

# **PROJECT PROFILE**

ON

## **EXTRUDED PUFFED SNACKS**

Month & Year  
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**PREPARED BY  
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## EXTRUDED PUFFED SNACKS

### **1. Introduction**

Extruded puffed snacks are made from degermed corn grits, wheat semolina, rice and other cereals. There has been a remarkable growth in the varieties of these products available in the market because the consumers find these products easily affordable and ready to eat. The snacks are flavoured with cheese, masala, onion, garlic, or chillies and pepper to suit local tastes.

### **2. Market**

The market for the product is expanding considerably because these foods are nutritive, tasty and inexpensive. In all metropolitan cities, such foods are available for example: 'Peppys' in all metros; Chennai - 'Corn Puffs'; Pune - 'Tasty Bites'; Delhi - 'Crax' etc.

### **3. Packaging**

The snack food should preferably be packed in metallized polyester-poly pouches and flushed with nitrogen before sealing. The quantity in each pouch can be either 25 grams or 35 grams as is the general practice. The pouches are placed in paperboard cartons and strapped prior to dispatch.

### **4. Production capacity**

- The plant operates to two shifts a day, with each shift of 8 hours duration.
- Production is envisaged at 50 kilograms per hour or 800 kilograms per day.
- The total production per month will be 20 M.T while the annual production is estimated at 240 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 pack of 25 grams or Rs.160 per kilogram. The MRP is Rs. 5 per pack. The annual sales revenue is Rs.384 lakhs inclusive of taxes on full capacity utilization.

## **6. Production process outline.**

The ingredients comprising of degermed corn grits and / or rice flour are mixed with water so as to raise the moisture content to about 17%. The moistened cereal grits are then fed manually into the hopper of the extruder. The plant through a thermoplastic process, converts the natural starches in the cereal to cold soluble starches in the machine. On cooking the cereals leave the extruder as an expanded product.

. The product that leaves the extruder is termed as “collets”. The product is cut to the desired shape and size with the help of a cutter fitted to the die assembly. It has a moisture content of 6% and is immediately dried to a moisture content of less than 2% in the drier. The raw dried collets are then fed into the coating pan for enrobing with oil and spices. Oil is sprayed through a spray gun, activated by a dried filtered air from a compressor. The oil used must be a saturated fat in order to increase the shelf life of the product. The oil has to be preserved with anti-oxidants. The coated snacks are fed directly into the hopper of an automatic form and sealing machine. The product is weighed and packed automatically in pouches by the hot bar sealing jaws of the machine. The pouches are then packed in cartons for easy handling and distribution.

## **7. Quality specifications**

- Moisture content of the product at the time of packing should range between 1.0 to 1.2 percent.
- Free fatty acids of the oil used should not exceed 0.1%
- The oil used should also test negative for free peroxides.
- The cereal grits used should conform to the following specifications:
  - a. Moisture - 12% maximum
  - b. Ash - 0.5% maximum
  - c. Acid insoluble ash - 0.1% maximum
  - d. Alcoholic acidity - 0.1% maximum
- The cereal grits used should be free from insect infestation, rodent excreta and hair.

- The end product shall not contain any harmful colouring, flavouring or any other additive deleterious to health.
- The snack food should also show no signs of fungal growth. It should also test negative for coliforms, salmonella and streptococci.

**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 unit is proposed to be located in a leased area. The total space required is 2500 square feet as detailed below

SI	Description	Sq. feet
1	Processing area	1000
2	Raw material store	200
3	Other ingredients store room	200
4	Finished goods storage room	200
5	Packaging material storage room	100
6	Laboratory	200
7	Office space	200
8	Machinery spares room	100
9	Toilet space	200
10	Miscellaneous space	100
<b>11</b>	<b>Total</b>	<b>2500</b>

Lease rent – Rs. 8.00 per square foot

Total rent per month – Rs. 20000

Lease advance – Rs. 100000

### 11. Costing of machinery and equipment

SI	Description	Rs. lakhs
1	Extruder with 30 HP motor for extrusion unit and 1 HP motor for attached cutter assembly along with screws, barrel, dies etc.	6.240
2	Drier for collets	5.500
3	Coating pans with spray gun and compressor for oil and spice coating of snacks and stainless steel oil heater	4.250
4	Automatic form fill and seal packing machine	2.540
5	Weighing scales, coarse and fine	0.350
<b>6</b>	<b>Total</b>	<b>18.880</b>
11	Laboratory equipment	1.000
<b>12</b>	<b>Grand total machinery and equipment</b>	<b>19.880</b>

