



## **DETAILED PROJECT REPORT**

### **LEMON GRASS OIL UNIT**

### **UNDER PMFME SCHEME**



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Ministry of Food Processing Industries

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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Lemon Grass Oil Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	85500 bottles/annum (50,55,60,65&70% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw material	:	Lemon Grass
5. Major product outputs	:	Lemon Grass Oil
6. Total project cost	:	Rs. 13.56 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 6.80 Lakh
• Miscellaneous Fixed Assets	:	Rs. 2.50 Lakh
• Working capital	:	Rs. 4.26 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 3.26 Lakh
• Promoter's contribution (min10%)	:	Rs. 1.35 Lakh
• Term loan	:	Rs. 5.12 Lakh
• Working Capital Requirement	:	Rs. 3.84 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs. 1.36 Lakh
• 2 <sup>nd</sup> year	:	Rs. 2.78 Lakh
• 3 <sup>rd</sup> year	:	Rs. 4.19 Lakh
• 4 <sup>th</sup> year	:	Rs. 6.02 Lakh
• 5 <sup>th</sup> year	:	Rs. 7.72 Lakh
11. Average DSCR	:	Rs. 4.28
12. Term loan repayment	:	5 Years with 6 months grace period

## **2. ABOUT THE PRODUCT**

### **2.1. PRODUCT INTRODUCTION:**

Lemongrass oil has a strong lemon-like odour due to high citral content (75-90%). The minimum commercial requirement is 70% citral content. The major quality checking measures are its citral content and its solubility in alcohol. This is an essential ingredient in toiletry products such as toilet soaps, bath salts, etc. It is also employed in artificial lemon flavouring and in the manufacture of ionenes. Ionenenes are very important for the production of artificial flavour, perfumes, and soaps and as raw material for vitamin A manufacturing. Here in this project, we intend to explore how to start a small-scale lemongrass oil manufacturing business. The oil is of a reddish-yellow to reddish-brown colour, with a strong, lemon odour. It is also used in pharmaceutical preparations, such as pain balm, disinfectants, and mosquito repellent cream.

Oil is the source of Citral which is used as a basic raw material for synthesis of Beta-ionone used for synthesis of a number of useful aromatic compounds and Vitamin-A. This is thus used as substitutes of 'cod liver oil. Citral itself is used in perfumery for various grades of soaps, detergents, cosmetics and flavour agent for soft drinks.

## **2.2. MARKET POTENTIAL:**

The growing demand for lemongrass is stimulated by its therapeutic benefits such as for anti-fungal, anti-antiseptic, anti-inflammatory properties. Growing awareness of the therapeutic benefits of essential oils has spurred the utilization of lemongrass for commercial use in personal care industry and food industry. Asian nations have seen rise in commercial production of lemongrass. Rise in adoption of lemongrass oil in aromatherapy is a key trend bolstering the production of lemongrass oil. Growing popularity of aromatherapy for therapeutic end is also boosting the prospects in the lemongrass market. Producers in the lemongrass oil market are seeing resurgence of interest among companies who specialize in plant-based therapeutic grade products. Numerous stakeholders in the past few years have been leaning on integrating the value chain in a bid to make frequent product innovations. They are collaborating from the raw material producers to sellers to gain a large pie in the global lemongrass oil. Further, numerous cosmetics and pharmaceutical companies have been increasing their stakes among essential oil producers. This has also spurred investments in the lemongrass market. In the coming years, they are expected to play a key role in shaping the competitive contours, especially during the forecast period of 2020 – 2030.

## **2.3. RAW MATERIAL DESCRIPTION:**

The major raw material is lemon grass. And the grass plants grow well in soils not suitable for richer production plants. From sandy and rather dry soils yield relatively more oil and oil of higher citral content than plants from very fertile soils.

### **3. PROCESS FLOW CHART**

A primitive processing is already included in harvesting which includes partial cleaning, packaging and sorting of required part of crop but oil extraction takes it a step further and extracts the required oil out of the harvested crop. This is essentially true for aromatic crops which may lose the essential oils after a particular period of harvest. For aromatic plants this primary processing includes pre-process of Field Distillation and Field Distillation itself.

