

# RICE PRODUCTION

## 1. INTRODUCTION

Rice is a vital food material for more than half of the world's population, the importance of which as a food crop has been increasing with increase in population. It is estimated that the rice requirement for Kerala is about 7000 tons per day whereas the production within the state is grossly inadequate to meet the requirement. The productivity of paddy in the State at the current level is sub optimal, meeting only 15% of the requirement, and the remaining 85% requirement is met from the neighboring states of Tamil Nadu, Andhra Pradesh and Karnataka. Modern Rice Mills are scientifically up-to-date units, with most modern plant and machinery.

## 2. MARKET POTENTIAL

At present paddy milling capacity available in the State is 3000 tons per day. According to Rice Mills Owners Association there are about 125 Rice Mills operating in the state which meet only 15% State's requirement and balance met from PDS and other States. So that demand supply gap is huge and there is sufficient scope for more rice mills.

## 3. PRESUMPTION

- The production based on Single Shift of 8 Hours per Day 25 working Days in a Month
- The calculations have been carried out on present data available.
- Time period for achieving full capacity utilisation is 2 years.
- The production capacity i.e. 80% have been taken into account.
- Rate of interest for fixed and working capital @15% per annum.
- Margin money 40%

- Land& building area 2000sqft

#### IMPLEMENTATION SCHEDULE:

i. Loan Sanction(including TFR)	- 2 Months
ii. NOC-Pollution Control Board	- 1 month
iii. Installation of machinery	- 1 Month
iv. Power connection	- 1 Month
v. Testing operation	- 3 Weeks
vi Production	- 7 Month onwards.
vii Udyog Aadhar filing	- 1 Day

#### 4. MANUFACTURING PROCESS

The manufacturing process employed in a Rice Mill is continuous and Partially automatic, consisting of Paddy Cleaning, Par Boiling, Drying, Milling, Sorting and Packing. The Cleaning section consists of raw paddy cleaners, de-stoner and dust blowers, where the dust, mud, stones and immature paddy are removed to make it completely free from the foreign materials. The next stage is a pre-milling process called Parboiling, which is the partial cooking of the grain with husk, done to impart the required hardness to paddy grains so as to withstand the pressure exerted during the Milling process. The parboiled paddy is taken to the Drying section which consists of the Drying plant, Heat exchanger and Blower. The steam produced by the boiler is used for drying the paddy in the drier. When the paddy is sufficiently dry, it is taken to the Milling section. Milling section consists of a Rubber Sheller, Cone Polishers, Bran Blower and Separator, De-stoner and a Vibrator machine.

The paddy husk is collected in a separate room and is used as the fuel for firing the boiler, or sold loosely for making cattle feed, manure, etc. The shelled paddy is then directed to the Paddy Separator, which will separate the unshelled paddy and the rice. The unshelled paddy will again go back to the Rubber Sheller and the shelled paddy is

taken to the first Cone Polisher, where the rice bran is also removed from the rice. This will then go to the Bran Blower and Separator, which will completely remove the bran from the product. The rice collected at the end of the milling section then moves to the Colour Sorter for removing the black and immature rice completely. The product is then moved to the Packing Section for packing in polythene and gunny bags, weighed, stitched and taken to the store room for dispatch.

## 5. FINANCIAL ASPECTS (All values in Rs)

### LAND & BUILDING:

1	Covered area	Sq. Ft.	1,800
2	Uncovered area Sq.	Sq. Ft.	200
3	Total area	Sq. Ft.	<b>2,000</b>
4	Whether constructed or Rented		Rented
5	If constructed, constructed Value		
<b>Total</b>			<b>10,000</b>

### MACHINERY AND EQUIPMENT:

Sl.no	Description	Qty- Nos	Value
1	Milling Machine	3	3,00,000
2	Sack stitching Machine	2	20,000
3	Boiler Machine	2	1,00,000
4	Drying Machine	2	1,00,000
5	Water tank(5000L)	1	25,000
6	Electrification and installation of machinery		10,000
7	Office furniture		10,000
<b>Total</b>			<b>5,65,000</b>

