



## **DETAILED PROJECT REPORT**

### **BETEL VINE OIL UNIT**

### **UNDER PMFME SCHEME**



National Institute of Food Technology Entrepreneurship and Management

Ministry of Food Processing Industries

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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Betel Vine Oil Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	24000 bottles/annum (30,35,40,45&50% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw material	:	Betel Leaves
5. Major product outputs	:	Betel Vine Oil Unit
6. Total project cost	:	Rs. 24.10 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 13.50 Lakh
• Miscellaneous Fixed Assets	:	Rs. 2.50 Lakh
• Working capital	:	Rs. 8.10 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 5.60 Lakh
• Promoter's contribution (min10%)	:	Rs. 2.40 Lakh
• Term loan	:	Rs. 8.80 Lakh
• Working Capital Requirement	:	Rs. 7.29 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs. 1.52 Lakh
• 2 <sup>nd</sup> year	:	Rs. 4.56 Lakh
• 3 <sup>rd</sup> year	:	Rs. 7.25 Lakh
• 4 <sup>th</sup> year	:	Rs. 10.53 Lakh
• 5 <sup>th</sup> year	:	Rs. 13.83 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:**

Betel vine (*Piper betel* L.) belongs to the genus *Piper* of the family *Piperaceae*. In India, betel leaf is known by more than 150 names in various local languages, such as Nagavalli, Nagarvel, Saptaseera, Sompatra, Tamalapaku, Tambul, Tambuli, Vaksha Patra, Vetrilai, Voojagalata, and so on in different parts of the country. The betel plant is a perennial creeper with glossy heart-shaped leaves and white catkin. Betel vine is a perennial, dioecious, evergreen climber cultivated in the tropics and subtropics for its chewing stimulant leaves. The leaves are alternate and entire measuring 5 to 10 cm long and 3 to 6 cm across. The flowers are tiny and are produced on pendulous spikes 4 to 8 cm long at the leaf nodes, with the spikes lengthening up to 7 to 15 cm as the fruit matures. The leaves and stems of the betel vine have a good aromatic taste. Betel oil has various medicinal applications. Chewing betel leaves is a good source of calcium. Betel Leaf Oil is produced from the leaves of the Betal plant, which contain this aromatic essential oil. The heart-shaped leaves have a good fragrance and It is extracted by the process of steam distillation.

The crop's economic potential can be judged by the fact that it can be used in a variety of pharmaceuticals, medicinal products, and cottage industries. This is due to the plant's or its oil's use in a variety of medical conditions and for the treatment of a wide range of normal, acute, chronic, incurable, and even fatal diseases like bad breath, cold cough, ringworm, asthma, and leukaemia etc. The betel products, such as herbal medications, remedies, and natural herbal formulations, are currently in high demand. Betel leaves and their extracts have long been used to treat a number of illnesses, including bad breath, wounds, burns, inflammations, cold coughs, indigestion, and more.

### **Product Uses:**

The following major uses are given for betel leaves

- It has a breath-freshening effect.
- It can be used to treat intestinal worms.
- It aids in the treatment of constipation.
- It has the ability to protect the system from pathogens and microorganisms.
- It aids in the relief of colds and coughs.
- It is a pain reliever.
- It relieves nose bleeding, itchiness, vaginal wetness, and other skin infections thanks to its antiseptic properties.
- It can be used to treat urinary tract infections, headaches, and other ailments.
- It may help to lessen the occurrence of pimples.
- Lower back pain can be relieved with betel oil.
- It also boosts the voice and is said to be an aphrodisiac