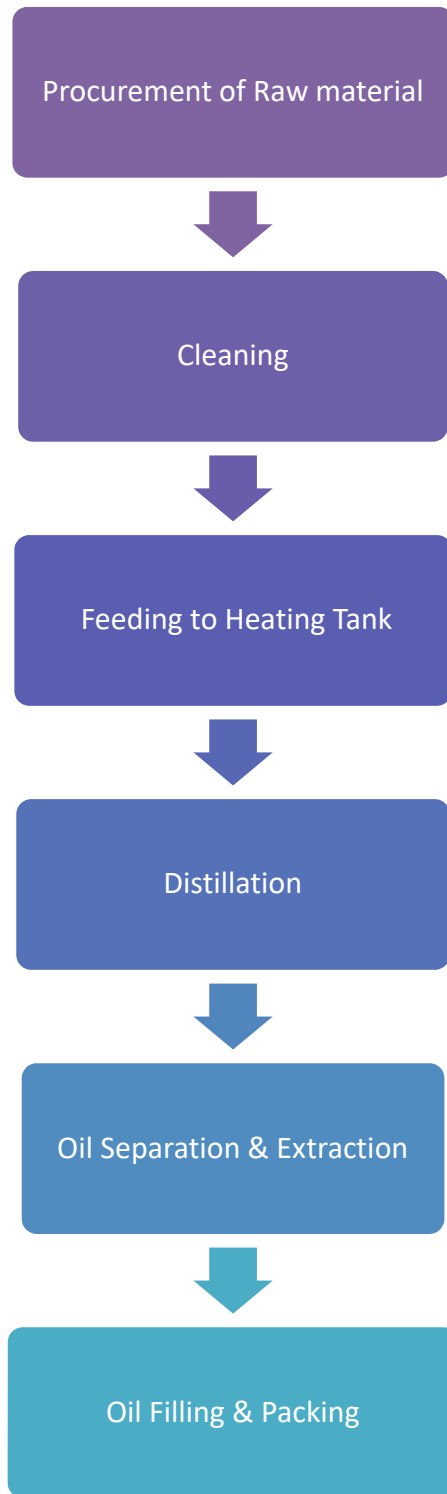
The field distillation unit consists of a Heating Tanks, Furnace, Condenser, Water Pump, pipings and a separator, these components are basic components of field distillation unit though extra part may be required for more through processing or oil extraction.

The pre-process simply includes cleaning of required part of crop in a large washing tank, if it's in contact with soil or close to soil. Then the next step is simple which is a simple steam distillation process, The required part of aromatic plant is heated with steam generated by boiling water in heating tank, during this process the steam generated carries along with it aromatic oils.

This steam is transferred to condenser via steam pipe, as condenser is circulated with cooling water continuously, thus steam transferred to condenser undergoes condensation as water and aromatic oil have different boiling point they get separated completing distillation process.

The contents (Water + Aromatic Oil) obtained from condenser are supplied to separator which is designed for extraction of a particular range of oil. The liquid is allowed to settle down and as oil and water are immiscible, they both separate into layers, water is drained from separator and supplied back to heating tank; entire process is repeated for enrichment purpose.

The enrichment process continues till most of the aromatic oil is extracted, followed by which oil is sold in market after packaging in appropriate containers, while remains of aromatic part of plant are usually supplied or sold to Incense Stick Makers.



## **4. ECONOMICS OF THE PROJECT**

### **4.1. BASIS & PRESUMPTIONS**

1. Production Capacity of Lemon Grass Oil is 30 Ltr. per day. First year, Capacity has been taken @ 50%.
2. Working shift of 8 hours per day has been considered.
3. Raw Material stock is for 7 days and Finished goods Closing Stock has been taken for 7 days.
4. Credit period to Sundry Debtors has been given for 20 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 6 KW.
10. Increase in sales and raw material costing has been taken @ 5% on a yearly basis.



