



## **DETAILED PROJECT REPORT**

### **BLACK RICE UNIT**

### **UNDER PMFME SCHEME**



National Institute of Food Technology Entrepreneurship and Management

Ministry of Food Processing Industries

Plot No.97, Sector-56, HSIIDC, Industrial Estate, Kundli, Sonapat, Haryana-131028

Website: <http://www.niftem.ac.in>

Email: [pmfmecell@niftem.ac.in](mailto:pmfmecell@niftem.ac.in)

Call: 0130-2281089

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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Black Rice Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	504000 Kg/annum (40,45,50,55&60% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw material	:	Paddy grains of Black Rice.
5. Major product outputs	:	Black Rice
6. Total project cost	:	Rs. 20.54 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 11.30 Lakh
• Miscellaneous Fixed Assets	:	Rs. 3.50 Lakh
• Working capital	:	Rs. 5.74 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 5.18 Lakh
• Promoter's contribution (min10%)	:	Rs. 2.04 Lakh
• Term loan	:	Rs.8.14 Lakh
• Working Capital Requirement	:	Rs. 5.17 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs. 1.53 Lakh
• 2 <sup>nd</sup> year	:	Rs. 4.15 Lakh
• 3 <sup>rd</sup> year	:	Rs. 6.58 Lakh
• 4 <sup>th</sup> year	:	Rs. 9.43 Lakh
• 5 <sup>th</sup> year	:	Rs. 12.30 Lakh
11. Average DSCR	:	Rs. 4.18
12. Term loan repayment	:	5 Years with 6 months grace period

## 2. ABOUT THE PRODUCT

### 2.1. PRODUCT INTRODUCTION:

Black rice is a type of *Oryza sativa* L. rice and is eaten as a functional food for health reasons. Black rice contains proteins, vitamins, and minerals that are higher than common white rice. A good source of minerals, iron, zinc, calcium, phosphorus, selenium, and others, Blackrice contains essential amino acids such as lysine, tryptophan, vitamins as vitamin B1 and vitamin B2 folic acid. In addition to phenol, flavonoid, and anthocyanin, it contains the most antioxidants, proteins, and dietary fiber of each rice variety. The health benefits of these antioxidant compounds can decrease the risk for different chronic diseases. This rice enhances your health and lifespan, protects your heart health, reduces atherosclerosis, controls your high blood pressure, increases your digestive system, acts against inflammation, reduces allergy, detoxifies your body, improves lipid profiles, lowers your diabetes risk, helps to manage your body's weight, helps reduce cancer growth, increases cognitive functions and improves the quality of life. That is why The nutrient density, the high fiber content, and its rich antioxidant content make black rice an excellent alternative to white and brown rice.

Black rice is the native of the common rice (*Oryza sativa*), and black rice has the scientific name (*Zizania aqatica*). Blue rice, prohibited rice, sky rice, imperial rice, royal rice, prized rice are common names. Another common name is black rice.

It is known as Chakhao Ambi (Chak-hao means 'delicious' and ambi means 'black') in Manipur and so it refers to the delicious black rice. It means 'black' ('black'). Kala means 'black' in Odisha and 'bati,' in Oriya it is known as kalabati. Keelapoongudi village is located in the district of Karaikudi in Tamil Nadu and is named 'kavuni rice' in southern India.

In the outer cover of the rice grain, the presence of dark purple color (pericarp) appears to be black, which makes the grain black. A purple color pigment is antioxidant-rich in black currants and vegetables like eggplant, which is naturally found in many berries (brinjal). Black rice is rich in iron, antioxidants, and vitamin E, thereby ensuring good health and increasing people's total lifespan.

Because of a Black pigment, the black rice is rich in antioxidants and presents a range of benefits in health such as Anti-aging, Cancers, anti-diabetes, reduced risk of obesity, etc. The black rice's pericarp is black in its color.

Black rice has a high level of glutinous and nutrients, including vitamin B, vitamin E, iron, thiamine, magnesium, niacin, phosphate, and also rich in fiber. Also gluten-free, cholesterol-free, low in sugar and salt, and fat, black rice is similar to regular white rice. It becomes purple when cooked and has a shiny indigo finish, a mild nutty taste, and a smooth and firm texture.