## **2.2. MARKET POTENTIAL:**

Around 120 million kg of essential oils are produced worldwide from nearly 300 crops worth about \$4 billion, including 4% production from India amounting to about 21%–22% of the total revenue. Despite the fact that no such data on the essential oil of betel leaf is currently available in the public domain, India continues to hold great promise for the production, processing, use, and export of essential oil of betel leaf because India produces the world's largest quantity and highest quality leaves. This is reported that in India, 10–70 percent of the leaves are thrown away each year, amounting to at least \$900 million in monetary terms that could be transformed into

oil, a measure of generating wealth from waste. At least 10% of the total supply remains unsold or sold at a discount at any given time, and essential oil may be extracted from these surplus leaves, whether they are dry, fresh, stale, or dechlorophyllated, or even partially decayed and rejected for consumption. Aside from that, in India's cottage industries, at least 25% of the leaves are rejected during curing or bleaching. Furthermore, a substantial number of export consignments are often incinerated to prevent public health risks, mostly due to Salmonella spp. contamination. All of these discarded leaves can be used to extract the essential oil, which can be used to generate wealth. The extracted oil would have the aroma and flavour of the source plants or varieties.

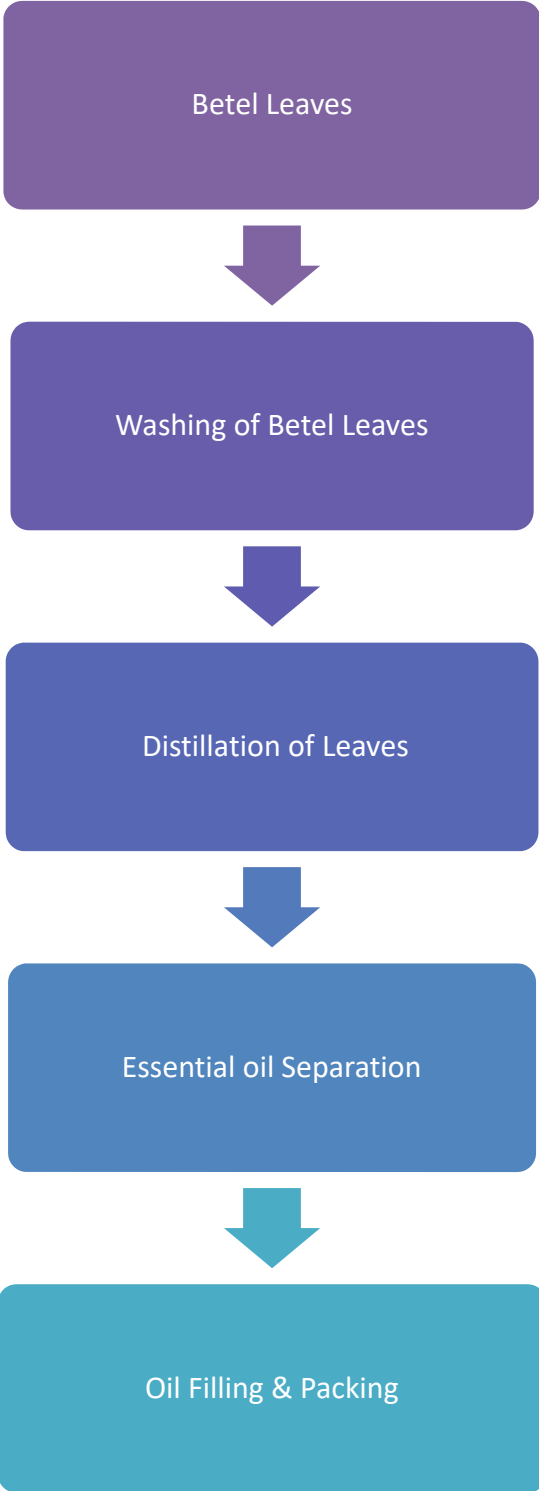
### **2.3. RAW MATERIAL DESCRIPTION:**

The only raw material that is required is Betel Leaves to manufacture Betel Vine Oil. Betel leaves can be directly procured from farmers.

## **3. PROCESS FLOW CHART**

- Betel leaves are procured from the various sources i.e. farmer field, pan mandis and other places.
- Betel leaves (chopped or unchopped) are filled in the distillation unit and its lid is fitted tightly by swivel bolts so that oil and vapour do not leak out.

