

BEATEN RICE (CHIRA)



1.0 INTRODUCTION

Beaten rice popularly known as “Chira” in Assam and other States in the north-eastern region is a staple breakfast diet of the rural population. It is a low cost wholesome food and has good nutritional value. Chira can be taken in different forms viz. raw, fried, with curd and therefore has mass appeal.

This project profile is for setting up of a Chira Making Unit with installed processing capacity of 240 Ton per annum, based on 300 working days per annum and 8 working hours per day.

2.0 MARKET POTENTIAL

In the north-eastern region, Chira is popular mainly in Assam and Manipur. Of the total estimated population of 400 lakhs in the north-eastern region about 80% i.e. 320

lakhs reside in rural areas. Assuming an average per capita consumption of 2 Kg, the total demand for Chira is estimated at 64,000 tonne per year. There are few units making Chira and their production is not adequate to meet the demand of the local population. Bulk of the requirement of Chira is being met from Bihar and West Bengal.

3.0 PROCESS DETAILS

The main process steps are:

- i) Soaking of paddy in water for 2 to 3 days.
- ii) Drying of soaked paddy in heated “Iron Pan”
- iii) Milling and shelling of dried paddy to rice flakes (Chira)
- iv) Cleaning.

4.0 COST OF THE PROJECT

The estimated project cost is given below:

		(Rs. in lacs)
Particulars	Amount (Rs)	
Land & site development	Own Land/On Lease	
Building & civil works	2.64	
Plant & Machinery	2.04	
Misc. Fixed assets	0.55	
Preliminary & pre-operative expenses	0.61	
Contingencies & escalation @ 3%	0.16	
Working capital	1.50	
TOTAL	7.50	

4.1 Land & Site Development: Nil. Covered Area: 800 Sq. Ft.

4.2 Building & Civil Works: Details of building & civil works are given below.

Particulars	Area (Sqft)	Rate (Rs)	Amount (Rs)
Factory Shed, Store cum Office	800	275	220000
Sub total			220000
Add: Electrification, water supply and sanitation @ 20%			44000
TOTAL			264000
Say (Rs. in lacs)			2.64

4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Complete set of Chira Making Machine	1	150000	150000
Boiler	1	20000	20000
Containers, Weighing Scale etc.	1	15000	15000
Sub total			185000
Add: Installation, transportation, etc @ 10%			18500
TOTAL			203500
Say (Rs. in lacs)			2.04

4.4 Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Furniture's & Fixtures	1	15000	15000
Tools and equipment	1	20000	20000
Miscellaneous items	LS	—	15000
Sub total			50000
Add: Installation, transportation, etc @ 10%			5000
TOTAL			55000
Say (Rs. in lacs)			0.55

4.5 Contingencies & escalation: Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

4.6 Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

(Rs. In lacs)

Particulars	Amount (Rs)
Travelling expenses	10000
Professional & other fees	15000
Interest during implementation	15730
Miscellaneous expenses	20000
TOTAL	60730
Say (Rs. in lacs)	0.61

4.7 Working capital: Details of working capital are given below.

(Rs. in lacs)

	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	10	0.64	0.74	0.85
Power & Utility	30	0.07	0.08	0.10
Salary	30	0.49	0.50	0.50
Finished Goods	15	1.26	1.42	1.59
Receivables	15	1.30	1.52	1.74
Total		3.76	4.27	4.77
Working capital margin in Year 1 (40%)	1.50			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

(Rs. in lacs)

Particulars	Percent	Amount
<u>EQUITY</u>		
A. Equity from Promoters	40%	3.00
B. Subsidy from Central/State Govt.	-	
<u>DEBT</u>		
Term Loan from Banks/Financial Institutions	60%	4.50
TOTAL	100%	7.50

6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
<u>A. INCOME</u>					
Production capacity (Ton/annum)	240	240	240	240	240
Capacity utilisation	60%	70%	80%	80%	80%
Production/ annum at capacity utilisation	144	168	192	192	192
Total income/annum	31.68	36.96	42.24	42.24	42.24
<u>B. OPERATING EXPENSES</u>					
Raw materials	23.28	27.16	31.04	31.04	31.04
Power & Utility	0.87	1.02	1.17	1.17	1.17
Salary	6.00	6.03	6.06	6.09	6.12