## **2.2. MARKET POTENTIAL:**

In 2019 India was the world's largest exporter of rice, which accounts for 29.3% of worldwide rice exports, according to the ITC Trade Map. The ITC Trade Map states that the major importers of rice from India are Iran, Saudi Arabia, Iraq, the United Arab Emirates, and other Middle East countries. In the European Union and the United States, demand is high for the Indian rice variety, which increases further exports of rice from India. Exports from India are rising with the increasing demand for rice worldwide. The export values between 2016 and 2019 have increased by 6.0 percent per year. In 2019, 98190 thousand tonnes of rice were exported in that country. In addition, growing rice consumption in developing and emerging countries around the world is likely to drive rice export growth during the forecast period.

In recent years, the organized industry has begun to make a name for it by focusing on Tier 1 and Tier 2 cities where urbanization has increased. The report includes various segments of the Indian rice market, such as basmati and packed rice, which is further divided into types. Complete trade analysis is included, as well as current market trends. This will aid in gaining a market share of the competition's best-performing companies. India's rice production and consumption have increased over the years, and the organized rice industry has benefited from the involvement of many top companies. Along with production, India is the world's leading rice exporter, accounting for nearly 25% of global rice exports. Because India is the world's largest producer of basmati rice, basmati rice dominates India's rice exports. Iran and Saudi Arabia are India's largest basmati rice importers, accounting for the majority of the country's overall basmati rice export value.

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

Black Rice varieties are the only raw material required for the milling plant. It is easily available in the market.

## **3. PROCESS FLOW CHART**

### **Paddy Cleaning**

In order to ensure the correct functioning of the rice milling machinery, paddy cleaning is necessary for the removal of unwanted foreign matter. Stones and other heavy impurities, being heavier, foreign matters are separated in this process.

### **Paddy De-husking**

A streamlined paddy flow is sent into a pair of rubber rolls, rotating at different speeds, in opposite directions. The husk is actually extracted with friction to allow paddy grain to move between two abrasive surfaces at different speeds. It is easy to cut the husk. The husk is removed after dehusking and transported outside the mill to a storage dump. Husk represents 20% of the paddy weight and an effective husker can take away 90% of the husk in one pass.

### **Polishing**

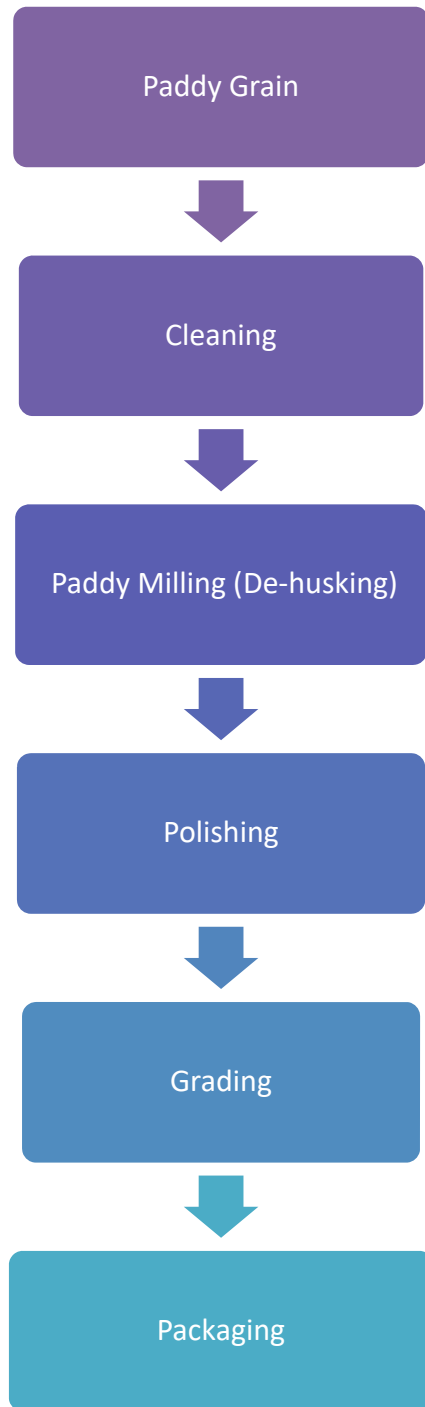
The method involves rubbing the rice surface with another rice surface with mystified air. The Mystified air act as a lubricant between the two surfaces. This process is used to make a superfluous silky finish on the rice surface.