- The steam is induced into the unit with the help of steam sparger provided at the bottom of the vessel.
- The upcoming steam carries away the oil from the plant material i.e. betel vine leaves and both oil as well as steam pass to the condenser through the vapour line.
- These vapours get condensed and oil and water are separated in the separators.
- It can be used to separate the immiscible liquids of two layers such as oil and water.
- Oil being lighter is separated out from the top and water being heavier is taken out from the bottom of separators.
- The oil thus obtained is betel vine oil.





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

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

1. Production Capacity of Betel Vine Oil is 10 Ltr. per day. First year, Capacity has been taken @ 30%.
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 10 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><u>COMPUTATION OF PRODUCTION OF BETEL VINE OIL</u></b>		
<b>Items to be Manufactured</b>		
Betel Vine Oil		
Total working Hours	8	
Plant capacity Per Day	10	Ltr
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	20%	
Raw material requirement	3000	Ltr
Final Output per annum after wastage	2400	Ltr
Final Product to be packed in 100 ml Bottles		
Number of Bottles per annum	24000	100 ml Bottles

<b>Production of Betel Vine Oil</b>		
<b>Production</b>	<b>Capacity</b>	<b>Ltr</b>
1st year	30%	7,200
2nd year	35%	8,400
3rd year	40%	9,600
4th year	45%	10,800
5th year	50%	12,000






<b>Raw Material Cost</b>			
<b>Year</b>	<b>Capacity</b>	<b>Rate</b>	<b>Amount</b>
	<b>Utilisation</b>	<b>(per bottle.)</b>	<b>(Rs. in lacs)</b>
1st year	30%	1,600.00	115.20
2nd year	35%	1,680.00	141.12
3rd year	40%	1,764.00	169.34
4th year	45%	1,852.00	200.02
5th year	50%	1,945.00	233.40

<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	-	168	196	224	252
Production	7,200	8,400	9,600	10,800	12,000
Less : Closing Stock	168	196	224	252	280
<b>Net Sale</b>	<b>7,032</b>	<b>8,372</b>	<b>9,572</b>	<b>10,772</b>	<b>11,972</b>
Sale price per bottle	2,100.00	2,205.00	2,315.00	2,431.00	2,553.00
<b>Sales (in Lacs)</b>	<b>147.67</b>	<b>184.60</b>	<b>221.59</b>	<b>261.87</b>	<b>305.65</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.
Leaf washing machine	This machine is used for wash the leaves before taking then in cutting section.	
Steam distillation unit	Steam distillation equipment for extraction of natural oils from the betel vine leaves.	
Essential oil filling and packaging machine	These machines are uses for filling the essential oil in different packages for marketing purposes.	
Boiler	Boiler is used for producing steam which is used by distillation unit.	
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>
Leaf washing machine	1	400000	400000
Steam distillation unit	1	500000	500000
Boiler	1	120000	120000
Essential oil filling and packaging machine	1	180000	180000
Material handling and other equipment's (Bins, trolley, weighing machine, etc.)	-	150000	150000

**Note:** Total Machinery cost shall be Rs 13.50 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	13.50
Miscellaneous Assets	2.50
Working capital	8.10
<b>Total</b>	<b>24.10</b>

**4.7. MEANS OF FINANCE**

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	2.40
Subsidy @35%(Max. Rs 10 Lac)	5.60
Term Loan @ 55%	8.80
Working Capital (Bank Finance)	7.29
<b>Total</b>	<b>24.10</b>

