

BEATEN RICE



1.0 INTRODUCTION

Beaten rice, popularly known as "Chira" in Assam and other North-Eastern States of India is a staple breakfast diet especially in rural and semi-urban areas. It is a low cost wholesome food with good nutritional value. It can be taken in different forms - raw, fried, with curd or milk and therefore has mass appeal. Its preparations can be made at a short notice and hence it is also a convenient food item.

2.0 PRODUCTS

Beaten rice or chira is made from paddy and is popular in all parts of India. People of all age groups from all sections like it and thus it is a mass consumption item. It is used in households, restaurants, roadside dhabas and other eateries, hostels and so on. Beaten rice can be produced anywhere in the North- East region of the country.

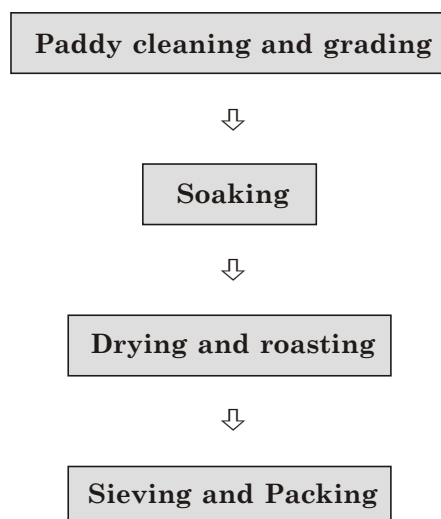
2.1 Compliance with PFA Act is necessary.

3.0 MARKET POTENTIAL

Several easy and quick to make preparations are made from beaten rice. Majority of the Indian households consume it in many forms like raw, fried, with curd or milk or it is also added in some spicy preparations. Since it is made from rice, it is easy to digest with nutritional values. Market for this product is scattered with rural and semi-urban population having distinct edge over the urban population. Therefore, the market is restricted to local areas and there are no national level brands. Majority of the population of Assam lives in rural or semi-urban areas and hence the project has to be located suitably so that these markets can be easily catered to. This would also ensure easy availability of paddy which is the all important raw material.

4.0 MANUFACTURING PROCESS

It is conventional and very well established. Paddy is cleaned and graded to remove impurities and then it is soaked in hot water for about 45 minutes. After drying it is roasted to make flakes. These flakes are passed through sieves to remove uneven and unwanted materials and to obtain flakes of fairly even size. Finally, they are packed in polythene bags. During the process, yield of even sized flakes is around 80%, 10% is wastage and production loss and balance 10% is bran which has market. The Process Flow Chart is as under:



5.0 CAPITAL INPUTS

5.1 Land and Building

An open plot of land of around 250 sq.mtrs. with constructed area of 125 sq.mtrs. can take care of main production hall, storage and packing requirements. Cost of land depending upon exact location may vary, but it is tentatively estimated at 75,000/- whereas cost of construction is assumed to be Rs.3.25 lacs.

5.2 Plant and Machinery

Selection of machinery depends upon the proposed production capacity. It is suggested to install annual production capacity of 500 tonnes based on 300 working days and working of 2 shifts every day. For this production capacity, following machines are suggested.

(Rs. in lacs)

Item	Qty. (Nos.)	Price
Chira Mill with accessories and electric motor (250 Kgs. Capacity)	2	0.90
Electrically-operated Roaster- 48 trays	1	0.75
Husk-fired Furnace	1	0.15
Paddy-soaking Tanks	4	0.40
Sieves	4	0.10
Sealing Machine, Weighing Scale, etc.	1 each	0.15
	Total	2.45

5.3 Miscellaneous Assets

A provision of Rs. 40,000/- would take care of working tables, furniture and fixtures, storage facilities etc.

5.4 Utilities

Power requirement shall be 20 HP and daily water consumption is likely to be 750-800 litres.

