



**DETAILED PROJECT REPORT**  
**GARLIC POWDER MAKING UNIT**  
**UNDER PMFME SCHEME**



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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Garlic Powder Making Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	142500 kg/annum (30,35,40,45&50% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw material	:	Matured Garlic
5. Major product outputs	:	Garlic Powder
6. Total project cost	:	Rs. 21.87 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 14.90 Lakh
• Miscellaneous Fixed Assets	:	Rs. 2.50 Lakh
• Working capital	:	Rs. 4.47 Lakh
7. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 6.09 Lakh
• Promoter's contribution (min10%)	:	Rs. 2.18 Lakh
• Term loan	:	Rs. 9.57 Lakh
• Working Capital Requirement	:	Rs. 4.02 Lakh
8. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs. 1.44 Lakh
• 2 <sup>nd</sup> year	:	Rs. 3.99 Lakh
• 3 <sup>rd</sup> year	:	Rs. 6.43 Lakh
• 4 <sup>th</sup> year	:	Rs. 8.80 Lakh
• 5 <sup>th</sup> year	:	Rs. 11.07 Lakh
9. Average DSCR	:	Rs. 3.53
10. Term loan repayment	:	5 Years with 6 months grace period

## **2. ABOUT THE PRODUCT**

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

Garlic powder is a spice made by dehydrating and grinding garlic. When people make their own homes, they are usually more troublesome, and sanitary conditions cannot be ensured, so people can purchase high-quality garlic powder from professional garlic powder manufacturers. Garlic powder is a spice made from dehydrated garlic that is used to improve the taste of food. Garlic powder is made by drying and dehydrating the vegetable before powdering it with machines or home equipment, depending on the size of development. Garlic powder is a popular addition to spice blends. It's even used in a lot of seasoned salt. One of the reasons that so many people want to start a garlic powder company is because of this. Garlic powder is made by combining garlic oil with a carrier oil. It is used for health and growth promotion. Allicin can help animals produce more scent-producing amino acids, increase the aroma components in meat and eggs, and enhance the flavour of meat and eggs. Adding feed to livestock, poultry, and fish can increase disease tolerance and speed up development. It performs detoxification, promotes blood supply, and removes blood stasis, both of which help to reduce the toxicity of effective feed ingredients. Garlic is usually used as a condiment in various food preparations, but it is also used in many medical preparations as a carminative and gastric stimulant. It's used to flavour mayonnaise, tomato ketchup sauce, salad dressings, beef sausages, stews, spaghetti chutney, pickles, and other condiments. It assists in food digestion and absorption, has antihelminthic and antibacterial effects, and is used in a variety of herbal preparations due to these unique properties. Garlic powder production from raw garlic bulbs is a well-established industry in the United States and Europe, where its applications are well-known.

## **2.2. MARKET POTENTIAL:**

Garlic powder is an important part of Indian cuisine. It has been used as a condiment for over a century. It aids in food digestion and absorption, as well as having anathematic and antiseptic effects, and is used in a variety of medicinal preparations. Garlic is cultivated in many states around the world, with the major cultivators being M.P., U.P., Maharashtra, Haryana, and Gujarat. Garlic powder production. Garlic powder production from raw bulbs is a well-established industry in Europe and the United States, and it is now gaining momentum in India. Garlic powder has been prepared in a sanitary way. It is simple and easy to use, and it is commonly used in Indian cuisine, both vegetarian and non-vegetarian. It can be made everywhere, but for ease of sourcing, it should be limited to garlic-producing regions. Despite the fact that garlic is abundantly produced and eaten in India, little attempt has been made to manufacture dehydrated garlic and garlic powder, resulting in approximately 20% of the harvest being wasted due to respiration and microbial spoilage during raw garlic bulb storage. Garlic bulbs, garlic, and garlic powder are mainly exported from India to Bahrain, Kuwait, Muscat, Seychelles, the United States, Yemen Arab Republic, and a few European countries. Garlic is sourced from all over the state (Madhya Pradesh, Uttar Pradesh, Gujarat, Bihar, and Himachal Pradesh), as well as from China through Nepal. Farmers sell their products at this market as well. Wholesalers receive a 7% fee from farmers and assist them in selling their products. India has 21 major integrated wholesale assembly markets. In addition to these regulated wholesale markets, all of the major garlic-producing states have a significant number of private and unorganised markets.