### **Rice Grading**

Broken rice is removed from whole rice. After polishing, white rice is separated into head rice, large and small broken rice, and “brewers”.

### **Packaging**

Rice is now packed in the appropriate package which must be accurately weighed and labeled.





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

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

1. Production Capacity of Black Rice is 300 kg per hr. First year, Capacity has been taken @ 40%.
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 BLACK RICE</u></b>		
<b>Items to be Manufactured</b>		
Black Rice		
Machine capacity Per hour	300	Kg
Total working Hours	8	
Machine capacity Per Day	2,400	Kg
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	30%	
Raw material requirement	720000	Kg
Final Output per annum after wastage	504000	Kg
Final Product to be packed in 1 kg Packet		
Number of Packets per annum	504000	1 Kg Packet

<b>Production of Black Rice</b>		
<b>Production</b>	<b>Capacity</b>	<b>KG</b>
1st year	40%	2,01,600
2nd year	45%	2,26,800
3rd year	50%	2,52,000
4th year	55%	2,77,200
5th year	60%	3,02,400

<b>Raw Material Cost</b>			
<b>Year</b>	<b>Capacity Utilisation</b>	<b>Rate (per Kg)</b>	<b>Amount (Rs. in lacs)</b>
1st year	40%	24.00	69.12
2nd year	45%	25.00	81.00
3rd year	50%	26.00	93.60
4th year	55%	27.00	106.92
5th year	60%	28.00	120.96




<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	-	4,704	5,292	5,880	6,468
Production	2,01,600	2,26,800	2,52,000	2,77,200	3,02,400
Less : Closing Stock	4,704	5,292	5,880	6,468	7,056
<b>Net Sale</b>	<b>1,96,896</b>	<b>2,26,212</b>	<b>2,51,412</b>	<b>2,76,612</b>	<b>3,01,812</b>
Sale price per packet	54.00	57.00	60.00	63.00	66.00
<b>Sales (in Lacs)</b>	<b>106.32</b>	<b>128.94</b>	<b>150.85</b>	<b>174.27</b>	<b>199.20</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.
Paddy Pre Cleaning Machine	A Paddy Cleaner is an effective machine designed to clean unwanted paddy materials.	
Compact Milling Machine	A Rice milling machine is a machine used for removing the outer husks, Rice polishing, and grading of rice grains.	
Packaging machine	This automatic rice packing machine is mainly used for the automatic quantitative packaging of rice.	
Unloading Bins	These are large bins designed for unloading of grains & similar product; they are equipped with large rod mess to prevent big impurities from entering system.	

<p>Silos</p>	<p>This Equipment are class of storage Equipment which are specifically designed for dry grain raw material of small granule composition. Usually used to store grains but can also be used to store cement &amp; aggregate.</p>	
<p>Bucket Elevator</p>	<p>A bucket lift is also a grain leg and is a device for vertical transport, often grain materials.</p>	
<p>Material handling and other Equipments</p>	<p>These Equipments are used for material handling. Other equipment's like water pumps, weighing machine, etc are also used.</p>	

Machine	Unit	Rate	Price
Paddy Pre-Cleaning Machine	1	180000	180000
Compact Milling Machine	1	220000	220000
Packaging machine	1	380000	380000
Material handling and other equipment's (Bins, trolley, conveyor, silos, weighing machine, bucket elevator etc.)	-	350000	350000

**Note:** Total Machinery cost shall be Rs 11.30 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	11.30
Miscellaneous Assets	3.50
Working capital	5.74
<b>Total</b>	<b>20.54</b>