**4.8. TERM LOAN:** Term loan of Rs. 8.80 Lakh is required for project cost of Rs. 24.10 Lakh

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

<b>REPAYMENT SCHEDULE OF TERM LOAN</b>							
					Interest	11.00%	
<b>Year</b>	<b>Particulars</b>	<b>Amount</b>	<b>Addition</b>	<b>Total</b>	<b>Interest</b>	<b>Repayment</b>	<b>Closing Balance</b>
<b>1st</b>	Opening Balance						
	1st month	-	8.80	8.80	-	-	8.80
	2nd month	8.80	-	8.80	0.08	-	8.80
	3rd month	8.80	-	8.80	0.08	-	8.80
	4th month	8.80	-	8.80	0.08		8.80
	5th month	8.80	-	8.80	0.08		8.80
	6th month	8.80	-	8.80	0.08		8.80
	7th month	8.80	-	8.80	0.08	0.16	8.64
	8th month	8.64	-	8.64	0.08	0.16	8.47
	9th month	8.47	-	8.47	0.08	0.16	8.31
	10th month	8.31	-	8.31	0.08	0.16	8.15
	11th month	8.15	-	8.15	0.07	0.16	7.99
	12th month	7.99	-	7.99	0.07	0.16	7.82
					0.86	0.98	
<b>2nd</b>	Opening Balance						
	1st month	7.82	-	7.82	0.07	0.16	7.66
	2nd month	7.66	-	7.66	0.07	0.16	7.50
	3rd month	7.50	-	7.50	0.07	0.16	7.33
	4th month	7.33	-	7.33	0.07	0.16	7.17

PM FME- Detailed Project Report of Betel Vine Oil Unit

	5th month	7.17	-	7.17	0.07	0.16	7.01
	6th month	7.01	-	7.01	0.06	0.16	6.84
	7th month	6.84	-	6.84	0.06	0.16	6.68
	8th month	6.68	-	6.68	0.06	0.16	6.52
	9th month	6.52	-	6.52	0.06	0.16	6.36
	10th month	6.36	-	6.36	0.06	0.16	6.19
	11th month	6.19	-	6.19	0.06	0.16	6.03
	12th month	6.03	-	6.03	0.06	0.16	5.87
					<b>0.76</b>	<b>1.96</b>	
<b>3rd</b>	Opening Balance						
	1st month	5.87	-	5.87	0.05	0.16	5.70
	2nd month	5.70	-	5.70	0.05	0.16	5.54
	3rd month	5.54	-	5.54	0.05	0.16	5.38
	4th month	5.38	-	5.38	0.05	0.16	5.21
	5th month	5.21	-	5.21	0.05	0.16	5.05
	6th month	5.05	-	5.05	0.05	0.16	4.89
	7th month	4.89	-	4.89	0.04	0.16	4.73
	8th month	4.73	-	4.73	0.04	0.16	4.56
	9th month	4.56	-	4.56	0.04	0.16	4.40
	10th month	4.40	-	4.40	0.04	0.16	4.24
	11th month	4.24	-	4.24	0.04	0.16	4.07
	12th month	4.07	-	4.07	0.04	0.16	3.91
					<b>0.55</b>	<b>1.96</b>	
<b>4th</b>	Opening Balance						
	1st month	3.91	-		0.04	0.16	3.75



PM FME- Detailed Project Report of Betel Vine Oil Unit

				3.91			
2nd month	3.75	-	3.75	0.03	0.16	3.59	
3rd month	3.59	-	3.59	0.03	0.16	3.42	
4th month	3.42	-	3.42	0.03	0.16	3.26	
5th month	3.26	-	3.26	0.03	0.16	3.10	
6th month	3.10	-	3.10	0.03	0.16	2.93	
7th month	2.93	-	2.93	0.03	0.16	2.77	
8th month	2.77	-	2.77	0.03	0.16	2.61	
9th month	2.61	-	2.61	0.02	0.16	2.44	
10th month	2.44	-	2.44	0.02	0.16	2.28	
11th month	2.28	-	2.28	0.02	0.16	2.12	
12th month	2.12	-	2.12	0.02	0.16	1.96	
				<b>0.33</b>	<b>1.96</b>		
<b>5th</b>	<b>Opening Balance</b>						
1st month	1.96	-	1.96	0.02	0.16	1.79	
2nd month	1.79	-	1.79	0.02	0.16	1.63	
3rd month	1.63	-	1.63	0.01	0.16	1.47	
4th month	1.47	-	1.47	0.01	0.16	1.30	
5th month	1.30	-	1.30	0.01	0.16	1.14	
6th month	1.14	-	1.14	0.01	0.16	0.98	
7th month	0.98	-	0.98	0.01	0.16	0.81	
8th month	0.81	-	0.81	0.01	0.16	0.65	
9th month	0.65	-	0.65	0.01	0.16	0.49	
10th month	0.49	-	0.49	0.00	0.16	0.33	
11th month	0.33	-		0.00	0.16	0.16	