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

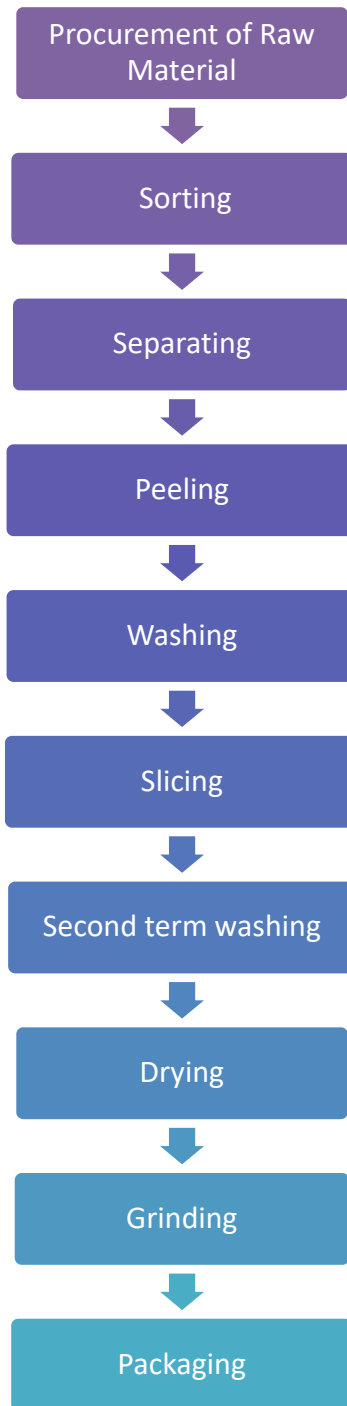
Well matured yellow leaves garlic are used for making garlic powder with dry stems.

### 3. PROCESS FLOW CHART

The **garlic powder processing** steps are mainly: selecting, separating, garlic peeling, sorting, slicing, drying, and garlic powder grinding.

- **Raw Material Procurement:** Raw materials should be received & stored in hygienic condition. The quality of the raw material should be checked carefully.
- **Sorting:** The garlic is dumped on the garlic sorting table, and the garlic heads with worms and mildew are taken out one at a time and removed. The garlic is too small during the picking process, and the region of the garlic is too small during the slicing process, lowering the finished product's consistency.
- **Separating:** A garlic separator machine is used to separate the garlic in order to get the skin. The garlic separate machine divides the garlic cloves using the force provided by the upper and lower rubber bands spinning at different speeds. A blower generates a heavy breeze. Since the proportion of garlic cloves to garlic skin is greater than the proportion of garlic skin, the garlic cloves are heavier and the outer skin is lighter. The garlic skin can be removed with the aid of the wind. Manually take off any garlic skin that has not been removed.
- **Peeling:** The next move is to peel the garlic cloves. The garlic peeling system blows off the outer cover of the garlic clove as well as a translucent film stuck to the garlic clove with high-pressure steam. The garlic is immediately peeled by the peeling unit. The peeled garlic is often chosen to ensure the consistency of the garlic powder.

