

PROJECT REPORT

Of

PUFFED RICE (MURMURE)

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **PUFFED RICE (MURMURE) UNIT**

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.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : XXXXXXXX
- 2 Constitution (legal Status) : XXXXXXXX
- 3 Father's/Spouce's Name : XXXXXXXX
- 4 Unit Address : XXXXXXXX
- Taluk/Block:
District : XXXXX
Pin: XXXXX State: XXXXX
E-Mail : XXXXX
Mobile XXXXX
- 5 Product and By Product : **Puffed Rice (Murmura)**
- 6 Name of the project / business activity proposed : **Puffed Rice (Murmura)**
- 7 Cost of Project : Rs9.14lac
- 8 Means of Finance
Term Loan Rs.4.95 Lacs
KVIC Margin Money - As per Project Eligibility
Own Capital Rs.0.91 Lacs
Working Capital Rs.3.28 Lacs
- 9 Debt Service Coverage Ratio : 5.87
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 6 Months
- 12 Break Even Point : 24%
- 13 Employment : 6 Persons
- 14 Power Requirement : 10.00 HP
- 15 Major Raw materials : **Rice**
- 16 Estimated Annual Sales Turnover : 39.90 Lacs
- 16 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lacs)

Particulars	Amount
Land	Rented/Owned
Building & Civil Work (1000 Sq Ft)	2.00
Plant & Machinery	3.00
Furniture & Fixtures	0.50
Pre-operative Expenses	-
Working Capital Requirement	3.64
Total	9.14

MEANS OF FINANCE

Particulars	Amount
Own Contribution @10%	0.91
Term Loan	4.95
Workign Capital Finance	3.28
Total	9.14

	General	Special
Beneficiary's Margin Money (% of Project Cost)	10%	5%

PUFFED RICE (MURMURA) MANUFACTURING UNIT



INTRODUCTION:

Puffed Rice or Murmura is one of the very popular fast food of the Country. The paddy is used after gelatinization of starch which will give a better puffing. The parboiled rice is sundried and dehisced and polished. Then the same is soaked in the brine solution for 6 to 7 hours and drained completely and dried in sun light for about one hour for removing the excess moisture. Later the rice is fried at 110 degree celcius and cooled and packed. Puffed rice is a type of puffed grain from the Indian subcontinent, made from rice, commonly used in breakfast cereal or snack foods, and served as a popular street food in India, Bangladesh and Nepal. It is usually made by heating rice kernels under high pressure in the presence of steam, though the method of manufacture varies widely. It is widely consumed in countries like India.

PRODUCT & ITS APPLICATION:

Compared to other ready-to-eat cereals, puffed rice is very low in calories. A 3/4-cup serving of a bran flake cereal has 98 calories, and swapping out your bran flakes for puffed rice can save you 44 calories per serving. If you're trying to lose weight, saving an extra 44 calories a day may help you lose 1 pound every 2 1/2 months. While that may seem like a slow way to lose weight, every little bit helps. Puffed rice, especially the one made from white rice, does

not offer any major health benefit. White rice is produced by removing the bran layer, along with the germ. The manufacturing process of white rice destroys much of the nutrients found in unpolished rice, leaving behind only the endosperm that mainly contains carbohydrates with traces of B vitamins. The process of making puffed rice further lowers the nutritional value of this grain, by destroying the heat-sensitive nutrients. However, some manufacturers do add iron and other vitamins and minerals to puffed rice, in order to compensate the loss of nutrients in the manufacturing process. So, fortified puffed rice can provide some essential nutrients like B vitamins, iron, magnesium, potassium, and phosphorus. Moreover, it contains negligible amounts of sodium, which is good for regulating your blood pressure. Puffed rice is light and easily digestible. Though it has more volume than regular rice, it contains less calories and almost no fat. So, it can be used as a snack between meals. However, puffed rice is not rich in proteins and fibers and will not keep you full for long.

As mentioned already, puffed brown rice is comparatively more nutritious than puffed white rice. Puffed brown rice does contain dietary fiber, and hence, may prove beneficial for maintaining the health of your digestive tract. Brown rice contains a significant amount of B vitamins and minerals, like zinc, manganese, magnesium, potassium, and phosphorus. Puffs made from brown rice also contains these nutrients, though the puffing process reduces the nutritional value of this grain to some extent.