Preoperative expense: nil

Total fixed cost = 5,75,000/-

**RAW MATERIAL & PACKING Material (PER MONTH):**

S.N.	Particulars	Quantity (Kg)	Rate	Value
1	Paddy	10000	12	1,20,000
2	Sacks	2000	4	8,000

**STAFF & LABOUR (PER MONTH):**

S.N.	Particulars	Nos	Salary	Value
1	Manager / Director	1	15,000	15,000
2	Accountant	1	10,000	10,000
3.	Supervisor	1	10,000	10,000
4.	Semiskilled workers	2	7,000	14,000
5.	Skilled worker	1	8,000	8,000
<b>TOTAL</b>		<b>6</b>		<b>57,000</b>

**OTHER EXPENSES (PER MONTH):**

1	Power / Electricity Charges	10,000
2	Water Charges	2,000
3	Maintenance & repair.	5,000
4	Printing postage & stationery	2,000
5	Cartage/ transportation charges	15,000
6	Selling/ publicity	4,000
7	Telephone	1,200
8	Insurance	800
<b>Total</b>		<b>40,000</b>

**WORKING CAPITAL (FOR ONE MONTH):**

SL.No.	DESCRIPTION	AMOUNT
1	Raw material (Only 30 Days)	1,20,000
2	Salaries & Wages	50,000
3	Other Expenses	40,000
<b>Total</b>		<b>2,10,000</b>

Working capital for 3 months  $210000 \times 3 = 3,60,000$  /-

#### TOTAL CAPITAL INVESTMENT:

Building	Rented
Machinery & Equipment	5,65,000
Working capital for 3 month	3,60,000
<b>Total</b>	<b>9,25,000</b>

Promoter's contribution (20% of total capital investment) : 2,00,000/-

Bank Loan Amount: 7,25,000/-

#### 6. FINANCIAL ANALYSIS

##### Cost of Production (Per Annum)

Total recurring cost per year ( i.e Working Capital for 12 months)	$210000 \times 12$ months=25,20,000/-
Depreciation on machinery & Equipment ( @ 10% )	$565000 \times 10\% = 56,500/-$
Depreciation on Building ( @ 5 % )	Rented
Interest on total investment ( @ 14% ) [ Bank loan]	$725000 \times 15\% = 1,08,750/-$
<b>Grand Total:</b>	<b>26,85,250/-</b>

#### 7. SALES PROCEEDS (PER ANNUM):

	Qty (Kg)	Value
Total capacity of project( one mont-10000Kg)	120000Kg	40,00,000/-
Wastage ( @ 8% )	20000Kg	
Net production		100000 Kg
Rice Packets weight each 5 kg		$100000/5 = 20000$ Nos
Cost of packet[ 5kg pack]		Rs: 200/-
<b>Total sale</b>		<b>Rs 200 * 19850 Nos = 39,70,000/-</b>

## 8. Profit Analysis (P.A.)

Net Profit [ Sales- Cost of Production ] =3970000-2685250 = 1284750

Income Tax at 30%= 310425. Profit after tax=974325/-

## 9. Rate of Return

On total sale = [ Profit x 100/Cost of Production]

$$= 974325 \times 100 / 2685250 = 36.28 \%$$

## 10. BREAK- EVEN ANALYSIS

$$\frac{\text{Fixed cost} \times 100}{\text{Fixed cost} + \text{Net Profit}}$$

## 11. FIXED COST

Rent [ own building]	10,000
Total Depreciation[ Machinery & Building]	56,500
Interest on Total Investment	1,08,750
40 % of Salary & Wages[ 50000*12/ 40%]	2,40,000
40% of utilities & other contingent expenses[ 40000*12/ 40%]	1,92,000
<b>Total</b>	<b>6,07,250</b>

Net Profit =1284750/-

$$\text{B.E.P} = \frac{607250 \times 100}{607250 + 1284750} = 32\%$$

## 12. Manufactures/ Suppliers of Machinery:

1	M/s. Suguna Engineering Trading Company R. No. 2, (2nd Flour) Sree Chambers, 367-369, Ayyar Street, Coimbatore-500009
2	M/s. Ramdev Engineering Industries works, Karnataka R.No.3 1 <sup>st</sup> Floor Rakila Building, Hosur
3	M/s. Sheemas Engg. Works, R.No.5, Pravasi Building, Bangalore,