Repair & Maintenance	0.08	0.08	0.08	0.08	0.08
Other Expenses	0.32	0.37	0.42	0.42	0.42
Total Operating Expenses	30.55	34.66	38.77	38.80	38.83
Operating profit	1.13	2.30	3.47	3.44	3.41
C. FINANCIAL EXPENSES					
Depreciation	0.23	0.23	0.23	0.23	0.23
Interest on Term Loan	0.35	0.28	0.20	0.12	0.04
Interest on Working Capital Loan	0.18	0.20	0.23	0.23	0.23
Net Profit	0.37	1.58	2.81	2.86	2.91
Net cash accruals	0.60	1.82	3.04	3.09	3.14
Principal Repayment	0.50	1.00	1.00	1.00	1.00

6.1 Production capacity and Sales Realisation: Total production of spice powder at 100% capacity utilization is estimated as below.

Beaten Rice (Chira)	240 Ton
Total production per annum at 100% capacity	240 Ton

Products	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Beaten Rice (Chira)	240 Ton	22000 Per Ton	5280000
Total Sales per annum at 100% capacity			5280000

6.2 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Particulars	Qty	Average Rate Per Unit (Rs.)	Amount (Rs)
Paddy	400	9500	3800000
Packaging Materials	400	200	80000
Expenses on raw material at 100% capacity (Rs)			3880000

6.3 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & machinery (Total 20)	--	14.92	14.92
General Lighting	10	0.10	1.00
Total power requirement/ day (Kw)			15.92
No. of hrs/day	8		
No of days/annum	300		
Annual power requirement (kwh)	38208		
Rate per unit (Rs)	3.50		
Expenses on power (Rs)	133728		
Expenses on Water/Other Utility (Rs)	12000		
Expenses on power & utility at 100% capacity (Rs)	145728		

6.4 Salary: Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	7000	84000
Store In charge cum Accountant	1	6000	72000
Sales Personnel	3	6000	216000
Machine Operator/Skilled Workers	2	5000	120000
Unskilled workers	3	3000	108000
Expenses on salary in the 1st year (Rs)			600000

6.5 Repair & Maintenance: Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)			
Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & civil works	2.64	1.00%	0.03
Plant & Machinery	2.04	2.00%	0.04
Misc. Fixed assets	0.55	1.50%	0.01
Expenses on repair & maintenance in year 1			0.08

6.6 Other Expenses: Other expenses have been assumed at 1% of sales realisation.

6.7 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)			
Description	Cost (Rs)	Rate	Amount/annum (Rs)
Building & civil works	2.64	3.34%	0.09
Plant & Machinery	2.04	5.28%	0.11
Misc. Fixed assets	0.55	6.33%	0.03
TOTAL			0.23

6.8 Interest on term loan & principal repayment: Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 5 years including moratorium period of 6 months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)						
Month	Year	1	2	3	4	5
Month 1	Opening balance	4.50	4.00	3.00	2.00	1.00
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest (8.00%)	0.03	0.03	0.02	0.01	0.01
	Closing balance	4.50	3.92	2.92	1.92	0.92
Month 2	Opening balance	4.50	3.92	2.92	1.92	0.92
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest	0.03	0.03	0.02	0.01	0.01
	Closing balance	4.50	3.83	2.83	1.83	0.83
Month 3	Opening balance	4.50	3.83	2.83	1.83	0.83
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest	0.03	0.03	0.02	0.01	0.01
	Closing balance	4.50	3.75	2.75	1.75	0.75
Month 4	Opening balance	4.50	3.75	2.75	1.75	0.75
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00