## 4.2. CAPACITY, UTILIZATION, PRODUCTION & OUTPUT

<b>COMPUTATION OF PRODUCTION OF LEMON GRASS OIL</b>		
<b>Items to be Manufactured</b>		
Lemon Grass Oil		
Total working Hours	8	
Plant capacity Per Day	30	Ltr
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	5%	
Raw material requirement	9000	Ltr
Final Output per annum after wastage	8550	Ltr
Final Product to be packed in 100 ml Bottles		
Number of Bottles per annum	85500	100 ml Bottles

<b>Production of Lemon Grass Oil</b>		
<b>Production</b>	<b>Capacity</b>	<b>Ltr</b>
1st year	50%	42,750
2nd year	55%	47,025
3rd year	60%	51,300
4th year	65%	55,575
5th year	70%	59,850




<b>Raw Material Cost</b>			
<b>Year</b>	<b>Capacity Utilisation</b>	<b>Rate (per bottle.)</b>	<b>Amount (Rs. in lacs)</b>
1st year	50%	60.00	25.65
2nd year	55%	63.00	29.63
3rd year	60%	66.00	33.86
4th year	65%	69.00	38.35
5th year	70%	72.00	43.09

<b>COMPUTATION OF SALE</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	-	998	1,097	1,197	1,297
Production	42,750	47,025	51,300	55,575	59,850
Less : Closing Stock	998	1,097	1,197	1,297	1,397
<b>Net Sale</b>	<b>41,753</b>	<b>46,925</b>	<b>51,200</b>	<b>55,475</b>	<b>59,750</b>
Sale price per bottle	120.00	126.00	132.00	139.00	146.00
<b>Sales (in Lacs)</b>	<b>50.10</b>	<b>59.13</b>	<b>67.58</b>	<b>77.11</b>	<b>87.24</b>

### 4.3. PREMISES/INFRASTRUCTURE

The approximate total area required for complete factory setup is 2000-2500 Sq. ft. for smooth production including storage area. It is expected that the premises will be on rental.

#### 4.4. MACHINERY & EQUIPMENTS

Machine Name	Description	Machine Image.
Water Supply System	2000 litres water tank at 14 ft height, STW boring, 3 hp diesel pump set, pipes and fittings is required that provide water and store water in required quantity.	
Distillation Unit	Hydro-steam and lifting type, capacity 1.0 MT/ batch, made of 304 grade stainless steel with all accessories is required where the oil is finally extracted from Lemon grass.	
Material handling and other Equipments	These Equipments are used for material handling. Other equipments like water pumps, weighing machine, etc are also used.	

<b>Machine</b>	<b>Unit</b>	<b>Rate</b>	<b>Price</b>
Water Supply System	1	80000	80000
Distillation Unit	1	450000	450000
Material handling and other equipment's (Bins, trolley, weighing machine, etc.)	-	150000	150000

**Note:** Total Machinery cost shall be Rs 6.80 lakh including equipment's but excluding GST and Transportation Cost.

#### **4.5. MISCELLANEOUS FIXED ASSETS**

- Water Supply Arrangements
- Furniture & Fixtures
- Computers & Printers

#### 4.6. TOTAL COST OF PROJECT

<b>COST OF PROJECT</b>	
	(in Lacs)
<b>PARTICULARS</b>	<b>Amount</b>
Land & Building	Owned/Rented
Plant & Machinery	6.80
Miscellaneous Assets	2.50
Working capital	4.26
<b>Total</b>	<b>13.56</b>

#### 4.7. MEANS OF FINANCE

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	1.35
Subsidy @35%(Max. Rs 10 Lac)	3.26
Term Loan @ 55%	5.12
Working Capital (Bank Finance)	3.84
<b>Total</b>	<b>13.56</b>

**4.8. TERM LOAN:** Term loan of Rs. 5.12 Lakh is required for project cost of Rs. 13.56 Lakh

#### 4.9. TERM LOAN REPAYMENT& INTEREST SCHEDULE

REPAYMENT SCHEDULE OF TERM LOAN							
					Interest	11.00%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance						
	1st month	-	5.12	5.12	-	-	5.12
	2nd month	5.12	-	5.12	0.05	-	5.12
	3rd month	5.12	-	5.12	0.05	-	5.12
	4th month	5.12	-	5.12	0.05		5.12
	5th month	5.12	-	5.12	0.05		5.12
	6th month	5.12	-	5.12	0.05		5.12
	7th month	5.12	-	5.12	0.05	0.09	5.02
	8th month	5.02	-	5.02	0.05	0.09	4.93
	9th month	4.93	-	4.93	0.05	0.09	4.83
	10th month	4.83	-	4.83	0.04	0.09	4.74
	11th month	4.74	-	4.74	0.04	0.09	4.64
	12th month	4.64	-	4.64	0.04	0.09	4.55