			0.33			
12th month	0.16	-	0.16	0.00	0.16	-
				<b>0.12</b>	<b>1.96</b>	
DOOR TO DOOR MORATORIUM PERIOD	60	MONTHS				
	6	MONTHS				
REPAYMENT PERIOD	54	MONTHS				

#### 4.10. WORKING CAPITAL CALCULATIONS

<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>					
	3.18	3.86	4.60	5.39	6.24
<b><u>Raw Material</u></b>					
	2.69	3.29	3.95	4.67	5.45
<b>Closing Stock</b>	<b>5.87</b>	<b>7.16</b>	<b>8.55</b>	<b>10.06</b>	<b>11.69</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	5.87				
Less : Creditors	2.69				
<b>Paid stock</b>	<b>3.18</b>	<b>10%</b>	<b>0.32</b>	<b>90%</b>	<b>2.86</b>
<b>Sundry Debtors</b>	<b>4.92</b>	<b>10%</b>	<b>0.49</b>	<b>90%</b>	<b>4.43</b>
	<b>8.10</b>		<b>0.81</b>		<b>7.29</b>
<b>MPBF</b>					<b>7.29</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>7.29</b>
<b>Working Capital Margin</b>					<b>0.81</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	2	30,000
Supervisor	18,000	1	18,000
Skilled (in thousand rupees)	12,000	2	24,000
Unskilled (in thousand rupees)	8,500	3	25,500
<b>Total salary per month</b>			<b>97,500</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>11.70</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	13.50	2.50	16.00
Total	13.50	2.50	16.00
Less : Depreciation	2.03	0.25	2.28
<b>WDV at end of Year</b>	<b>11.48</b>	<b>2.25</b>	<b>13.73</b>
Additions During The Year	-	-	-
Total	11.48	2.25	13.73
Less : Depreciation	1.72	0.23	1.95
<b>WDV at end of Year</b>	<b>9.75</b>	<b>2.03</b>	<b>11.78</b>
Additions During The Year	-	-	-
Total	9.75	2.03	11.78
Less : Depreciation	1.46	0.20	1.67
<b>WDV at end of Year</b>	<b>8.29</b>	<b>1.82</b>	<b>10.11</b>
Additions During The Year	-	-	-
Total	8.29	1.82	10.11
Less : Depreciation	1.24	0.18	1.43
<b>WDV at end of Year</b>	<b>7.05</b>	<b>1.64</b>	<b>8.69</b>
Additions During The Year	-	-	-
Total	7.05	1.64	8.69
Less : Depreciation	1.06	0.16	1.22
<b>WDV at end of Year</b>	<b>5.99</b>	<b>1.48</b>	<b>7.47</b>