INDUSTRY LOOKOUT AND TRENDS

Puffed food segmented by category type, application and region. By category, puffing comes in wheat, rice, corn, sorghum, and ragi. Puffed wheat is prepared by heating wheat grains under pressure and then rapidly releasing pressure when the superheated steam in the grain expands grain is puffed. It is a good source of copper, protein, and iron. Puffed rice used in breakfast cereal or snack foods served as popular street food. It is made by heating rice kernels under high pressure in the presence of steam. Puffed food is segmented by applications as Bakery Industry and Snacks Industry. In bakery it uses in in making puffed backed pancake, puffed baked potato and others. Puffed food market is further segmented by region such as Latin America, North America, Europe, Middle East and Africa, and Asia

Pacific. Latin America and North America possess significant potential, whereas Europe and other developing markets such as Asia-Pacific and MEA possess the growth opportunities for quinoa over the forecast period. There is a high consumption of puffed food in Asia-Pacific regions like India and China as growing young population prefers street food and snacks like cheese doodles.

Puffed food provides a multitude of health benefits, as these are rich source of protein, fiber, magnesium, iron, and potassium, and which are anticipated to contribute to the growth of global puffed market over the coming years. Puffed food has low calories which easily gets digested and absorbed quickly which acts as one of the factors of popularity among consumers.

MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

Puffed rice is enriched with extra vitamins and minerals. The refining process used to create the white rice cereal also removes many of the essential nutrients, so manufacturers add iron and B vitamins back into the product. As a result, one cup of puffed rice provides 25 percent of the daily value for iron and niacin and 24 percent for thiamin, based on a 2,000-calorie diet. The cereal also provides 24 percent of the daily value for riboflavin and 10 percent for manganese. It is not a notable source of any other vitamins or minerals. You can use puffed rice to extend your serving sizes of more nutritious cereals. Many healthier cereals contain 150 to 200 calories per 1/2 to 1 cup serving. If you find these servings too small for your appetite, consider stretching them by adding 1 cup of puffed rice, which adds minimal calories, but may help you feel more satisfied. Eating puffed rice alone may leave you feeling hungry sooner because it contains no fiber or protein.

RAW MATERIAL REQUIREMENTS:

The basic raw material for the unit is RICE.

MANUFACTURING PROCESS:

Rice is first cleaned to remove stones and husk. It is then soaked in brine solution and dried. On drying it is fed into the puffing machine from where the 2 puffed products is obtained. It is cooled and packed immediately to prevent moisture absorption. A traditional puffed rice called muri is made by heating rice in a sand-filled oven. Muri is to rice as popcorn is to corn. The processing involved makes rice less perishable. Mandakki is a staple food in many parts of Rayalaseema, North Karnataka, Odisha, Tripura, West Bengal and Bangladesh. Jhalmuri or Masalemandakki is a very popular preparation made from mandakki (muri). Puffed rice is formed by the reaction of both starch and moisture when heated within the shell of the grain. Unlike popcorn, rice kernels are naturally lacking in moisture and must first be conditioned with steam. Puffed rice can be created by heating the steam-conditioned kernels either with oil or in an oven. Rice puffed in this way is crisp, and known as "crisped rice". Oven-crisped rice is used to produce the Rice Krispies breakfast cereal as well as the crisped rice used in Lion Bars, Nestlé Crunch, Krackel, and similar chocolate bars. Though not as dramatic a change when compared to popcorn, the process and end result are the same. Another method of puffing rice is "gun puffing", where the grain is conditioned to the correct level of moisture and pressurized to around 200 psi (1,400 kPa). When the pressure is suddenly released, the pressure stored inside the kernel causes it to puff out. This method produces a puffed rice which is spongy in texture. Rice can also be puffed by making a rice dough, and extruding small pellets which are then rapidly heated. The moisture in the dough flash boils and puffs the rice up.