PM FME- Detailed Project Report of Lemon Grass Oil Unit

				0.50	0.57		
<b>2nd</b>	Opening Balance						
	1st month	4.55	-	4.55	0.04	0.09	4.45
	2nd month	4.45	-	4.45	0.04	0.09	4.36
	3rd month	4.36	-	4.36	0.04	0.09	4.26
	4th month	4.26	-	4.26	0.04	0.09	4.17
	5th month	4.17	-	4.17	0.04	0.09	4.07
	6th month	4.07	-	4.07	0.04	0.09	3.98
	7th month	3.98	-	3.98	0.04	0.09	3.88
	8th month	3.88	-	3.88	0.04	0.09	3.79
	9th month	3.79	-	3.79	0.03	0.09	3.69
	10th month	3.69	-	3.69	0.03	0.09	3.60
	11th month	3.60	-	3.60	0.03	0.09	3.50
	12th month	3.50	-	3.50	0.03	0.09	3.41
				<b>0.44</b>	<b>1.14</b>		
<b>3rd</b>	Opening Balance						
	1st month	3.41	-	3.41	0.03	0.09	3.32
	2nd month	3.32	-	3.32	0.03	0.09	3.22
	3rd month	3.22	-	3.22	0.03	0.09	3.13
	4th month	3.13	-	3.13	0.03	0.09	3.03
	5th month	3.03	-	3.03	0.03	0.09	2.94
	6th month	2.94	-	2.94	0.03	0.09	2.84
	7th month	2.84	-	2.84	0.03	0.09	2.75
	8th month	2.75	-	2.75	0.03	0.09	2.65
	9th month	2.65	-		0.02	0.09	2.56

PM FME- Detailed Project Report of Lemon Grass Oil Unit

				2.65			
	10th month	2.56	-	2.56	0.02	0.09	2.46
	11th month	2.46	-	2.46	0.02	0.09	2.37
	12th month	2.37	-	2.37	0.02	0.09	2.27
					<b>0.32</b>	<b>1.14</b>	
<b>4th</b>	Opening Balance						
	1st month	2.27	-	2.27	0.02	0.09	2.18
	2nd month	2.18	-	2.18	0.02	0.09	2.08
	3rd month	2.08	-	2.08	0.02	0.09	1.99
	4th month	1.99	-	1.99	0.02	0.09	1.89
	5th month	1.89	-	1.89	0.02	0.09	1.80
	6th month	1.80	-	1.80	0.02	0.09	1.71
	7th month	1.71	-	1.71	0.02	0.09	1.61
	8th month	1.61	-	1.61	0.01	0.09	1.52
	9th month	1.52	-	1.52	0.01	0.09	1.42
	10th month	1.42	-	1.42	0.01	0.09	1.33
	11th month	1.33	-	1.33	0.01	0.09	1.23
	12th month	1.23	-	1.23	0.01	0.09	1.14
					<b>0.19</b>	<b>1.14</b>	
<b>5th</b>	Opening Balance						
	1st month	1.14	-	1.14	0.01	0.09	1.04
	2nd month	1.04	-	1.04	0.01	0.09	0.95
	3rd month	0.95	-	0.95	0.01	0.09	0.85
	4th month	0.85	-	0.85	0.01	0.09	0.76
	5th month	0.76	-	0.76	0.01	0.09	0.66



6th month	0.66	-	0.66	0.01	0.09	0.57
7th month	0.57	-	0.57	0.01	0.09	0.47
8th month	0.47	-	0.47	0.00	0.09	0.38
9th month	0.38	-	0.38	0.00	0.09	0.28
10th month	0.28	-	0.28	0.00	0.09	0.19
11th month	0.19	-	0.19	0.00	0.09	0.09
12th month	0.09	-	0.09	0.00	0.09	-
				<b>0.07</b>	<b>1.14</b>	
DOOR TO DOOR MORATORIUM PERIOD	60	MONTHS				
REPAYMENT PERIOD	6	MONTHS				
	54	MONTHS				