#### 4.7. MEANS OF FINANCE

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	2.04
Subsidy @35%(Max. Rs 10 Lac)	5.18
Term Loan @ 55%	8.14
Working Capital (Bank Finance)	5.17
<b>Total</b>	<b>20.54</b>

**4.8. TERM LOAN:** Term loan of Rs. 8.14 Lakh is required for project cost of Rs. 20.54 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
<b>1st</b>	Opening Balance						
	1st month	-	8.14	8.14	-	-	8.14
	2nd month	8.14	-	8.14	0.07	-	8.14
	3rd month	8.14	-	8.14	0.07	-	8.14
	4th month	8.14	-	8.14	0.07		8.14
	5th month	8.14	-	8.14	0.07		8.14
	6th month	8.14	-	8.14	0.07		8.14
	7th month	8.14	-	8.14	0.07	0.15	7.99
	8th month	7.99	-	7.99	0.07	0.15	7.84
	9th month	7.84	-	7.84	0.07	0.15	7.69
	10th month	7.69	-	7.69	0.07	0.15	7.54
	11th month	7.54	-	7.54	0.07	0.15	7.39
	12th month	7.39	-	7.39	0.07	0.15	7.24
					0.80	0.90	
<b>2nd</b>	Opening Balance						
	1st month	7.24	-	7.24	0.07	0.15	7.08
	2nd month	7.08	-	7.08	0.06	0.15	6.93
	3rd month	6.93	-	6.93	0.06	0.15	6.78

PM FME- Detailed Project Report of Black Rice Unit

4th month	6.78	-	6.78	0.06	0.15	6.63
5th month	6.63	-	6.63	0.06	0.15	6.48
6th month	6.48	-	6.48	0.06	0.15	6.33
7th month	6.33	-	6.33	0.06	0.15	6.18
8th month	6.18	-	6.18	0.06	0.15	6.03
9th month	6.03	-	6.03	0.06	0.15	5.88
10th month	5.88	-	5.88	0.05	0.15	5.73
11th month	5.73	-	5.73	0.05	0.15	5.58
12th month	5.58	-	5.58	0.05	0.15	5.43
				<b>0.70</b>	<b>1.81</b>	
<b>3rd</b>	<b>Opening Balance</b>					
1st month	5.43	-	5.43	0.05	0.15	5.28
2nd month	5.28	-	5.28	0.05	0.15	5.13
3rd month	5.13	-	5.13	0.05	0.15	4.97
4th month	4.97	-	4.97	0.05	0.15	4.82
5th month	4.82	-	4.82	0.04	0.15	4.67
6th month	4.67	-	4.67	0.04	0.15	4.52
7th month	4.52	-	4.52	0.04	0.15	4.37
8th month	4.37	-	4.37	0.04	0.15	4.22
9th month	4.22	-	4.22	0.04	0.15	4.07
10th month	4.07	-	4.07	0.04	0.15	3.92
11th month	3.92	-	3.92	0.04	0.15	3.77
12th month	3.77	-	3.77	0.03	0.15	3.62
				<b>0.51</b>	<b>1.81</b>	



PM FME- Detailed Project Report of Black Rice Unit

<b>4th</b>	Opening Balance						
	1st month	3.62	-	3.62	0.03	0.15	3.47
	2nd month	3.47	-	3.47	0.03	0.15	3.32
	3rd month	3.32	-	3.32	0.03	0.15	3.17
	4th month	3.17	-	3.17	0.03	0.15	3.01
	5th month	3.01	-	3.01	0.03	0.15	2.86
	6th month	2.86	-	2.86	0.03	0.15	2.71
	7th month	2.71	-	2.71	0.02	0.15	2.56
	8th month	2.56	-	2.56	0.02	0.15	2.41
	9th month	2.41	-	2.41	0.02	0.15	2.26
	10th month	2.26	-	2.26	0.02	0.15	2.11
	11th month	2.11	-	2.11	0.02	0.15	1.96
	12th month	1.96	-	1.96	0.02	0.15	1.81
					<b>0.31</b>	<b>1.81</b>	
<b>5th</b>	Opening Balance						
	1st month	1.81	-	1.81	0.02	0.15	1.66
	2nd month	1.66	-	1.66	0.02	0.15	1.51
	3rd month	1.51	-	1.51	0.01	0.15	1.36
	4th month	1.36	-	1.36	0.01	0.15	1.21
	5th month	1.21	-	1.21	0.01	0.15	1.06
	6th month	1.06	-	1.06	0.01	0.15	0.90
	7th month	0.90	-	0.90	0.01	0.15	0.75
	8th month	0.75	-	0.75	0.01	0.15	0.60
	9th month	0.60	-	0.60	0.01	0.15	0.45
	10th month	0.45	-		0.00	0.15	0.30