5.5 Raw Material

The all important material is paddy of the desired quality. It is grown in ample quantity throughout the state round the year with 2 or 3 crops. But it is advisable to have some firm supply arrangements before hand to ensure timely and adequate supply. Polythene bags will be required for packing of flakes and then these bags can be packed in new or used gunny bags for bulk supply.

6.0 MANPOWER REQUIREMENTS

Particulars	Nos.	Monthly Salary (Rs)	Total Monthly Salary (Rs)
Skilled Workers	2	2,000	4,000
Semi-skilled Workers	2	1,600	3,200
Helpers	4	1,000	4,000
Salesman	1	2,000	2,000
		Total	13,200

7.0 TENTATIVE IMPLEMENTATION SCHEDULE

Activity	Period (in months)
Application and sanction of loan	1.5
Site selection and commencement of civil work	0.5
Completion of civil work and placement of orders for machinery	1.5
Erection, installation and trial runs	0.5

8.0 DETAILS OF THE PROPOSED PROJECT

8.1 Land and Building

Particulars	Area (Sq.Mtrs)	Cost (Rs.)
Land	250	75,000
Building	125	3,25,000
	Total	4,00,000

8.2 Plant and Machinery

As explained in the earlier chapter, the total cost under this head is estimated to be Rs. 2.45 lacs.

8.3 Miscellaneous Assets

A provision of Rs. 40,000/- would take care of other assets as discussed earlier.

8.4 Preliminary & Pre-operative Expenses

Certain pre-production expenses like registration and establishment charges, trial run expenses, interest during implementation etc. are covered under this head. A provision of Rs. 40,000/- would be sufficient.

8.5 Working Capital Requirement

It is envisaged that the plant would be operated at 60% in the first year for which the working capital needs are estimated as under:

(Rs. in lacs)

Particulars	Period	Margin	Total	Bank	Promoters
Stock of Raw Materials	1 Month	30%	1.30	0.90	0.40
Stock of Finished Goods	½ Month	25%	0.75	0.55	0.20
Receivables	1 Month	25%	2.10	1.60	0.50
Working Expenses	1 Month	100%	0.25	--	0.25
		Total	4.40	3.05	1.35

8.6 Cost of the Project and Means of Financing

(Rs. in lacs)

Item	Amount
Land and Building	4.00
Machinery	2.45
Miscellaneous Assets	0.40
P&P Expenses	0.40
Contingencies @ 10% on Land & Building and Plant & Machinery	0.55
Working Capital Margin	1.35
Total	9.15
Means of Finance	
Promoters' Contribution	2.90
Loan from Bank/FI	6.25
Total	9.15
Debt Equity Ratio	2.16 : 1
Promoters' Contribution	31 %

Financial assistance in the form of grant is available from the Ministry of Food Processing Industries, Govt. of India, towards expenditure on technical civil works and plant and machinery for eligible projects subject to certain terms and conditions.

9.0 PROFITABILITY CALCULATIONS

9.1 Production Capacity and Build up

The rated production capacity of the project is 500 tonnes every year whereas actual capacity utilisation in the first year is taken at 60% and second year onwards, it is restricted to 75%.

9.2 Sales Revenue at 100%

(Rs. in lacs)

Product	Qty. (Tonnes)	Selling Price/ Ton (Rs)	Sales
Beaten Rice	400	10,000	40.00
Rice Bran	50	4,000	2.00
		Total	42.00

9.3 Raw Materials Required at 100%

(Rs. in lacs)

Product	Qty. (Tonnes)	Rate per Ton (Rs)	Value
Paddy	500	5,000	25.00
Packing Materials	--	--	0.75
		Total	25.75

9.4 Utilities

The annual expenditure at 100% utilisation towards power, and water estimated to be Rs. 60,000/-.

9.5 Selling Expenses

Beaten Rice will be sold through retailers in rural areas. They will have to be paid commission and there will be transportation expenditure. Hence, a provision of 12.5% of total sales value has been made every year.

9.6 Interest

Interest on term loan of Rs. 6.25 lacs is calculated @ 12% per annum assuming repayment of loan in 4 years including a moratorium period of 1 year. Interest on working capital loan from bank is taken at 14% per annum.