#### 4.10. WORKING CAPITAL CALCULATIONS

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</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>
<b><u>Finished Goods</u></b>					
	0.92	1.05	1.18	1.32	1.47
<b><u>Raw Material</u></b>					
	0.60	0.69	0.79	0.89	1.01
<b>Closing Stock</b>	<b>1.52</b>	<b>1.74</b>	<b>1.97</b>	<b>2.22</b>	<b>2.47</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	1.52				
Less : Creditors	0.60				
<b>Paid stock</b>	<b>0.92</b>	<b>10%</b>	<b>0.09</b>	<b>90%</b>	<b>0.83</b>
<b>Sundry Debtors</b>	<b>3.34</b>	<b>10%</b>	<b>0.33</b>	<b>90%</b>	<b>3.01</b>
	<b>4.26</b>		<b>0.43</b>		<b>3.84</b>
<b>MPBF</b>					<b>3.84</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>3.84</b>
<b>Working Capital Margin</b>					<b>0.43</b>

#### 4.11. SALARY & WAGES

<b><u>BREAK UP OF LABOUR CHARGES</u></b>			
<b>Particulars</b>	<b>Wages</b>	<b>No of</b>	<b>Total</b>
	<b>Rs. per Month</b>	<b>Employees</b>	<b>Salary</b>
Plant Operator	15,000	1	15,000
Supervisor	18,000	1	18,000
Skilled (in thousand rupees)	12,000	2	24,000
Unskilled (in thousand rupees)	8,500	2	17,000
<b>Total salary per month</b>			<b>74,000</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>8.88</b>

<b><u>BREAK UP OF STAFF SALARY CHARGES</u></b>			
<b>Particulars</b>	<b>Salary</b>	<b>No of</b>	<b>Total</b>
	<b>Rs. per Month</b>	<b>Employees</b>	<b>Salary</b>
Administrative Staff	6,500	1	6,500
Manager	18,000	1	18,000
Accountant	15,000	1	15,000
<b>Total salary per month</b>			<b>39,500</b>
<b>Total annual Staff charges</b>	<b>(in lacs)</b>		<b>4.74</b>

#### 4.12 POWER REQUIREMENT

<b>Utility Charges (per month)</b>		
<b>Particulars</b>	<b>value</b>	<b>Description</b>
Power connection required	6	KWH
consumption per day	48	units
Consumption per month	1,200	units
Rate per Unit	10	Rs.
power Bill per month	12,000	Rs.

**4.13. DEPRECIATION CALCULATION**

<b>COMPUTATION OF DEPRECIATION</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	6.80	2.50	9.30
Total	6.80	2.50	9.30
Less : Depreciation	1.02	0.25	1.27
<b>WDV at end of Year</b>	<b>5.78</b>	<b>2.25</b>	<b>8.03</b>
Additions During The Year	-	-	-
Total	5.78	2.25	8.03
Less : Depreciation	0.87	0.23	1.09
<b>WDV at end of Year</b>	<b>4.91</b>	<b>2.03</b>	<b>6.94</b>
Additions During The Year	-	-	-
Total	4.91	2.03	6.94
Less : Depreciation	0.74	0.20	0.94
<b>WDV at end of Year</b>	<b>4.18</b>	<b>1.82</b>	<b>6.00</b>
Additions During The Year	-	-	-
Total	4.18	1.82	6.00
Less : Depreciation	0.63	0.18	0.81
<b>WDV at end of Year</b>	<b>3.55</b>	<b>1.64</b>	<b>5.19</b>
Additions During The Year	-	-	-
Total	3.55	1.64	5.19
Less : Depreciation	0.53	0.16	0.70
<b>WDV at end of Year</b>	<b>3.02</b>	<b>1.48</b>	<b>4.49</b>