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Dehusker 50 kg/hr	1	90000.00	90000.00
Iron Drum	2	5000.00	10000.00
Furnace	1	113000.00	113000.00
Storage Tank	1	35000.00	35000.00
Sieves	2	6000.00	12000.00
Sealing Packing fillingMachine	1	15,000.00	15,000.00
Weighing scale	1	15,000.00	15,000.00
Misc tools	LS	10,000.00	10,000.00
TOTAL			3,00,000.00

PROJECTED BALANCE SHEET

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Capital Account	0.91	0.91	0.91	0.91	0.91
Retained Profit	8.51	16.56	24.28	32.52	41.21
Term Loan	4.95	3.71	2.48	1.24 -	0.00
Cash Credit	3.28	3.28	3.28	3.28	3.28
Sundry Creditors	0.55	0.59	0.63	0.67	0.71
Provisions & Other Liab	0.36	0.40	0.44	0.48	0.53
TOTAL :	18.57	25.44	32.01	39.09	46.64
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	5.50	5.50	5.50	5.50	5.50
Gross Dep.	0.68	1.29	1.81	2.28	2.68
Net Fixed Assets	4.83	4.22	3.69	3.22	2.82
Current Assets					
Sundry Debtors	1.33	1.50	1.60	1.70	1.80
Stock in Hand	2.86	3.07	3.27	3.47	3.68
Cash and Bank	7.05	13.92	20.43	27.37	34.68
Deposits & Advances	2.50	2.75	3.03	3.33	3.66
TOTAL :	18.57	25.44	32.01	39.09	46.64

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PROJECTED CASH FLOW STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>SOURCES OF FUND</u>					
Share Capital	0.91	-			
Reserve & Surplus	8.51	8.93	9.65	10.30	10.87
Depriciation & Exp. W/off	0.68	0.61	0.53	0.46	0.40
Increase in Cash Credit	3.28	-	-	-	-
Increase In Term Loan	4.95	-	-	-	-
Increase in Creditors	0.55	0.04	0.04	0.04	0.04
Increase in Provisions	0.36	0.04	0.04	0.04	0.05
TOTAL :	19.24	9.62	10.26	10.84	11.36
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	5.50	-	-	-	-
Increase in Stock	2.86	0.20	0.20	0.20	0.20
Increase in Debtors	1.33	0.17	0.10	0.10	0.10
Increase in Deposits & Adv	2.50	0.25	0.28	0.30	0.33
Repayment of Term Loan	-	1.24	1.24	1.24	1.24
Taxation	-	0.89	1.93	2.06	2.17
TOTAL :	12.19	2.75	3.75	3.90	4.05
Opening Cash & Bank Balance	-	7.05	13.92	20.43	27.37
Add : Surplus	7.05	6.87	6.51	6.94	7.31
Closing Cash & Bank Balance	7.05	13.92	20.43	27.37	34.68

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
A) SALES					
Gross Sale	39.90	44.85	47.85	50.85	53.85
Total (A)	39.90	44.85	47.85	50.85	53.85
B) COST OF SALES					
Raw Mateiral Consumed	23.63	25.31	27.00	28.69	30.38
Electricity Expenses	1.00	1.07	1.15	1.22	1.29
Repair & Maintenance	-	0.45	0.48	0.51	0.54
Labour & Wages	3.04	3.34	3.67	4.04	4.45
Depriciation	0.68	0.61	0.53	0.46	0.40
Consumables and Other Expenses	0.80	0.90	0.96	1.02	1.08
Cost of Production	29.14	31.68	33.78	35.93	38.13
Add: Opening Stock /WIP	-	1.68	1.80	1.92	2.04
Less: Closing Stock /WIP	1.68	1.80	1.92	2.04	2.16
Cost of Sales (B)	27.46	31.56	33.66	35.81	38.01
C) GROSS PROFIT (A-B)	12.44	13.29	14.19	15.04	15.84
	31%	30%	30%	30%	29%
D) Bank Interest (Term Loan)	0.43	0.52	0.37	0.23	0.09
Bank Interest (C.C. Limit)	0.33	0.33	0.33	0.33	0.33
E) Salary to Staff	2.38	2.61	2.87	3.16	3.48
F) Selling & Adm Expenses Exp.	0.80	0.90	0.96	1.02	1.08
TOTAL (D+E)	3.93	4.35	4.53	4.74	4.97
H) NET PROFIT	8.51	8.93	9.65	10.30	10.87
I) Taxation	-	0.89	1.93	2.06	2.17
J) PROFIT (After Tax)	8.51	8.04	7.72	8.24	8.70