			0.45			
11th month	0.30	-	0.30	0.00	0.15	0.15
12th month	0.15	-	0.15	0.00	0.15	-
			<b>0.11</b>	<b>1.81</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>					(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>					
	2.20	2.58	2.97	3.40	3.83
<b><u>Raw Material</u></b>					
	1.61	1.89	2.18	2.49	2.82
<b>Closing Stock</b>	<b>3.81</b>	<b>4.47</b>	<b>5.16</b>	<b>5.90</b>	<b>6.66</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	3.81				
Less : Creditors	1.61				
<b>Paid stock</b>	<b>2.20</b>	<b>10%</b>	<b>0.22</b>	<b>90%</b>	<b>1.98</b>
<b>Sundry Debtors</b>	<b>3.54</b>	<b>10%</b>	<b>0.35</b>	<b>90%</b>	<b>3.19</b>
	<b>5.74</b>		<b>0.57</b>		<b>5.17</b>
<b>MPBF</b>					<b>5.17</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>5.17</b>
<b>Working Capital Margin</b>					<b>0.57</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	3	42,000
Supervisor	16,000	1	16,000
Skilled (in thousand rupees)	12,000	3	36,000
Unskilled (in thousand rupees)	9,000	3	27,000
<b>Total salary per month</b>			<b>1,21,000</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>14.52</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	7,000	2	14,000
Manager	18,000	1	18,000
Accountant	15,000	1	15,000
<b>Total salary per month</b>			<b>47,000</b>
<b>Total annual Staff charges</b>	<b>(in lacs)</b>		<b>5.64</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	11.30	3.50	14.80
Total	11.30	3.50	14.80
Less : Depreciation	1.70	0.35	2.05
<b>WDV at end of Year</b>	<b>9.61</b>	<b>3.15</b>	<b>12.76</b>
Additions During The Year	-	-	-
Total	9.61	3.15	12.76
Less : Depreciation	1.44	0.32	1.76
<b>WDV at end of Year</b>	<b>8.16</b>	<b>2.84</b>	<b>11.00</b>
Additions During The Year	-	-	-
Total	8.16	2.84	11.00
Less : Depreciation	1.22	0.28	1.51
<b>WDV at end of Year</b>	<b>6.94</b>	<b>2.55</b>	<b>9.49</b>
Additions During The Year	-	-	-
Total	6.94	2.55	9.49
Less : Depreciation	1.04	0.26	1.30
<b>WDV at end of Year</b>	<b>5.90</b>	<b>2.30</b>	<b>8.20</b>
Additions During The Year	-	-	-
Total	5.90	2.30	8.20
Less : Depreciation	0.88	0.23	1.11
<b>WDV at end of Year</b>	<b>5.01</b>	<b>2.07</b>	<b>7.08</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>40%</b>	<b>45%</b>	<b>50%</b>	<b>55%</b>	<b>60%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Black Rice	106.32	128.94	150.85	174.27	199.20
<b>Total</b>	<b>106.32</b>	<b>128.94</b>	<b>150.85</b>	<b>174.27</b>	<b>199.20</b>
<b><u>COST OF SALES</u></b>					
Raw Material Consumed	69.12	81.00	93.60	106.92	120.96
Electricity Expenses	4.32	4.97	5.71	6.57	7.23
Depreciation	2.05	1.76	1.51	1.30	1.11
Wages & labour	14.52	17.71	20.55	24.14	27.04
Repair & maintenance	2.66	3.22	3.77	4.36	4.98
Packaging	1.59	1.93	2.26	2.61	2.99
<b>Cost of Production</b>	<b>94.26</b>	<b>110.60</b>	<b>127.40</b>	<b>145.90</b>	<b>164.31</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>2.20</b>	<b>2.58</b>	<b>2.97</b>	<b>3.40</b>
<b>Less: Closing Stock /WIP</b>	<b>2.20</b>	<b>2.58</b>	<b>2.97</b>	<b>3.40</b>	<b>3.83</b>
Cost of Sales	92.06	110.21	127.01	145.47	163.88
<b>GROSS PROFIT</b>	<b>14.27</b>	<b>18.73</b>	<b>23.84</b>	<b>28.80</b>	<b>35.31</b>
	<b>13.42%</b>	<b>14.52%</b>	<b>15.80%</b>	<b>16.52%</b>	<b>17.73%</b>