- **Washing:** Garlic that has been peeled is a bit dirty. The dust on the garlic cloves are washed in the washing machine. A high-pressure water jet is also used in the washing machine, and the high-pressure water sprayed from the nozzles cleans the garlic cloves even further.
- **Slicing:** The garlic cloves are hoisted and conveyed to the feeder inlet through the conveyor. The cutter head spins in a steady motion. The average rotation speed is 80 to 100 revolutions per minute. And the cut garlic pieces should be uniform in size, with a thickness of 1.5 to 1.8 mm.
- **Second term Washing:** The sliced garlic slice will be cleaned once more in a bubble washer. The surface mucus and sugar on the garlic slice will be swept away by the bubbles' sputum. The washing time is three minutes, and the water temperature is about ten degrees Celsius.
- **Drying/Dehydrating:** To shorten the drying time, use washed garlic slices to extract moisture from the surface of the garlic. It is possible to dry the garlic slices that have been dried. A dedicated heat pump dryer is used to dry the dehydrated garlic slices. The process is as follows: equally scatter the garlic parts in the dryer's grid tray, place the grid plate into the material cart, drive the material cart into the garlic drying unit, and open the host. The temperature should be held between 55 and 75 degrees Celsius during the drying process, and the drying time should be between 10 and 12 hours. The standard for dried garlic slices is that they have a regular form, are white in color, and have a moisture content of 4 to 5%.
- **Grinding:** After drying, the dried garlic pulp is grounded by grinder immediately in order to get a uniform powder. Then, the powder is filtered through fine screen again for getting finer and end product.
- **Packaging:** The qualified garlic powder is packed in the sealed plastic bags or plastic or glass bottles which prevents it from damping.





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

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

1. Production Capacity of Garlic Powder is 500 kg 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 18 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 GARLIC POWDER</u></b>		
<b>Items to be Manufactured</b>		
Garlic Powder		
Total working Hours	8	
Machine capacity Per Day	500	Kg
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	5%	
Raw material requirement	150000	Kg
Final Output per annum after wastage	142500	Kg
Final Product to be packed in 100 gm Packet		
Number of Packets per annum	1425000	100 gm Packet

<b>Production of Garlic Powder</b>		
<b>Production</b>	<b>Capacity</b>	<b>KG</b>
1st year	30%	4,27,500
2nd year	35%	4,98,750
3rd year	40%	5,70,000
4th year	45%	6,41,250
5th year	50%	7,12,500

<b>Raw Material Cost</b>			
<b>Year</b>	<b>Capacity Utilisation</b>	<b>Rate (per packet)</b>	<b>Amount (Rs. in lacs)</b>
1st year	30%	12.00	51.30
2nd year	35%	13.00	64.84
3rd year	40%	14.00	79.80
4th year	45%	15.00	96.19
5th year	50%	16.00	114.00






<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	-	9,975	11,638	13,300	14,963
Production	4,27,500	4,98,750	5,70,000	6,41,250	7,12,500
Less : Closing Stock	9,975	11,638	13,300	14,963	16,625
<b>Net Sale</b>	<b>4,17,525</b>	<b>4,97,088</b>	<b>5,68,338</b>	<b>6,39,588</b>	<b>7,10,838</b>
Sale price per packet	20.00	21.00	22.00	23.00	24.00
<b>Sales (in Lacs)</b>	<b>83.51</b>	<b>104.39</b>	<b>125.03</b>	<b>147.11</b>	<b>170.60</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.
Garlic Sorting Machine	After the garlic peeling machine, the Automated Galic Clove Color Sorting Machine is used to extract the unpeeled garlic clove. It uses a CCD Color Sorting system to filter the garlic clove, ensuring high speed and precision.	
Garlic Separating Machine	Garlic bulb breaking is the unit operation through which cloves are separated to facilitate further processing.	
Garlic Peeling Machine	The garlic is fed into the peeling chamber through the inlet chute. Power is transmitted from the two HP motor shafts through V-belts. The pulley, fitted on the shaft, rotates the small blower. Pressurized air from the small blower removes the excess moisture from the garlic on the way to the peeling chamber.	

<p>Garlic Washing Machine</p>	<p>Peeled Garlic Clove Washing Machine is used to wash the dirt attached on the surface of garlic cloves by bubble washing.</p>	
<p>Garlic Slicing Machine</p>	<p>The garlic slicing system will slice stem and root vegetables and fruits as well as solid vegetables and fruits of differing thicknesses, such as garlic, ginger, cabbage, lotus root, apple, and pear.</p>	
<p>Garlic Drying Machine</p>	<p>This machine can be used for drying not only garlic but all the spices. This Drier machine is a boon for food processing industries.</p>	
<p>Grinding Machine</p>	<p>The machine is used to grind the dried garlic into fine powder.</p>	
<p>Packaging Machine</p>	<p>The finished product is packed using this machine.</p>	