COMPUTATION OF SALE

Particulars	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Op Stock	-	5	6	6	6
Production	105	113	120	128	135
	105	118	126	134	141
Less : Closing Stock	5	6	6	6	7
Net Sale	100	112	120	127	135
Sale Price per MT	40,000.00	40,000.00	40,000.00	40,000.00	40,000.00
Sale (in Lacs)	39.90	44.85	47.85	50.85	53.85

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required			10	
Load Factor			0.7460	
Electricity Charges		per unit	8.00	
Total Working Days			300	
Electricity Charges (8 Hrs Per day)				1,43,232.00
Add : Minimim Charges (@ 10%)				
(B) D.G. SET				
No. of Working Days			300	days
No of Working Hours			-	Hour per day
Total no of Hour			-	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			-	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			-	
Add : Lube Cost @15%			-	
Total			-	
Total cost of Power & Fuel at 100%				1.43
Year		Capacity		Amount
				(in Lacs)
IST YEAR		70%		1.00
IIND YEAR		75%		1.07
IIIRD YEAR		80%		1.15
IVTH YEAR		85%		1.22
VTH YEAR		90%		1.29

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
Finished Goods					
(15 Days requirement)	1.68	1.80	1.92	2.04	2.16
Raw Material					
(10 Days requirement)	1.18	1.27	1.35	1.43	1.52
Closing Stock	2.86	3.07	3.27	3.47	3.68

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars			Total
			Amount
Stock in Hand			2.86
Sundry Debtors			1.33
		Total	4.19
Sundry Creditors			0.55
Working Capital Requirement			3.64
Margin			0.36
Working Capital Finance			3.28

BREAK UP OF LABOUR

Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Skilled Worker		8,000.00	1	8,000.00
Unskilled Worker		5,000.00	3	15,000.00
				23,000.00
Add: 10% Fringe Benefit				2,300.00
Total Labour Cost Per Month				25,300.00
Total Labour Cost for the year (In Rs. Lakhs)				3.04

BREAK UP OF SALARY

Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Supervisor		10,000.00	1	10,000.00
Accountant		8,000.00	1	8,000.00
Total Salary Per Month				18,000.00
Add: 10% Fringe Benefit				1,800.00
Total Salary for the month				19,800.00
Total Salary for the year (In Rs. Lakhs)				2.38

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased	-	-	-	-
Addition	-	2.00	3.00	0.50	5.50
	-	2.00	3.00	0.50	5.50
Less : Depreciation	-	0.20	0.45	0.03	0.68
WDV at end of Ist year	-	1.80	2.55	0.48	4.83
Additions During The Year	-	-	-	-	-
	-	1.80	2.55	0.48	4.83
Less : Depreciation	-	0.18	0.38	0.05	0.61
WDV at end of IIInd Year	-	1.62	2.17	0.43	4.22
Additions During The Year	-	-	-	-	-
	-	1.62	2.17	0.43	4.22
Less : Depreciation	-	0.16	0.33	0.04	0.53
WDV at end of IIIrd year	-	1.46	1.84	0.38	3.69
Additions During The Year	-	-	-	-	-
	-	1.46	1.84	0.38	3.69
Less : Depreciation	-	0.15	0.28	0.04	0.46
WDV at end of IV year	-	1.31	1.57	0.35	3.22
Additions During The Year	-	-	-	-	-
	-	1.31	1.57	0.35	3.22
Less : Depreciation	-	0.13	0.23	0.03	0.40
WDV at end of Vth year	-	1.18	1.33	0.31	2.82