	Closing balance	4.50	3.67	2.67	1.67	0.67
Month 5	Opening balance	4.50	3.67	2.67	1.67	0.67
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00
	Closing balance	4.50	3.58	2.58	1.58	0.58
Month 6	Opening balance	4.50	3.58	2.58	1.58	0.58
	Repayment	0.00	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00
	Closing balance	4.50	3.50	2.50	1.50	0.50
Month 7	Opening balance	4.50	3.50	2.50	1.50	0.50
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00
	Closing balance	4.42	3.42	2.42	1.42	0.42
Month 8	Opening balance	4.42	3.42	2.42	1.42	0.42
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00
	Closing balance	4.33	3.33	2.33	1.33	0.33
Month 9	Opening balance	4.33	3.33	2.33	1.33	0.33
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.02	0.01	0.00
	Closing balance	4.25	3.25	2.25	1.25	0.25
Month 10	Opening balance	4.25	3.25	2.25	1.25	0.25
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.01	0.01	0.00
	Closing balance	4.17	3.17	2.17	1.17	0.17
Month 11	Opening balance	4.17	3.17	2.17	1.17	0.17
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.01	0.01	0.00
	Closing balance	4.08	3.08	2.08	1.08	0.08
Month 12	Opening balance	4.08	3.08	2.08	1.08	0.08
	Repayment	0.08	0.08	0.08	0.08	0.08
	Interest	0.03	0.02	0.01	0.01	0.00
	Closing balance	4.00	3.00	2.00	1.00	0.00
Principal Repayment		0.50	1.00	1.00	1.00	1.00
Interest		0.35	0.28	0.20	0.12	0.04

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5
Profit After Tax (Net Profit)	0.37	1.58	2.81	2.86	2.91
Depreciation	0.23	0.23	0.23	0.23	0.23
Interest	0.35	0.28	0.20	0.12	0.04
Total	0.95	2.10	3.24	3.21	3.18
Interest	0.35	0.28	0.20	0.12	0.04
Loan repayment	0.50	1.00	1.00	1.00	1.00
Total	0.85	1.28	1.20	1.12	1.04
DSCR	1.12	1.64	2.70	2.86	3.05

Average DSCR= 2:31

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)			
Year	1	2	3
A. Net sales	31.68	36.96	42.24
B. Variable cost			
Raw materials	23.28	27.16	31.04
Power & Utility	0.87	1.02	1.17
Other expenses	0.32	0.37	0.42
Interest on Working Capital Loan	0.18	0.20	0.23
Total variable cost	24.65	28.75	32.86
C. Contribution (A-B)	7.03	8.21	9.38
D. Fixed & Semi-fixed Costs			
Salary	6.00	6.03	6.06
Repair & maintenance	0.08	0.08	0.08
Interest on Term Loan	0.35	0.28	0.20
Depreciation	0.23	0.23	0.23
Total fixed cost	6.66	6.62	6.57
E. BREAKEVEN POINT	94.73%	80.69%	70.05%
F. BEP at operating capacity	56.84%	56.48%	56.04%
G. Cash BEP	54.87%	54.51%	54.07%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)						
Year	0	1	2	3	4	5
CASH OUTFLOW						
Capital Expenditure	5.39	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	3.76	0.51	0.51	0.00	0.00
Total (A)	5.39	3.76	0.51	0.51	0.00	0.00
CASH INFLOW						
Profit After Tax		0.37	1.58	2.81	2.86	2.91
Add: Depreciation		0.23	0.23	0.23	0.23	0.23
Add: Interest		0.35	0.28	0.20	0.12	0.04
Add: Salvage Value						
Total (B)	0.00	0.95	2.10	3.24	3.21	3.18
NET FLOW (B-A)	-5.39	-2.81	1.59	2.74	3.21	3.18

IRR = 19%

Sl. No.	Name of the Machinery Suppliers	Communication Address
1.	M/s Suan Scientific Instruments and Equipments	P-814, Ground Floor, Block-A Lake Town Kolkata,
2.	M/s Gee Gee Co. (P) Ltd.	B-188/2, Savitri Nagar (Malviya Nagar), New Delhi, Pin- 110 017
3.	M/s Archana Machinery Stores	M.S. Road, Fancy Bazaar, Guwahati, Pin-781 001.