Material handling and other Equipments	These Equipments are used for material handling. Other equipment's like water pumps, weighing machine, etc are also used.	
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Machine	Unit	Rate	Price
Garlic Sorting Machine	1	250000	250000
Garlic Separating Machine	1	150000	150000
Garlic Peeling Machine	1	175000	175000
Garlic Washing Machine	1	135000	135000
Garlic Slicing Machine	1	115000	115000
Garlic Drying Machine	1	60000	60000
Grinding Machine	1	195000	195000
Packaging Machine	1	160000	160000
Material handling and other equipment's (Bins, trolley, weighing machine, Soaking Tank etc.)	-	250000	250000

**Note:** Total Machinery cost shall be Rs 14.90 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	14.90
Miscellaneous Assets	2.50
Working capital	4.47
<b>Total</b>	<b>21.87</b>

**4.7. MEANS OF FINANCE**

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	2.18
Subsidy @35%(Max. Rs 10 Lac)	6.09
Term Loan @ 55%	9.57
Working Capital (Bank Finance)	4.02
<b>Total</b>	<b>21.87</b>

**4.8. TERM LOAN:** Term loan of Rs. 9.57 Lakh is required for project cost of Rs. 21.87 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	-	9.57	9.57	-	-	9.57
	2nd month	9.57	-	9.57	0.09	-	9.57
	3rd month	9.57	-	9.57	0.09	-	9.57
	4th month	9.57	-	9.57	0.09		9.57
	5th month	9.57	-	9.57	0.09		9.57
	6th month	9.57	-	9.57	0.09		9.57
	7th month	9.57	-	9.57	0.09	0.18	9.39
	8th month	9.39	-	9.39	0.09	0.18	9.22
	9th month	9.22	-	9.22	0.08	0.18	9.04
	10th month	9.04	-	9.04	0.08	0.18	8.86
	11th month	8.86	-	8.86	0.08	0.18	8.68
	12th month	8.68	-	8.68	0.08	0.18	8.51
					0.94	1.06	
<b>2nd</b>	Opening Balance						
	1st month	8.51	-	8.51	0.08	0.18	8.33
	2nd month	8.33	-	8.33	0.08	0.18	8.15



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3rd month	8.15	-	8.15	0.07	0.18	7.98
4th month	7.98	-	7.98	0.07	0.18	7.80
5th month	7.80	-	7.80	0.07	0.18	7.62
6th month	7.62	-	7.62	0.07	0.18	7.44
7th month	7.44	-	7.44	0.07	0.18	7.27
8th month	7.27	-	7.27	0.07	0.18	7.09
9th month	7.09	-	7.09	0.06	0.18	6.91
10th month	6.91	-	6.91	0.06	0.18	6.73
11th month	6.73	-	6.73	0.06	0.18	6.56
12th month	6.56	-	6.56	0.06	0.18	6.38
				<b>0.83</b>	<b>2.13</b>	
<b>3rd</b>	<b>Opening Balance</b>					
1st month	6.38	-	6.38	0.06	0.18	6.20
2nd month	6.20	-	6.20	0.06	0.18	6.03
3rd month	6.03	-	6.03	0.06	0.18	5.85
4th month	5.85	-	5.85	0.05	0.18	5.67
5th month	5.67	-	5.67	0.05	0.18	5.49
6th month	5.49	-	5.49	0.05	0.18	5.32
7th month	5.32	-	5.32	0.05	0.18	5.14
8th month	5.14	-	5.14	0.05	0.18	4.96
9th month	4.96	-	4.96	0.05	0.18	4.79
10th month	4.79	-	4.79	0.04	0.18	4.61
11th month	4.61	-	4.61	0.04	0.18	4.43
12th month	4.43	-	4.43	0.04	0.18	4.25