### 12. Project cost

SI	Description	Rs. lakhs
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	18.880
4	Laboratory equipment	1.000
5	Transport vehicle ( 1 LCV)	7.500
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	0.500
9	Cost of electrification	1.500
10	Erection and commissioning	1.078
11	Cost of machinery spares	0.500
12	Cost of office equipment	1.000
13	Deposits if any	0.500
14	Company formation expenses	0.100
15	Gestation period expenses	1.500
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	10.000
18	Contingencies	1.000
19	Working capital margin money	10.222
<b>20</b>	<b>Total</b>	<b>55.380</b>



**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	0.500
3	Skilled workers	4	0.400
4	Unskilled workers	6	0.360
5	Packing workers	4	0.160
6	Administrative staff	2	0.500
7	Sales coordinator	1	0.150
8	Driver	1	0.100
9	Security staff	3	0.180
<b>10</b>	<b>Total</b>	<b>24</b>	<b>2.750</b>

**b. Raw material requirement per month**

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Corn grits	20000	20.00	4.000
2	Vegetable oil	2500	70.00	1.750
3	Salt and spices	500	50.00	0.250
4	<b>Total raw material</b>	<b>23000</b>		<b>6.000</b>

**c. Packaging material requirement per month**

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	Primary packaging material – metallized polyester – poly film	3000 kgs	250	7.500
2	Cartons and straps	8000 nos	40	3.200
3	<b>Total</b>			<b>10.700</b>

**Total raw + packaging material = Rs. 16.700 lakhs**

**d. Utilities per month**

SI	Description	Rs. lakhs
1	Power 15000 kwh @ Rs. 5.50 per unit	0.825
2	Water	0.050
3	Boiler fuel	0.000
4	<b>Total utilities</b>	<b>0.875</b>

SI	Description	Rs. lakhs
1	Rent for processing shed	0.200
2	Postage and stationery	0.020
3	Telephones, fax etc.	0.050
4	Consumable stores	0.050
5	Repairs and maintenance	0.228
6	Local transports, loading and unloading	0.500
7	Advertisement and publicity @ 5% of sales	1.600
8	Insurance	0.021
9	Sales expenses @ 1% of sales	0.320
10	Miscellaneous expenses @ 1% of sales	0.320
11	Trade incentives @ 2% of sales	0.640
12	Taxes @ 4%	1.280
13	<b>Total contingent expenses</b>	<b>5.229</b>

**f. Total working capital requirement per month**

SI	Description	Rs. lakhs
1	Salaries and wages	2.750
2	Raw material and packaging material	16.700
3	Utilities	0.875
4	Contingent expenses	5.229
5	<b>Total</b>	<b>25.554</b>



**14. Means of finance**

SI	Description	Rs. lakhs
1	Total Project Cost	55.380
2	Equity	18.275
3	Debt	37.105
4	Working capital margin money	10.222

**15. Financial analysis**

SI	Description	Rs. lakhs
1	Total recurring cost per year	306.648
2	Depreciation on land and building	0.000
3	Depreciation on machinery and vehicle	2.738
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%	5.009
8	Interest on short term borrowings@ 13.5%	2.070
<b>9</b>	<b>Total cost of production</b>	<b>316.585</b>

**16. Turnover per year**

SI	Item	Qty	Rate/kg (Rs)	Total Rs. lakhs
1	Extruded corn snacks	240 MT	160	384

**17. Viability analysis**

SI	Description	Value
1	Net profit before income tax (Rs. lakhs)	67.415
2	Net profit ratio	17.6%
3	Internal rate of return	24.2%
4	Break even percentage	41%
5	Debt service coverage ratio	2.224

*List of machinery suppliers for Extruded Snack Food*

1. G.L. Extrusion System Private Limited, RZ - 172 / 12, Street no. 4, Durga Park, Nasir Pur Dabri Road, New Delhi. 110045.; Tel: 011 - 25043182; Fax: 011 - 25043124
2. G.R. Engineering Works Limited, Poonam Chambers, Dr. Annie Besant Road, Worli, Mumbai 400018.; Tel: 022 - 24930404; Fax: 022 - 24925712
3. Fun Snacks Private Limited, B-134, DDA Sheds, Okhla Industrial Estate Phase -1, New Delhi. 110020