PROJECT REPORT

Of

MINI RICE MILL

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Mini Rice Mill

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]

SAMADHAN
Nurturing Dreams - Innovative Solutions

Lucknow Office: Sidhivinayak Building , 27/1/B, Gokhlley Marg, Lucknow-226001

Delhi Office : Multi Disciplinary Training Centre, Gandhi Darshan Rajghat, New Delhi 110002

Email : info@udyami.org.in
Contact : +91 7526000333, 444, 555

MINI RICE MILL

INTRODUCTION

Rice is the basic grain consumed as a food in India which is found in almost every Indian kitchen. It is the most common grain and the most common food in India. However, India is not only a big consumer of rice but also it is the second largest producer of rice in the world after China. India also holds the largest agriculture land for paddy production in the world.

Rice is obtained by milling of paddy. The byproducts which we get from paddy milling are rice bran and husk. The amount of rice bran is approximately eight per cent of paddy processed. The rice bran is a pericarp or outer cuticle layer that remains beneath the hull. It gets removed during the milling process. About two decades back, rice bran was considered almost a waste and hence most of it was burnt. It is now viewed to have high nutritive value.

Rice is the primary source of carbohydrates and protein besides, rice also contains small quantities of fat, ash, fibre and moisture. It has very high calorific value (363 K cal) than any other cereal crop with easily digestible carbohydrates (80.40 per cent) and high quality protein (6.76 per cent) with biological value as high as egg protein, due to high content of

amino acids. Vitamins and minerals are present largely in bran and germ. Being rich in natural B-Vitamin, rice bran is used as a cattle feed. The rice bran processing has now gained momentum, with increasing consumer demand for oil, extracted from bran.

The practice of milling is as old as the cultivation of rice itself and finds reference even in Vedic literature. Different types of milling equipment's for shelling /polishing of rice existed in Indian homes many centuries ago. The discovery of parboiling was one of the most important achievements in food science and the credit for this discovery goes to India.

DESCRIPTION OF RICE MILLING

Before the advent of mechanical milling, hand-pounding traditional method of rice milling was in practice. With the introduction of mechanized mills, hand-pounding method has steadily decreased because it could not compete with machine mills. In fact, hand-pounding rice has got more nutritive value as compared to machine milling rice. In hand-pounding, a variety of implements are used, the more common being –

1. Mortor and Pestle

2. Dhenki

3. Hand Stone (Chakki)

The conventional mills in use can be categorized into three main types –

1. Huller mills

2. Sheller-Huller mills

3. Sheller-Cone Polisher mills

After harvesting and drying, the paddy is subjected to the primary milling operation which includes de-husking as well as the removal of bran layers (polishing) before it is consumed. In this process the rice which is obtained after milling is called raw rice. Another process through which rice is obtained is called "Parboiling Rice." Nearly 60% of the total rice produced in India is subjected to parboiling. Parboiling is a hydrothermal treatment of paddy followed by drying before milling for the production of milled parboiled rice.

In general, three major steps in parboiling i.e., soaking, steaming and drying have a great influence on the final characteristics and quality of parboiled rice. Parboiling of paddy has been practiced in Indian households since time immemorial. The parboiling process is followed extensively in the Eastern and part of Southern India, Eastern Madhya Pradesh and Uttar Pradesh. It is also well known in Western Uttar Pradesh, Punjab and Haryana in the form of Sela. Sela process of parboiling and the rice produced from this process is called Sela rice.

The rice grains are hardened sufficiently in the process of parboiling and results in improved milling properties, leading to a high head rice recovery. The parboiling process also results in the low breakage during milling. The cooking qualities of parboiled rice are somewhat different from those of raw rice. Parboiled rice takes a larger time to cook to the same degree of softness than the raw rice of the same variety. During cooking the loss of protein and starch are low. During parboiling process water soluble B-group vitamins and other water soluble nutrients get diffused into the endosperm, hence, the loss of nutrients is less in parboiled rice even after polishing than raw rice. The presence of Vitamin-E is also found in parboiled rice.