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				<b>0.59</b>	<b>2.13</b>	
<b>4th</b>	Opening Balance					
	1st month	4.25	-	4.25	0.04	4.08
	2nd month	4.08	-	4.08	0.04	3.90
	3rd month	3.90	-	3.90	0.04	3.72
	4th month	3.72	-	3.72	0.03	3.54
	5th month	3.54	-	3.54	0.03	3.37
	6th month	3.37	-	3.37	0.03	3.19
	7th month	3.19	-	3.19	0.03	3.01
	8th month	3.01	-	3.01	0.03	2.84
	9th month	2.84	-	2.84	0.03	2.66
	10th month	2.66	-	2.66	0.02	2.48
	11th month	2.48	-	2.48	0.02	2.30
	12th month	2.30	-	2.30	0.02	2.13
				<b>0.36</b>	<b>2.13</b>	
<b>5th</b>	Opening Balance					
	1st month	2.13	-	2.13	0.02	1.95
	2nd month	1.95	-	1.95	0.02	1.77
	3rd month	1.77	-	1.77	0.02	1.60
	4th month	1.60	-	1.60	0.01	1.42
	5th month	1.42	-	1.42	0.01	1.24
	6th month	1.24	-	1.24	0.01	1.06
	7th month	1.06	-	1.06	0.01	0.89
	8th month	0.89	-	0.89	0.01	0.71
	9th month	0.71	-		0.01	0.53

			0.71			
10th month	0.53	-	0.53	0.00	0.18	0.35
11th month	0.35	-	0.35	0.00	0.18	0.18
12th month	0.18	-	0.18	0.00	0.18	-
				<b>0.13</b>	<b>2.13</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>					
	1.69	2.06	2.45	2.88	3.33
<b><u>Raw Material</u></b>					
	1.20	1.51	1.86	2.24	2.66
<b>Closing Stock</b>	<b>2.89</b>	<b>3.57</b>	<b>4.32</b>	<b>5.12</b>	<b>5.99</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	2.89				
Less : Creditors	1.20				
<b>Paid stock</b>	<b>1.69</b>	<b>10%</b>	<b>0.17</b>	<b>90%</b>	<b>1.52</b>
<b>Sundry Debtors</b>	<b>2.78</b>	<b>10%</b>	<b>0.28</b>	<b>90%</b>	<b>2.51</b>
	<b>4.47</b>		<b>0.45</b>		<b>4.02</b>
<b>MPBF</b>					<b>4.02</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>4.02</b>
<b>Working Capital Margin</b>					<b>0.45</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	14,000	2	28,000
Supervisor	16,000	1	16,000
Skilled (in thousand rupees)	12,000	2	24,000
Unskilled (in thousand rupees)	8,000	2	16,000
<b>Total salary per month</b>			<b>84,000</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>10.08</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	18	KWH
consumption per day	144	units
Consumption per month	3,600	units
Rate per Unit	10	Rs.
power Bill per month	36,000	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	14.90	2.50	17.40
Total	14.90	2.50	17.40
Less : Depreciation	2.24	0.25	2.49
<b>WDV at end of Year</b>	<b>12.67</b>	<b>2.25</b>	<b>14.92</b>
Additions During The Year	-	-	-
Total	12.67	2.25	14.92
Less : Depreciation	1.90	0.23	2.12
<b>WDV at end of Year</b>	<b>10.77</b>	<b>2.03</b>	<b>12.79</b>
Additions During The Year	-	-	-
Total	10.77	2.03	12.79
Less : Depreciation	1.61	0.20	1.82
<b>WDV at end of Year</b>	<b>9.15</b>	<b>1.82</b>	<b>10.97</b>
Additions During The Year	-	-	-
Total	9.15	1.82	10.97
Less : Depreciation	1.37	0.18	1.55
<b>WDV at end of Year</b>	<b>7.78</b>	<b>1.64</b>	<b>9.42</b>
Additions During The Year	-	-	-
Total	7.78	1.64	9.42
Less : Depreciation	1.17	0.16	1.33
<b>WDV at end of Year</b>	<b>6.61</b>	<b>1.48</b>	<b>8.09</b>