Salary to Staff	5.64	6.77	7.78	8.48	9.50
Interest on Term Loan	0.80	0.70	0.51	0.31	0.11
Interest on working Capital	0.57	0.57	0.57	0.57	0.57
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	2.13	2.58	3.47	3.83	4.88
<b>TOTAL</b>	<b>12.74</b>	<b>14.58</b>	<b>16.68</b>	<b>17.98</b>	<b>20.33</b>
<b>NET PROFIT</b>	<b>1.53</b>	<b>4.15</b>	<b>7.15</b>	<b>10.81</b>	<b>14.98</b>
	<b>1.44%</b>	<b>3.22%</b>	<b>4.74%</b>	<b>6.20%</b>	<b>7.52%</b>
Taxation	-	-	0.57	1.38	2.68
<b>PROFIT (After Tax)</b>	<b>1.53</b>	<b>4.15</b>	<b>6.58</b>	<b>9.43</b>	<b>12.30</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>	106.32	128.94	150.85	174.27	199.20
Less : Op. WIP Goods	-	2.20	2.58	2.97	3.40
Add : Cl. WIP Goods	2.20	2.58	2.97	3.40	3.83
<b>Total Sales</b>	<b>108.52</b>	<b>129.32</b>	<b>151.24</b>	<b>174.70</b>	<b>199.63</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	69.12	81.00	93.60	106.92	120.96
Electricity Exp/Coal Consumption at 85%	3.67	4.22	4.86	5.58	6.14
Wages & Salary at 60%	12.10	14.69	17.00	19.58	21.93
Selling & administrative Expenses 80%	1.70	2.06	2.78	3.07	3.90
Interest on working Capital	0.568605	0.568605	0.568605	0.568605	0.568605
Repair & maintenance	2.66	3.22	3.77	4.36	4.98
Packaging	1.59	1.93	2.26	2.61	2.99
<b>Total Variable &amp; Semi Variable Exp</b>	<b>91.41</b>	<b>107.70</b>	<b>124.83</b>	<b>142.69</b>	<b>161.47</b>
<b>Contribution</b>	<b>17.11</b>	<b>21.62</b>	<b>26.41</b>	<b>32.01</b>	<b>38.16</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.65	0.75	0.86	0.99	1.08
Wages & Salary at 40%	8.06	9.79	11.33	13.05	14.62
Interest on Term Loan	0.80	0.70	0.51	0.31	0.11
Depreciation	2.05	1.76	1.51	1.30	1.11
Selling & administrative Expenses 20%	0.43	0.52	0.69	0.77	0.98
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>15.58</b>	<b>17.47</b>	<b>19.25</b>	<b>21.20</b>	<b>23.17</b>
<b>Capacity Utilization</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>	<b>55%</b>	<b>60%</b>
<b>OPERATING PROFIT</b>	<b>1.53</b>	<b>4.15</b>	<b>7.15</b>	<b>10.81</b>	<b>14.98</b>
<b>BREAK EVEN POINT</b>	<b>36%</b>	<b>36%</b>	<b>36%</b>	<b>36%</b>	<b>36%</b>
<b>BREAK EVEN SALES</b>	<b>98.82</b>	<b>104.52</b>	<b>110.27</b>	<b>115.69</b>	<b>121.23</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		6.25	7.40	8.98	10.91
Add:- Own Capital	2.04				
Add:- Retained Profit	1.53	4.15	6.58	9.43	12.30
Less:- Drawings	2.50	3.00	5.00	7.50	10.00
Subsidy/grant	5.18				
Closing Balance	6.25	7.40	8.98	10.91	13.22
Term Loan	7.24	5.43	3.62	1.81	-
Working Capital Limit	5.17	5.17	5.17	5.17	5.17
Sundry Creditors	1.61	1.89	2.18	2.49	2.82
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
<b>TOTAL :</b>	<b>20.67</b>	<b>20.39</b>	<b>20.55</b>	<b>21.11</b>	<b>22.07</b>
<b><u>Assets</u></b>					
<b>Fixed Assets ( Gross)</b>	14.80	14.80	14.80	14.80	14.80
Gross Dep.	2.05	3.80	5.31	6.60	7.72
<b>Net Fixed Assets</b>	<b>12.76</b>	<b>11.00</b>	<b>9.49</b>	<b>8.20</b>	<b>7.08</b>
<b>Current Assets</b>					
Sundry Debtors	3.54	4.30	5.03	5.81	6.64
Stock in Hand	3.81	4.47	5.16	5.90	6.66
Cash and Bank	0.56	0.62	0.88	1.20	1.70
<b>TOTAL :</b>	<b>20.67</b>	<b>20.39</b>	<b>20.55</b>	<b>21.11</b>	<b>22.07</b>