**4.14. REPAIR & MAINTENANCE:** Repair & Maintenance is 2.5% of Gross Sale.

**4.15. PROJECTIONS OF PROFITABILITY ANALYSIS:**

<b><u>PROJECTED PROFITABILITY STATEMENT</u></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>50%</b>	<b>55%</b>	<b>60%</b>	<b>65%</b>	<b>70%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Lemon Grass Oil	50.10	59.13	67.58	77.11	87.24
<b>Total</b>	<b>50.10</b>	<b>59.13</b>	<b>67.58</b>	<b>77.11</b>	<b>87.24</b>
<b><u>COST OF SALES</u></b>					
Raw Material Consumed	25.65	29.63	33.86	38.35	43.09
Electricity Expenses	1.44	1.66	1.90	2.19	2.41
Depreciation	1.27	1.09	0.94	0.81	0.70
Wages & labour	8.88	9.77	10.74	11.82	12.76
Repair & maintenance	1.25	1.48	1.69	1.93	2.18
Packaging	1.00	1.18	1.35	1.54	1.74
<b>Cost of Production</b>	<b>39.49</b>	<b>44.80</b>	<b>50.49</b>	<b>56.63</b>	<b>62.89</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>0.92</b>	<b>1.05</b>	<b>1.18</b>	<b>1.32</b>
<b>Less: Closing Stock /WIP</b>	<b>0.92</b>	<b>1.05</b>	<b>1.18</b>	<b>1.32</b>	<b>1.47</b>
Cost of Sales	38.57	44.68	50.36	56.49	62.74
<b>GROSS PROFIT</b>	<b>11.53</b>	<b>14.45</b>	<b>17.23</b>	<b>20.62</b>	<b>24.49</b>
	<b>23.01%</b>	<b>24.43%</b>	<b>25.49%</b>	<b>26.74%</b>	<b>28.08%</b>
Salary to Staff	4.74	5.78	6.76	7.30	8.40
Interest on Term Loan	0.50	0.44	0.32	0.19	0.07
Interest on working Capital	0.42	0.42	0.42	0.42	0.42
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	0.90	1.06	1.18	1.47	1.74
<b>TOTAL</b>	<b>10.17</b>	<b>11.67</b>	<b>13.04</b>	<b>14.17</b>	<b>15.90</b>
<b>NET PROFIT</b>	<b>1.36</b>	<b>2.78</b>	<b>4.19</b>	<b>6.45</b>	<b>8.59</b>
	<b>2.72%</b>	<b>4.69%</b>	<b>6.20%</b>	<b>8.36%</b>	<b>9.85%</b>
Taxation	-	-	-	0.43	0.87
<b>PROFIT (After Tax)</b>	<b>1.36</b>	<b>2.78</b>	<b>4.19</b>	<b>6.02</b>	<b>7.72</b>

#### 4.16. 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>	50.10	59.13	67.58	77.11	87.24
Less : Op. WIP Goods	-	0.92	1.05	1.18	1.32
Add : Cl. WIP Goods	0.92	1.05	1.18	1.32	1.47
<b>Total Sales</b>	<b>51.02</b>	<b>59.25</b>	<b>67.72</b>	<b>77.25</b>	<b>87.38</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	25.65	29.63	33.86	38.35	43.09
Electricity Exp/Coal Consumption at 85%	1.22	1.41	1.62	1.86	2.05
Wages & Salary at 60%	8.17	9.33	10.50	11.47	12.70
Selling & administrative Expenses 80%	0.72	0.85	0.95	1.17	1.40
Interest on working Capital	0.421912	0.421912	0.421912	0.421912	0.421912
Repair & maintenance	1.25	1.48	1.69	1.93	2.18
Packaging	1.00	1.18	1.35	1.54	1.74
<b>Total Variable &amp; Semi Variable Exp</b>	<b>38.44</b>	<b>44.30</b>	<b>50.39</b>	<b>56.74</b>	<b>63.58</b>
<b>Contribution</b>	<b>12.58</b>	<b>14.95</b>	<b>17.33</b>	<b>20.51</b>	<b>23.80</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.22	0.25	0.29	0.33	0.36
Wages & Salary at 40%	5.45	6.22	7.00	7.65	8.46
Interest on Term Loan	0.50	0.44	0.32	0.19	0.07
Depreciation	1.27	1.09	0.94	0.81	0.70
Selling & administrative Expenses 20%	0.18	0.21	0.24	0.29	0.35
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>11.22</b>	<b>12.18</b>	<b>13.14</b>	<b>14.06</b>	<b>15.21</b>
<b>Capacity Utilization</b>	<b>50%</b>	<b>55%</b>	<b>60%</b>	<b>65%</b>	<b>70%</b>
<b>OPERATING PROFIT</b>	<b>1.36</b>	<b>2.78</b>	<b>4.19</b>	<b>6.45</b>	<b>8.59</b>
<b>BREAK EVEN POINT</b>	<b>45%</b>	<b>45%</b>	<b>45%</b>	<b>45%</b>	<b>45%</b>
<b>BREAK EVEN SALES</b>	<b>45.49</b>	<b>48.25</b>	<b>51.34</b>	<b>52.97</b>	<b>55.84</b>