The process of rice milling Rice milling is the process which helps in removal of hulls and bran from paddy grains to produce polished rice. Rice forms the basic primary processed product obtained from paddy and this is further processed for obtaining various secondary and tertiary products. The basic rice milling processes consist of:

Process definition

1. Pre cleaning: Removing all impurities and unfilled grains from paddy

2. De-stoning: Separating small stones from paddy

3. Par boiling (optional): Helps in improving the nutritional quality by gelatinization of starch inside the rice grain. It improves the milling recovery per cent during deshelling and polishing / whitening operation

4. Husking: Removing husk from paddy

5. Husk aspiration: Separating the husk from brown rice/ unhusked paddy

6. Paddy separation: Separating the unhusked paddy from brown rice

7. Whitening: Removing all or part of the bran layer and germ from brown rice

8. Polishing: Improving the appearance of milled rice by removing the remaining bran particles and by polishing the exterior of the milled kernel

9. Length grading: Separating small and large broken from head rice

10. Blending: Mixing head rice with predetermined amount of broken, as required by the customer

11. Weighing and bagging: Preparing the milled rice for transport to the customer

PROJECT FINANCIALS

NAME OF COMPANY	:	**XXXX**	
TYPE OF PROJECT	:	FOOD PROCESSING UNIT(RICE MILL)	
CAPACITY OF PLANT	:	3 Ton per hour	
FINANCIAL ASSITANCE REQUIRED	:	Term Loan	11.90
		Working Capital Loan	8.50

COST OF PROJECT

Particulars	Amount
Land & Building	Owned
Plant & Machinery	12.50
Working Capital Requirement	9.66
Total	**22.16**
Proprietor Capital	1.76
Term Loan From Bank	11.90
Working Capital Loan From Bank	8.50
Capital Subsidy (from KVIC which are kept in Bank Rs. 5.44)	
Total	**22.16**
PCFI	0.78
Margin	5%

COMPUTATION OF RAW MATERIAL

Item Name	Rate Per Qtls	At 100% Quantity	Cap.Utilisation Total Cost
Paddy (3*8*180)	1200.00	43200	51,840,000.00
Total			51,840,000.00
Total Amount (In Lacs)			518.40

Raw Material Consumed	Capacity Utilization		
Ist Year	45%	(6 month)	233.28
IInd Year	65%		336.96
IIIrd Year	70%		362.88
IVth Year	75%		388.80
Vth Year	80%		414.72

COMPUTATION OF SALE

Item Name			At 100% Cap.Utilisation Quantity	Total Sales
Rice	67%	28940.00	1800.00	52,092,000.00
Rice Bran	7%	3020.00	1000.00	3,020,000.00
Rice Husk	23%	9940.00	350.00	3,479,000.00
TOTAL				**58,591,000.00**
Total (Rounded off In Lacs)				**585.91**

COMPUTATION OF SALES

RICE	**Ist Year**	**IInd Year**	**IIrd Year**	**IVth Year**	**Vth Year**
Op Stock	-	608.00	878.00	946.00	1013.00
Production	13024.80	18813.60	20,260.80	21708.00	23155.20
	13024.80	19421.60	21,138.80	22654.00	24168.20
Less Closing Stock	608.00	878.00	946.00	1013.00	1081.00
Total Qty Sold	12416.80	18543.60	20,192.80	21641.00	23087.20
Sales Amount	229.71	343.06	373.57	400.36	427.11

RICE BRAN

Op Stock	-	408.00	590.00	635.00	680.00
Production	1360.80	1965.60	2116.80	2268.00	2419.20
	1360.80	2373.60	2706.80	2903.00	3099.20
Less Closing Stock	408.00	590.00	635.00	680.00	726.00
Total Qty Sold	952.80	1783.60	2071.80	2223.00	2373.20
Sales Amount	9.53	17.84	20.72	22.23	23.73

COMPUTATION OF CLOSING STOCK

	Ist Year	**IInd Year**	**IIrd Year**	**IVth Year**	**Vth Year**
RICE	7.60	10.98	11.83	12.66	13.51
RICE BRAN	2.86	4.13	4.45	4.76	5.08
	10.46	15.11	16.27	17.42	18.59