**4.18. CASH FLOW STATEMENT**

<b>PROJECTED CASH FLOW 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>
<b><u>SOURCES OF FUND</u></b>					
Own Margin	2.04				
Net Profit	1.53	4.15	7.15	10.81	14.98
Depriciation & Exp. W/off	2.05	1.76	1.51	1.30	1.11
Increase in Cash Credit	5.17	-	-	-	-
Increase In Term Loan	8.14	-	-	-	-
Increase in Creditors	1.61	0.28	0.29	0.31	0.33
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	5.18				
<b>TOTAL :</b>	<b>26.12</b>	<b>6.28</b>	<b>9.05</b>	<b>12.54</b>	<b>16.57</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	14.80				
Increase in Stock	3.81	0.66	0.69	0.74	0.76
Increase in Debtors	3.54	0.75	0.73	0.78	0.83
Repayment of Term Loan	0.90	1.81	1.81	1.81	1.81
Drawings	2.50	3.00	5.00	7.50	10.00
Taxation	-	-	0.57	1.38	2.68
<b>TOTAL :</b>	<b>25.56</b>	<b>6.22</b>	<b>8.80</b>	<b>12.21</b>	<b>16.08</b>
Opening Cash & Bank Balance	-	0.56	0.62	0.88	1.20
Add : Surplus	0.56	0.06	0.26	0.33	0.49
Closing Cash & Bank Balance	<b>0.56</b>	<b>0.62</b>	<b>0.88</b>	<b>1.20</b>	<b>1.70</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	3.58	5.90	8.09	10.73	13.42
Interest on Term Loan	0.80	0.70	0.51	0.31	0.11
<b>Total</b>	<b>4.38</b>	<b>6.61</b>	<b>8.59</b>	<b>11.04</b>	<b>13.53</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	0.90	1.81	1.81	1.81	1.81
Interest on Term Loan	0.80	0.70	0.51	0.31	0.11
<b>Total</b>	<b>1.70</b>	<b>2.51</b>	<b>2.31</b>	<b>2.12</b>	<b>1.92</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.57</b>	<b>2.63</b>	<b>3.71</b>	<b>5.22</b>	<b>7.06</b>
<b>AVERAGE D.S.C.R.</b>	<b>4.18</b>				