**4.17. PROJECTED BALANCE SHEET**

<b><u>PROJECTED BALANCE SHEET</u></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>
<b><u>Liabilities</u></b>					
Capital					
opening balance		4.46	5.24	6.43	7.45
Add:- Own Capital	1.35				
Add:- Retained Profit	1.36	2.78	4.19	6.02	7.72
Less:- Drawings	1.50	2.00	3.00	5.00	6.50
Subsidy/grant	3.26				
Closing Balance	4.46	5.24	6.43	7.45	8.67
Term Loan	4.55	3.41	2.27	1.14	-
Working Capital Limit	3.84	3.84	3.84	3.84	3.84
Sundry Creditors	0.60	0.69	0.79	0.89	1.01
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
<b>TOTAL :</b>	<b>13.85</b>	<b>13.68</b>	<b>13.93</b>	<b>14.04</b>	<b>14.38</b>
<b><u>Assets</u></b>					
<b>Fixed Assets ( Gross)</b>	9.30	9.30	9.30	9.30	9.30
Gross Dep.	1.27	2.36	3.30	4.11	4.81
<b>Net Fixed Assets</b>	<b>8.03</b>	<b>6.94</b>	<b>6.00</b>	<b>5.19</b>	<b>4.49</b>
<b>Current Assets</b>					
Sundry Debtors	3.34	3.94	4.51	5.14	5.82
Stock in Hand	1.52	1.74	1.97	2.22	2.47
Cash and Bank	0.96	1.06	1.46	1.49	1.59
<b>TOTAL :</b>	<b>13.85</b>	<b>13.68</b>	<b>13.93</b>	<b>14.04</b>	<b>14.38</b>

**4.18. CASH FLOW STATEMENT**

<b><u>PROJECTED CASH FLOW STATEMENT</u></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>
<b><u>SOURCES OF FUND</u></b>					
Own Margin	1.35				
Net Profit	1.36	2.78	4.19	6.45	8.59
Depriciation & Exp. W/off	1.27	1.09	0.94	0.81	0.70
Increase in Cash Credit	3.84	-	-	-	-
Increase In Term Loan	5.12	-	-	-	-
Increase in Creditors	0.60	0.09	0.10	0.10	0.11
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	3.26				
<b>TOTAL :</b>	<b>17.18</b>	<b>4.06</b>	<b>5.33</b>	<b>7.48</b>	<b>9.54</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	9.30				
Increase in Stock	1.52	0.22	0.23	0.25	0.26
Increase in Debtors	3.34	0.60	0.56	0.64	0.67
Repayment of Term Loan	0.57	1.14	1.14	1.14	1.14
Drawings	1.50	2.00	3.00	5.00	6.50
Taxation	-	-	-	0.43	0.87
<b>TOTAL :</b>	<b>16.23</b>	<b>3.95</b>	<b>4.93</b>	<b>7.45</b>	<b>9.44</b>
Opening Cash & Bank Balance	-	0.96	1.06	1.46	1.49
Add : Surplus	0.96	0.11	0.40	0.03	0.10
Closing Cash & Bank Balance	<b>0.96</b>	<b>1.06</b>	<b>1.46</b>	<b>1.49</b>	<b>1.59</b>



**4.19. DEBT SERVICE COVERAGE RATIO**

<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	2.63	3.87	5.13	6.83	8.42
Interest on Term Loan	0.50	0.44	0.32	0.19	0.07
<b>Total</b>	<b>3.14</b>	<b>4.31</b>	<b>5.45</b>	<b>7.02</b>	<b>8.48</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	0.57	1.14	1.14	1.14	1.14
Interest on Term Loan	0.50	0.44	0.32	0.19	0.07
Total	1.07	1.58	1.45	1.33	1.20
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.93</b>	<b>2.73</b>	<b>3.75</b>	<b>5.28</b>	<b>7.04</b>
<b>AVERAGE D.S.C.R.</b>	<b>4.28</b>				