.44 | 0.27 | 0.09 |
| Depreciation | 1.35 | 1.16 | 0.99 | 0.85 | 0.72 |
| Selling & administrative Expenses 20% | 0.31 | 0.38 | 0.44 | 0.51 | 0.59 |
| Rent | 3.60 | 3.96 | 4.36 | 4.79 | 5.27 |
| Total Fixed Expenses | 9.29 | 9.80 | 10.32 | 10.96 | 11.67 |
| Capacity Utilization | 40% | 45% | 50% | 55% | 60% |
| OPERATING PROFIT | 1.36 | 2.87 | 4.66 | 6.94 | 10.06 |
| BREAK EVEN POINT | 35% | 35% | 34% | 34% | 32% |
| BREAK EVEN SALES | 93.20 | 98.24 | 102.19 | 105.16 | 105.92 |

6. LICENSE & APPROVALS

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

Implementation Schedule

| S.N. | Activity | Time Required (in Months) |
|------|--|------------------------------|
| 1 | Acquisition Of premises | 1-2 |
| 2 | Procurement & installation of Plant & Machinery | 1-2 |
| 3 | Arrangement of Finance | 1-2 |
| 4 | Requirement of required Manpower | 1 |
| | Total time Required (some activities shall run concurrently) | 5-6 Months |

7. ASSUMPTIONS

1. Production Capacity of Peanut oil is 300 Kgs per day. First year, Capacity has been taken @ 40%.
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 10 days.
5. Credit period by the Sundry Creditors has been provided for 10 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 50 HP.
10. Selling Prices & Raw material costing has been increased by 5% & 5% respectively in the subsequent years.

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.