PROJECTED BALANCE SHEET

PARTICULARS	Y1	Y2	Y3	Y4	Y5
SOURCES OF FUNDS					
Proprietor Capital	1.76	1.76	1.76	1.76	1.76
Capital Subsidy	5.44	5.44	5.44	-	-
Retained profit	3.84	9.39	15.37	21.29	27.95
Term Loan from Bank	11.30	10.50	9.70	8.90	-
Cash Credit from Bank	8.50	8.50	8.50	8.50	8.50
Sundry Creditors	17.55	22.46	24.19	25.92	27.65
General Reserve	-	-	-	5.44	5.44
Expenses payable	0.36	0.40	0.44	0.48	0.53
Total	**48.75**	**58.45**	**65.40**	**72.29**	**71.83**
APPLICATION OF FUNDS					
Net Fixed Assets	11.56	9.83	8.36	7.11	6.04
CURRENT ASSETS, LOAN & ADVANCES					
Stock	19.56	28.21	30.37	32.52	35.26
Cash & Bank Balances	4.54	3.54	8.78	13.97	10.59
Sundry Debtors	7.66	11.44	12.45	18.68	19.93
Fixed Deposit	5.44	5.44	5.44	-	-
	48.75	**58.45**	**65.40**	**72.29**	**71.83**

PROJECTED PROFITABILITY STATEMENT

Particular	Y1	Y2	Y3	Y4	Y5
INSTALLED CAPACITY	45%	65%	70%	75%	80%
A. SALES					
Rice	229.71	343.06	373.57	400.36	427.11
Bran	9.53	17.84	20.72	22.23	23.73
Husk	6.71	8.95	10.44	11.18	11.93
TOTAL (A)	**245.95**	**369.84**	**404.72**	**433.77**	**462.77**
B. COST OF SALES					
1.Raw Material Consumed	233.28	336.96	362.88	388.80	414.72
2.Power & Fuel	1.38	1.61	1.72	1.84	2.07
3. Wages & Salary	3.78	4.04	4.32	4.62	4.94
4.Factory Expenses	0.61	0.92	1.01	1.08	1.16
5. Mandi Fee	5.83	8.42	9.07	9.72	10.37
6.Depreciation	0.94	1.73	1.47	1.25	1.07
Cost of Production	245.83	353.69	380.48	407.31	434.32
Add : Opening Stock	0.00	10.46	15.11	16.27	17.42
Less Closing Stock	10.46	15.11	16.27	17.42	19.16
Cost of Sales: (B)	235.37	349.04	379.31	406.16	432.58
C. GROSS PROFIT (A-B)	**10.58**	**20.80**	**25.41**	**27.61**	**30.19**
D. Interest on Term Loan	0.90	0.82	0.71	0.60	0.48
Interest on Cash Credit	0.60	1.19	1.19	1.19	1.19
E: Salary Expenses	0.78	0.83	0.89	0.95	1.02
General & Adam. Expenses	1.10	1.21	1.33	1.46	1.54
Selling Expenses	2.46	9.25	12.14	13.01	13.88
TOTAL (D+E)	5.84	13.30	16.26	17.21	18.11
F: Net Profit/(Loss) (C-D-E-E1)	4.74	7.50	9.15	10.40	12.08
I: Taxation	0.00	0.75	1.37	2.08	2.42
J: Retained Profit	4.74	6.75	7.78	8.32	9.66
K: Depreciation Add Back	0.94	1.73	1.47	1.25	1.07
L: Net Cash Accruals	5.68	8.48	9.25	9.57	10.73

WORKING CAPITAL REQUIREMENT

S.No.	Particulars	Total
Working Capital		
	1.Raw Material	9.10
	2.Finished Goods	10.46
	3.Sundry Debtors	7.66
		27.21
	Less : Sundry Creditors	17.55
	Working Capital Requirement	9.66
	Less : Own Margin	0.48
	Working Capital Required	**9.18**
	Working Capital Demand	8.50

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