

PROJECT PROFILE

ON

RICE CRISPIES

Month & Year
Aug 2010

**PREPARED BY
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RICE CRISPIES

1. Introduction

Rice crispies are extruded rice snack products enrobed with oil and spices. Being ready to eat, they are termed as “convenient” snack foods. Being easy to digest or assimilate, they are consumed by people of all ages. Rice crispies can also be coated with sugar, a mild flavour of cardamom and consumed directly or after soaking in milk. Rice being the staple food, many people prefer the taste and the product as a pastime snack.

2. Market

The major market outlets are the “A” and “B” class outlets. The product also finds placement in self service counters and departmental stores.

3. Packaging

The processed product is packed in polypropylene pouches. Each pouch of rice crispies has a net weight of 50 grams.

4. Production capacity

- The plant will be in operation for two shifts a day with each shift of 8 hours duration.
- The plant operates to a production capacity of 100 kilograms per hour.
- The estimated production per day is 1500 kilograms.
- The total production per month will be 37.5 M.T while the annual production is estimated at 450 M.T
- The time period required for achieving full capacity utilization is one year.

5. Sales revenue

- The ex-factory selling price will be Rs. 4.00 per pouch of 25 grams. MRP is Rs. 5.00 per pouch.
- A carton of 40 pouches will weigh 1.0 kilograms (net weight) and will cost Rs. 160 inclusive of taxes. The price per kilogram is Rs. 160.
- The estimated annual sales revenue will be Rs. 720.00 lakhs.

6. Production process outline.

Rice is first ground in a micropulveriser to a fine powder after removing all stones and husk. It is then fed into the silo mixer and through the screw conveyer dosed into the extruder. In the extruder, the flow of water is regulated and the rice-water mixture is cooked at high shear. The cooked product is formed through a die of definite shape. At the die surface, the cutter assembly cuts the product to the desired size. The extruded product is conveyed through a pneumatic conveyer to a rotary drum drier and dried to a moisture content of less than 2%. The dried product is taken to the spice applicator wherein hot oil at a temperature of 180 degrees centigrade is sprayed. Dried salt and spices are dusted to the desired content. The product after enrobing is conveyed by a bucket elevator to the form fill and seal machine where it is packed automatically under an atmosphere of nitrogen.

7. Quality specifications

- Moisture - Maximum 2%
- Ash - Maximum 1.0%
- Acid insoluble ash - Maximum 0.2%
- Free fatty acids of oil used - Maximum 0.1% as oleic acid
- Peroxide value of oil used - Nil
- Total plate count - 30,000 per gram
- Coliforms - absent
- Streptococci - absent
- Salmonella - absent

8. Pollution control measures

Not necessary as there are no pollutants or effluents.

9. Energy conservation measures

Common measures will do.

10. Land and construction cost for the proposed unit

The proposed unit is to be set up in a leased area. The total leased area is 3000 square feet vide details given below.

SI	Description	Sq. feet
1	Processing area	1600
2	Raw material store	100
3	Other ingredients store room	100
4	Finished goods store	200
5	Packaging material store	100
6	Laboratory	200
7	Office	200
8	Machinery spares room	200
9	Toilets	200
10	Miscellaneous	100
11	Total	3000

Lease rent – Rs. 8.00 per square foot

Total rent per month – Rs. 24000

Lease advance – Rs. 100000

11. Costing of machinery and equipment

SI	Description	Rs. lakhs
1	Micro pulveriser for rice	0.500
2	Silo mixer	1.000
3	Screw conveyer	0.450
4	Extruder	5.500
5	Pneumatic conveyer	0.500
6	Drum drier	2.400
7	Spice applicator	2.000
8	Bucket elevator	0.550
9	Storage bin	0.500
10	Form fill and seal packing machine	2.750
10	Total	16.150
11	Laboratory equipment	1.000
12	Grand total machinery and equipment	17.150

12. Project cost

SI	Description	Rs. lakhs
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	16.150
4	Laboratory equipment	1.000
5	Transport vehicle	3.760
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	0.500
9	Cost of electrification	1.000
10	Erection and commissioning	1.500
11	Cost of machinery spares	0.200
12	Cost of office equipment	1.000
13	Deposits if any	0.600
14	Company formation expenses	0.100
15	Gestation period expenses	0.500
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	10.000
18	Contingencies	0.500
19	Working capital margin money	21.444
20	Total	58.354

13. Working capital requirements per month

a. Salaries and wages

SI	Description	No of persons	Total salary / month (Rs. lakhs)
1	Production Manager	1	0.400
2	Production supervisor cum chemist	2	0.250
3	Skilled workers	4	0.240
4	Unskilled workers	8	0.320
5	Administrative staff	1	0.250
6	Sales staff	1	0.150
7	Driver	1	0.070
8	Total	18	1.680

b. Raw material requirement per month

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Rice	35000	30.00	10.500
2	Vanaspathi	6000	70.00	4.200
3	Salt and spices	800	60.00	0.480
4	Total raw material	41800		15.180

c. Packaging material requirement per month

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Metallized polyester – poly film	3000 kgs	250	7.500
2	Secondary packing material cartons	37500 nos	40.00	15.000
3	Total			22.500

Total raw + packaging material - Rs. 37.680 lakhs

d. Utilities per month

SI	Description	Rs. lakhs
1	Power 40000 kwh @ Rs. 6.00 per unit	2.400
2	Water	0.100
3	Total utilities	2.500

e. Contingent expenses per month

SI	Description	Rs. lakhs
1	Rent for processing shed	0.240
2	Postage and stationery	0.020
3	Telephones, fax etc.	0.050
4	Consumable stores	0.020
5	Repairs and maintenance	0.139
6	Local transports, loading and unloading	0.200
7	Advertisement and publicity @ 10% of sales	6.000
8	Insurance	0.010
9	Sales expenses @ 1% of sales	0.600
10	Miscellaneous expenses @ 1% of sales	0.600
11	Trade incentives @ 2% of sales	1.200

12	Taxes @ 4%	2.400
13	Total contingent expenses	11.479

f. Total working capital requirement per month

SI	Description	Rs. lakhs
1	Salaries and wages	1.680
2	Raw material and packaging material	37.680
3	Utilities	2.500
4	Contingent expenses	11.749
5	Total	53.609

14. Means of finance

SI	Description	Rs. lakhs
1	Total Project Cost	58.354
2	Equity	19.257
3	Debt	39.097
4	Working capital margin money	21.444

15. Financial analysis

SI	Description	Rs. lakhs
1	Total recurring cost per year	643.308
2	Depreciation on land and building	0.000
3	Depreciation on machinery	2.850
4	Depreciation on furnaces	0.000
5	Depreciation on moulds and fixtures	0.020
6	Depreciation on office equipment	0.100
7	Interest on long term loan @ 13.5%	5.278
8	Interest on short term borrowings@ 13.5%	4.269
9	Total cost of production	655.825

16. Turnover per year

SI	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
1	Rice Crispies	450 MT	160,000	720

17. Viability analysis

Sl	Description	Value
1	Net profit before income tax (Rs. lakhs)	64.175
2	Net profit ratio	8.9%
3	Internal rate of return	22.7%
4	Break even percentage	49%
5	Debt service coverage ratio	2.012

List of machinery suppliers for rice crispies

Machinery has to be fabricated locally as per customers requirements.