**4.14. REPAIR & MAINTENANCE:** Repair & Maintenance is 2.0% 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>30%</b>	<b>35%</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Betel Vine Oil	147.67	184.60	221.59	261.87	305.65
<b>Total</b>	<b>147.67</b>	<b>184.60</b>	<b>221.59</b>	<b>261.87</b>	<b>305.65</b>
<b><u>COST OF SALES</u></b>					
Raw Material Consumed	115.20	141.12	169.34	200.02	233.40
Electricity Expenses	1.44	1.66	1.90	2.19	2.41
Depreciation	2.28	1.95	1.67	1.43	1.22
Wages & labour	11.70	13.81	15.88	17.46	18.86
Repair & maintenance	2.95	3.69	4.43	5.24	6.11
Packaging	2.66	3.32	3.99	4.71	5.50
<b>Cost of Production</b>	<b>136.23</b>	<b>165.54</b>	<b>197.21</b>	<b>231.05</b>	<b>267.51</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>3.18</b>	<b>3.86</b>	<b>4.60</b>	<b>5.39</b>
<b>Less: Closing Stock /WIP</b>	<b>3.18</b>	<b>3.86</b>	<b>4.60</b>	<b>5.39</b>	<b>6.24</b>
Cost of Sales	133.05	164.86	196.47	230.26	266.66
<b>GROSS PROFIT</b>	<b>14.62</b>	<b>19.74</b>	<b>25.12</b>	<b>31.61</b>	<b>38.99</b>
	<b>9.90%</b>	<b>10.70%</b>	<b>11.34%</b>	<b>12.07%</b>	<b>12.76%</b>
Salary to Staff	4.74	5.78	6.76	7.77	9.17
Interest on Term Loan	0.86	0.76	0.55	0.33	0.12
Interest on working Capital	0.80	0.80	0.80	0.80	0.80
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	3.10	3.88	4.65	5.50	6.42
<b>TOTAL</b>	<b>13.11</b>	<b>15.18</b>	<b>17.12</b>	<b>19.20</b>	<b>21.78</b>
NET PROFIT	1.52	4.56	8.00	12.41	17.21
	<b>1.03%</b>	<b>2.47%</b>	<b>3.61%</b>	<b>4.74%</b>	<b>5.63%</b>
Taxation	-	-	0.75	1.88	3.37
PROFIT (After Tax)	1.52	4.56	7.25	10.53	13.83

#### 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>	147.67	184.60	221.59	261.87	305.65
Less : Op. WIP Goods	-	3.18	3.86	4.60	5.39
Add : Cl. WIP Goods	3.18	3.86	4.60	5.39	6.24
<b>Total Sales</b>	<b>150.85</b>	<b>185.29</b>	<b>222.33</b>	<b>262.66</b>	<b>306.50</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	115.20	141.12	169.34	200.02	233.40
Electricity Exp/Coal Consumption at 85%	1.22	1.41	1.62	1.86	2.05
Wages & Salary at 60%	9.86	11.75	13.58	15.14	16.82
Selling & administrative Expenses 80%	2.48	3.10	3.72	4.40	5.13
Interest on working Capital	0.802001	0.802001	0.802001	0.802001	0.802001
Repair & maintenance	2.95	3.69	4.43	5.24	6.11
Packaging	2.66	3.32	3.99	4.71	5.50
<b>Total Variable &amp; Semi Variable Exp</b>	<b>135.18</b>	<b>165.20</b>	<b>197.49</b>	<b>232.17</b>	<b>269.82</b>
<b>Contribution</b>	<b>15.67</b>	<b>20.09</b>	<b>24.84</b>	<b>30.48</b>	<b>36.68</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%	6.58	7.84	9.05	10.10	11.21
Interest on Term Loan	0.86	0.76	0.55	0.33	0.12
Depreciation	2.28	1.95	1.67	1.43	1.22
Selling & administrative Expenses 20%	0.62	0.78	0.93	1.10	1.28
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>14.15</b>	<b>15.53</b>	<b>16.84</b>	<b>18.07</b>	<b>19.47</b>
<b>Capacity Utilization</b>	<b>30%</b>	<b>35%</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>
<b>OPERATING PROFIT</b>	<b>1.52</b>	<b>4.56</b>	<b>8.00</b>	<b>12.41</b>	<b>17.21</b>
<b>BREAK EVEN POINT</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>	<b>27%</b>
<b>BREAK EVEN SALES</b>	<b>136.25</b>	<b>143.22</b>	<b>150.72</b>	<b>155.72</b>	<b>162.69</b>