9.7 Depreciation

Depreciation is calculated on WDV basis and rates assumed are 10% on building and 20% on plant & machinery and other assets.

10.0 PROJECTED PROFITABILITY

(Rs. in lacs)

No.	Particulars	1st Year	2nd Year
A	Installed Capacity	---- 500 Tonnes ----	
	Capacity Utilisation	60%	75%
	Sales Realisation	25.20	31.50
B	Cost of Production		
	Raw Materials	15.45	19.31
	Utilities	0.36	0.45
	Salaries	1.58	1.75
	Stores & Spares	0.18	0.24
	Repairs & Maintenance	0.30	0.39
	Selling Expenses @ 12.5% of Sales	3.15	3.94
	Administrative Expenses	0.30	0.42
	Total	21.32	26.50
C	Profit before Interest & Depreciation	3.88	5.00
	Interest on Term Loan	0.70	0.47
	Interest on Working Capital	0.42	0.48
	Depreciation	0.88	0.73
	Profit before Tax	1.88	3.32
	Income-tax @ 20%	0.38	0.65
	Profit after Tax	1.50	2.67
	Cash Accruals	2.38	3.40
	Repayment of Term Loan	--	1.95

11.0 BREAK-EVEN ANALYSIS

(Rs. in lacs)

No	Particulars	Amount	
[A]	Sales		25.20
[B]	Variable Costs		
	Raw Materials	15.45	
	Utilities (70%)	0.25	
	Salaries (70%)	1.11	
	Stores & Spares	0.18	
	Selling Expenses (75%)	2.36	
	Admn. Expenses (50%)	0.15	
	Interest on Working Capital	0.42	19.92
[C]	Contribution [A] - [B]		5.28
[D]	Fixed Cost		3.40
[E]	Break-Even Point [D ÷ C]		64%

12.0 [A] LEVERAGES

Financial Leverage

$$\begin{aligned} &= \text{EBIT/EBT} \\ &= 3.00 \div 1.88 \\ &= 1.59 \end{aligned}$$

Operating Leverage

$$\begin{aligned} &= \text{Contribution/EBT} \\ &= 5.08 \div 1.88 \\ &= 2.70 \end{aligned}$$

Degree of Total Leverage

$$\begin{aligned} &= \text{FL/OL} \\ &= 1.59 \div 2.70 \\ &= 0.58 \end{aligned}$$

[B] Debt Service Coverage Ratio (DSCR)

(Rs. in lacs)

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr
Cash Accruals	2.38	3.40	3.78	3.38
Interest on TL	0.70	0.47	0.23	0.12
Total [A]	3.08	3.87	4.01	3.50
Interest on TL	0.70	0.47	0.23	0.12
Repayment of TL	--	1.95	1.95	1.90
Total [B]	0.70	2.42	2.18	2.02
DSCR [A] ÷ [B]	4.40	1.60	1.84	1.73
Average DSCR	----- 2.39 -----			

[C] Internal Rate of Return (IRR)

Cost of the project is Rs. 9.05 lacs.

(Rs. in lacs)

Year	Cash Accruals	20%	24%	28%
1	2.38	1.98	1.92	1.86
2	3.40	2.36	2.21	2.07
3	3.78	2.19	1.98	1.80
4	3.38	1.63	1.43	1.26
5	3.66	1.47	1.25	1.07
6	4.00	1.34	1.10	0.91
	33.79	10.97	9.89	8.97

The IRR is around 28%.

Some of the machinery suppliers are

1. M/s. Archana Machinery Stores, Guwahati
2. M/s. Industrial Equipments, Guwahati
3. Indopol Food Processing Machinery Pvt. Ltd., Plot No. 28, Sector 27-C, Faridabad-121003.
Tel No. 2272011/2278058, Fax : 2270549
4. Sifter International, Plot No. 83, Sector 6, Faridabad- 121006.
Tel No. 2231154/2234540, Fax : 2230039