**4.14. REPAIR & MAINTENANCE:** Repair & Maintenance is 3.0% of Gross Sale.

#### 4.15. PROJECTIONS OF PROFITABILITY ANALYSIS

<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>30%</b>	<b>35%</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Garlic Powder	83.51	104.39	125.03	147.11	170.60
<b>Total</b>	<b>83.51</b>	<b>104.39</b>	<b>125.03</b>	<b>147.11</b>	<b>170.60</b>
<b>COST OF SALES</b>					
Raw Material Consumed	51.30	64.84	79.80	96.19	114.00
Electricity Expenses	4.32	4.97	5.71	6.28	6.91
Depreciation	2.49	2.12	1.82	1.55	1.33
Wages & labour	10.08	11.09	11.86	12.46	12.83
Repair & maintenance	2.51	3.13	3.75	4.41	5.12
Packaging	1.67	2.09	2.25	2.35	2.39
<b>Cost of Production</b>	<b>72.36</b>	<b>88.24</b>	<b>105.20</b>	<b>123.25</b>	<b>142.58</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>1.69</b>	<b>2.06</b>	<b>2.45</b>	<b>2.88</b>
<b>Less: Closing Stock /WIP</b>	<b>1.69</b>	<b>2.06</b>	<b>2.45</b>	<b>2.88</b>	<b>3.33</b>
Cost of Sales	70.67	87.87	104.80	122.83	142.13
<b>GROSS PROFIT</b>	<b>12.83</b>	<b>16.52</b>	<b>20.23</b>	<b>24.28</b>	<b>28.47</b>
	<b>15.37%</b>	<b>15.83%</b>	<b>16.18%</b>	<b>16.50%</b>	<b>16.69%</b>
Salary to Staff	4.74	5.21	5.63	6.08	6.69
Interest on Term Loan	0.94	0.83	0.59	0.36	0.13
Interest on working Capital	0.44	0.44	0.44	0.44	0.44
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	1.67	2.09	2.25	2.65	2.75
<b>TOTAL</b>	<b>11.39</b>	<b>12.53</b>	<b>13.28</b>	<b>14.32</b>	<b>15.28</b>
<b>NET PROFIT</b>	<b>1.44</b>	<b>3.99</b>	<b>6.96</b>	<b>9.95</b>	<b>13.19</b>
	<b>1.72%</b>	<b>3.82%</b>	<b>5.57%</b>	<b>6.76%</b>	<b>7.73%</b>
Taxation	-	-	0.53	1.15	2.12
<b>PROFIT (After Tax)</b>	<b>1.44</b>	<b>3.99</b>	<b>6.43</b>	<b>8.80</b>	<b>11.07</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>	83.51	104.39	125.03	147.11	170.60
Less : Op. WIP Goods	-	1.69	2.06	2.45	2.88
Add : Cl. WIP Goods	1.69	2.06	2.45	2.88	3.33
<b>Total Sales</b>	<b>85.19</b>	<b>104.76</b>	<b>125.43</b>	<b>147.53</b>	<b>171.05</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	51.30	64.84	79.80	96.19	114.00
Electricity Exp/Coal Consumption at 85%	3.67	4.22	4.86	5.34	5.88
Wages & Salary at 60%	8.89	9.78	10.50	11.12	11.71
Selling & administrative Expenses 80%	1.34	1.67	1.80	2.12	2.20
Interest on working Capital	0.442719	0.442719	0.442719	0.442719	0.442719
Repair & maintenance	2.51	3.13	3.75	4.41	5.12
Packaging	1.67	2.09	2.25	2.35	2.39
<b>Total Variable &amp; Semi Variable Exp</b>	<b>69.82</b>	<b>86.17</b>	<b>103.40</b>	<b>121.98</b>	<b>141.74</b>
<b>Contribution</b>	<b>15.38</b>	<b>18.58</b>	<b>22.03</b>	<b>25.55</b>	<b>29.32</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.65	0.75	0.86	0.94	1.04
Wages & Salary at 40%	5.93	6.52	7.00	7.42	7.81
Interest on Term Loan	0.94	0.83	0.59	0.36	0.13
Depreciation	2.49	2.12	1.82	1.55	1.33