## 4.17. PROJECTED BALANCE SHEET

<b>PROJECTED BALANCE SHEET</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		8.02	10.08	12.33	15.36
Add:- Own Capital	2.40				
Add:- Retained Profit	1.52	4.56	7.25	10.53	13.83
Less:- Drawings	1.50	2.50	5.00	7.50	10.50
Subsidy/grant	5.60				
Closing Balance	8.02	10.08	12.33	15.36	18.70
Term Loan	7.82	5.87	3.91	1.96	-
Working Capital Limit	7.29	7.29	7.29	7.29	7.29
Sundry Creditors	2.69	3.29	3.95	4.67	5.45
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
<b>TOTAL :</b>	<b>26.22</b>	<b>27.03</b>	<b>28.08</b>	<b>30.00</b>	<b>32.30</b>
<b><u>Assets</u></b>					
<b>Fixed Assets ( Gross)</b>	16.00	16.00	16.00	16.00	16.00
Gross Dep.	2.28	4.22	5.89	7.31	8.53
<b>Net Fixed Assets</b>	<b>13.73</b>	<b>11.78</b>	<b>10.11</b>	<b>8.69</b>	<b>7.47</b>
<b>Current Assets</b>					
Sundry Debtors	4.92	6.15	7.39	8.73	10.19
Stock in Hand	5.87	7.16	8.55	10.06	11.69
Cash and Bank	1.70	1.94	2.03	2.52	2.95
<b>TOTAL :</b>	<b>26.22</b>	<b>27.03</b>	<b>28.08</b>	<b>30.00</b>	<b>32.30</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	2.40				
Net Profit	1.52	4.56	8.00	12.41	17.21
Depriciation & Exp. W/off	2.28	1.95	1.67	1.43	1.22
Increase in Cash Credit	7.29	-	-	-	-
Increase In Term Loan	8.80	-	-	-	-
Increase in Creditors	2.69	0.60	0.66	0.72	0.78
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	5.60				
<b>TOTAL :</b>	<b>30.97</b>	<b>7.21</b>	<b>10.43</b>	<b>14.67</b>	<b>19.35</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	16.00				
Increase in Stock	5.87	1.29	1.40	1.51	1.63
Increase in Debtors	4.92	1.23	1.23	1.34	1.46
Repayment of Term Loan	0.98	1.96	1.96	1.96	1.96
Drawings	1.50	2.50	5.00	7.50	10.50
Taxation	-	-	0.75	1.88	3.37
<b>TOTAL :</b>	<b>29.27</b>	<b>6.98</b>	<b>10.34</b>	<b>14.18</b>	<b>18.92</b>
Opening Cash & Bank Balance	-	1.70	1.94	2.03	2.52
Add : Surplus	1.70	0.24	0.09	0.49	0.43
Closing Cash & Bank Balance	<b>1.70</b>	<b>1.94</b>	<b>2.03</b>	<b>2.52</b>	<b>2.95</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	3.79	6.51	8.92	11.96	15.06
Interest on Term Loan	0.86	0.76	0.55	0.33	0.12
<b>Total</b>	<b>4.66</b>	<b>7.27</b>	<b>9.46</b>	<b>12.29</b>	<b>15.17</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	0.98	1.96	1.96	1.96	1.96
Interest on Term Loan	0.86	0.76	0.55	0.33	0.12
<b>Total</b>	<b>1.84</b>	<b>2.72</b>	<b>2.50</b>	<b>2.29</b>	<b>2.07</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.53</b>	<b>2.67</b>	<b>3.78</b>	<b>5.37</b>	<b>7.32</b>
<b>AVERAGE D.S.C.R.</b>	<b>4.28</b>				