REPAYMENT SCHEDULE OF TERM LOAN

11.5%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
IST YEAR	Opening Balance						
	Ist Quarter	-	4.95	4.95	-	-	4.95
	Iind Quarter	4.95	-	4.95	0.14	-	4.95
	IIIrd Quarter	4.95	-	4.95	0.14	-	4.95
	Ivth Quarter	4.95	-	4.95	0.14	-	4.95
					0.43	-	
IIIND YEAR	Opening Balance						
	Ist Quarter	4.95	-	4.95	0.14	0.31	4.64
	Iind Quarter	4.64	-	4.64	0.13	0.31	4.33
	IIIrd Quarter	4.33	-	4.33	0.12	0.31	4.02
	Ivth Quarter	4.02	-	4.02	0.12	0.31	3.71
					0.52	1.24	
IIIRD YEAR	Opening Balance						
	Ist Quarter	3.71	-	3.71	0.11	0.31	3.40
	Iind Quarter	3.40	-	3.40	0.10	0.31	3.09
	IIIrd Quarter	3.09	-	3.09	0.09	0.31	2.78
	Ivth Quarter	2.78	-	2.78	0.08	0.31	2.48
					0.37	1.24	
IVTH YEAR	Opening Balance						
	Ist Quarter	2.48	-	2.48	0.07	0.31	2.17
	Iind Quarter	2.17	-	2.17	0.06	0.31	1.86
	IIIrd Quarter	1.86	-	1.86	0.05	0.31	1.55
	Ivth Quarter	1.55	-	1.55	0.04	0.31	1.24
					0.23	1.24	
VTH YEAR	Opening Balance						
	Ist Quarter	1.24	-	1.24	0.04	0.31	0.93
	Iind Quarter	0.93	-	0.93	0.03	0.31	0.62
	IIIrd Quarter	0.62	-	0.62	0.02	0.31	0.31
	Ivth Quarter	0.31	-	0.31	0.01	0.31	0.00
					0.09	1.24	

CALCULATION OF D.S.C.R

PARTICULARS	IST YEAR	IIND YEAR	IIIRD YEAR	IVTH YEAR	VTH YEAR
<u>CASH ACCRUALS</u>	9.19	8.65	8.25	8.70	9.10
Interest on Term Loan	0.43	0.52	0.37	0.23	0.09
Total	9.62	9.17	8.63	8.93	9.19
<u>REPAYMENT</u>					
Instalment of Term Loan	1.24	1.24	1.24	1.24	1.24
Interest on Term Loan	0.43	0.52	0.37	0.23	0.09
Total	1.66	1.75	1.61	1.47	1.33
DEBT SERVICE COVERAGE RATIO	5.78	5.23	5.35	6.08	6.92
AVERAGE D.S.C.R.			5.87		

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	39.90	44.85	47.85	50.85	53.85
Less : Op. WIP Goods	-	1.68	1.80	1.92	2.04
Add : Cl. WIP Goods	1.68	1.80	1.92	2.04	2.16
Total Sales	41.58	44.97	47.97	50.97	53.97
Variable & Semi Variable Exp.					
Raw Material & Tax	23.63	25.31	27.00	28.69	30.38
Electricity Exp/Coal Consumption at 85%	0.85	0.91	0.97	1.03	1.10
Manufacturing Expenses 80%	0.64	1.08	1.15	1.22	1.29
Wages & Salary at 60%	3.25	3.57	3.93	4.32	4.75
Selling & administrative Expenses 80%	0.64	0.72	0.77	0.81	0.86
Intt. On Working Capital Loan	0.33	0.33	0.33	0.33	0.33
Total Variable & Semi Variable Exp	29.33	31.92	34.14	36.41	38.71
Contribution	12.25	13.05	13.83	14.56	15.26
Fixed & Semi Fixed Expenses					
Manufacturing Expenses 20%	0.16	0.27	0.29	0.31	0.32
Electricity Exp/Coal Consumption at 15%	0.15	0.16	0.17	0.18	0.19
Wages & Salary at 40%	2.16	2.38	2.62	2.88	3.17
Interest on Term Loan	0.43	0.52	0.37	0.23	0.09
Depreciation	0.68	0.61	0.53	0.46	0.40
Selling & administrative Expenses 20%	0.16	0.18	0.19	0.20	0.22
Total Fixed Expenses	3.74	4.12	4.17	4.26	4.39
Capacity Utilization	70%	75%	80%	85%	90%
OPERATING PROFIT	8.51	8.93	9.65	10.30	10.87
BREAK EVEN POINT	21%	24%	24%	25%	26%
BREAK EVEN SALES	12.68	14.19	14.48	14.92	15.53

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