Selling & administrative Expenses 20%	0.33	0.42	0.45	0.53	0.55
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>13.94</b>	<b>14.60</b>	<b>15.07</b>	<b>15.59</b>	<b>16.12</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>1.44</b>	<b>3.99</b>	<b>6.96</b>	<b>9.95</b>	<b>13.19</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>77.22</b>	<b>82.28</b>	<b>85.81</b>	<b>90.06</b>	<b>94.07</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		7.21	8.20	9.62	11.42
Add:- Own Capital	2.18				
Add:- Retained Profit	1.44	3.99	6.43	8.80	11.07
Less:- Drawings	2.50	3.00	5.00	7.00	9.00
Subsidy/grant	6.09				
Closing Balance	7.21	8.20	9.62	11.42	13.49
Term Loan	8.51	6.38	4.25	2.13	-
Working Capital Limit	4.02	4.02	4.02	4.02	4.02
Sundry Creditors	1.20	1.51	1.86	2.24	2.66
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
<b>TOTAL :</b>	<b>21.34</b>	<b>20.61</b>	<b>20.36</b>	<b>20.53</b>	<b>21.04</b>
<b><u>Assets</u></b>					
<b>Fixed Assets ( Gross)</b>	17.40	17.40	17.40	17.40	17.40
Gross Dep.	2.49	4.61	6.43	7.98	9.31
<b>Net Fixed Assets</b>	<b>14.92</b>	<b>12.79</b>	<b>10.97</b>	<b>9.42</b>	<b>8.09</b>
<b>Current Assets</b>					
Sundry Debtors	2.78	3.48	4.17	4.90	5.69
Stock in Hand	2.89	3.57	4.32	5.12	5.99
Cash and Bank	0.75	0.77	0.90	1.09	1.28
<b>TOTAL :</b>	<b>21.34</b>	<b>20.61</b>	<b>20.36</b>	<b>20.53</b>	<b>21.04</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	2.18				
Net Profit	1.44	3.99	6.96	9.95	13.19
Depreciation & Exp. W/off	2.49	2.12	1.82	1.55	1.33
Increase in Cash Credit	4.02	-	-	-	-
Increase In Term Loan	9.57	-	-	-	-
Increase in Creditors	1.20	0.32	0.35	0.38	0.42
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	6.09				
<b>TOTAL :</b>	<b>27.38</b>	<b>6.53</b>	<b>9.23</b>	<b>12.01</b>	<b>15.08</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	17.40				
Increase in Stock	2.89	0.69	0.74	0.80	0.87
Increase in Debtors	2.78	0.70	0.69	0.74	0.78
Repayment of Term Loan	1.06	2.13	2.13	2.13	2.13
Drawings	2.50	3.00	5.00	7.00	9.00
Taxation	-	-	0.53	1.15	2.12
<b>TOTAL :</b>	<b>26.63</b>	<b>6.51</b>	<b>9.09</b>	<b>11.82</b>	<b>14.90</b>
Opening Cash & Bank Balance	-	0.75	0.77	0.90	1.09
Add : Surplus	0.75	0.02	0.13	0.19	0.19
<b>Closing Cash &amp; Bank Balance</b>	<b>0.75</b>	<b>0.77</b>	<b>0.90</b>	<b>1.09</b>	<b>1.28</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	3.92	6.11	8.24	10.35	12.40
Interest on Term Loan	0.94	0.83	0.59	0.36	0.13
<b>Total</b>	<b>4.87</b>	<b>6.94</b>	<b>8.84</b>	<b>10.71</b>	<b>12.53</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	1.06	2.13	2.13	2.13	2.13
Interest on Term Loan	0.94	0.83	0.59	0.36	0.13
<b>Total</b>	<b>2.00</b>	<b>2.96</b>	<b>2.72</b>	<b>2.49</b>	<b>2.25</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.43</b>	<b>2.35</b>	<b>3.25</b>	<b>4.31</b>	<b>5.56</b>
<b>AVERAGE D.S.C.R.</b>	<b>3.53</b>				