

# **PROJECT PROFILE**

ON

**TEXTURISED SOYA NUGGETS**

Month & Year  
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**PREPARED BY  
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## TEXTURISED SOYA NUGGETS

### **1. Introduction**

Soya nuggets are prepared from defatted soya flour by the process of extrusion cooking. During the process the protein in the flour undergoes structural changes and forms a fibre like network. The texturised product on soaking in water has meat like chewy characteristics and therefore nuggets are called as “vegetarian meat”. They are a rich source of protein and among the vegetable proteins, they contribute a maximum level of 50% protein. Being free from cholesterol, they are used as meat substitutes.

### **2. Market**

The product finds placement in all “A”, and “B” class outlets, self service, departmental stores and supermarkets. The product has a lot of market potential if it is very hygienically processed and dried. There is an increasing awareness in the product because it blends well with both meat as well as vegetables. It can be substituted for meat in gravies, used in pulaos and biryani or in sambhar.

### **3. Packaging**

Nuggets is best packed in polyethylene or polypropylene or BOPP pouches as a primary packing. The pouch is placed in cartons and strapped prior to dispatch. The product is packed in weights of 50, 100, 200, 500 and 1000 gms.

### **4. Production capacity**

- The plant operates to two shifts a day with each shift of eight hours duration.
- The plant will operate to a capacity of raw material (defatted soya flour) input of 150 kilograms per hour. The anticipated production of nuggets is 2000 kilograms per day or 600 M.T per annum.
- The time period required for achieving full capacity utilization is one year.

### **5. Sales revenue**

- At an ex-factory selling price of Rs. 36 per kilogram of the product, the net sales revenue per annum will be Rs. 216 lakhs on full capacity utilization. The MRP is Rs. 50.00 per kilogram.



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

The ingredients comprising high protein dispersibility defatted soya flour and water are extruded (texturised) in the cooker extruder. The product obtained is in the form of small round balls with a moisture content of 17 - 18%. It is taken to the drier by a belt conveyer system where the product is dried at 100 to 105 degrees centigrade for 20 to 25 minutes. In the drier the moisture content reduces to 8%. From the drier the product is conveyed to the grader where grading takes place according to the size of the chunks. The product is then packed in consumer packs of 100 grams or in bulk of 20 kilograms in HDPE bags depending upon the market requirement.

#### **7. Quality specifications**

- Moisture - maximum 8%.
- Ash - maximum 0.5%.
- Acid insoluble ash - maximum 0.01%
- Protein - minimum 48%
- Fat - maximum 1%
- Urease activity - maximum 0.02 units
- Total plate count - maximum 30,000 per gram.
- The product should be free from coliforms, salmonella and streptococci bacteria.
- The product should be free from rodent excreta, human hair, and insect infestation It should also not contain any added coal tar food colours, preservatives, emulsifiers, stabilizers, bleaching agents and artificial flavouring agents.

#### **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 area required is 3000 square feet as detailed below:

SI	Description	Sq. feet
1	Processing area	1800
2	Raw material store	200
3	Other ingredients store	100
4	Finished goods store	200
5	Packaging material store	100
6	Laboratory	100
7	Office space	200
8	Machinery spares room	100
9	Toilets	100
10	Miscellaneous space	100
<b>11</b>	<b>Total</b>	<b>3000</b>

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	Vertical screw mixer	
2	Flour sifter	
3	5 Head extruder for texturising soya flour	
4	Water dosing tank	
5	Pipelines	
6	Cutter assembly	
7	Drier	
8	Grader	12.000
9	Bag stitching machine	0.060
10	Weighing scales – 3 nos	0.250
11	Machine spares	0.100
<b>12</b>	<b>Total</b>	<b>12.410</b>
13	Laboratory equipment	0.500
<b>14</b>	<b>Grand total machinery and equipment</b>	<b>12.910</b>

**12. Project cost**

SI	Description	Rs. lakhs
1	Land	On lease
2	Civil works	On lease
3	Plant machinery	12.410
4	Laboratory equipment	0.510
5	Transport vehicle	7.500
6	Pollution control equipment	0.000
7	Energy conservation equipment	0.000
8	Cost of power connection	1.000
9	Cost of electrification	1.000
10	Erection and commissioning	1.250
11	Cost of machinery spares	0.500
12	Cost of office equipment	1.000
13	Deposits if any	0.600
14	Company formation expenses	0.100
15	Gestation period expenses	1.000
16	Sales tax registration expenses	0.100
17	Initial advertisement and publicity	10.000
18	Contingencies	0.650
19	Working capital margin money	6.338
<b>20</b>	<b>Total</b>	<b>43.958</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	1	0.250
3	Skilled workers	4	0.240
4	Unskilled workers	6	0.240
5	Administrative staff	2	0.500
6	Sales staff	1	0.150
7	Security staff	3	0.180
<b>8</b>	<b>Total</b>	<b>18</b>	<b>1.960</b>

**b. Raw material requirement per month**

SI	Description	Qty (kgs)	Rate / kg (Rs)	Value (Rs. lakhs)
1	Defatted soya flour	50500	18.00	9.090
2	<b>Total raw material</b>	<b>50500</b>		<b>9.090</b>

**c. Packaging material requirement per month**

SI	Description	Qty	Rate / unit (Rs)	Value (Rs. lakhs)
1	HDPE bags with inner liner	2500 nos	14.00	0.350
2	<b>Total</b>			<b>0.350</b>

**Total raw + packaging material = Rs. 9.440 lakhs**

**d. Utilities per month**

SI	Description	Rs. lakhs
1	Power 20000 kwh @ Rs. 6.00 per unit	1.200
2	Water	0.050
3	Boiler fuel	0.000
4	<b>Total utilities</b>	<b>1.250</b>

**e. Contingent expenses per month**

SI	Description	Rs. lakhs
1	Rent for processing shed	0.240
2	Postage and stationery	0.010
3	Telephones, fax etc.	0.050
4	Consumable stores	0.020
5	Repairs and maintenance	0.108
6	Local transports, loading and unloading	0.150
7	Advertisement and publicity @ 5% of sales	1.000
8	Insurance	0.018
9	Sales expenses @ 1% of sales	0.200
10	Miscellaneous expenses @ 1% of sales	0.200
11	Trade incentives @ 2% of sales	0.400
12	Taxes @ 4%	0.800
<b>13</b>	<b>Total contingent expenses</b>	<b>3.196</b>

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

SI	Description	Rs. lakhs
1	Salaries and wages	1.960
2	Raw material and packaging material	9.440
3	Utilities	1.250
4	Contingent expenses	3.196
<b>5</b>	<b>Total</b>	<b>15.846</b>

**14. Means of finance**

SI	Description	Rs. lakhs
1	Total Project Cost	43.958
2	Equity	14.506
3	Debt	29.452
4	Working capital margin money	6.338

**15. Financial analysis**

SI	Description	Rs. lakhs
1	Total recurring cost per year	190.152
2	Depreciation on land and building	0.000
3	Depreciation on machinery and vehicle	2.791
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%	3.976
8	Interest on short term borrowings@ 13.5%	1.283
<b>9</b>	<b>Total cost of production</b>	<b>198.322</b>

**16. Turnover per year**

SI	Item	Qty	Rate/unit (Rs)	Total Rs. lakhs
<b>1</b>	<b>Nuggets</b>	<b>600,000 kgs</b>	<b>36.00</b>	<b>216.00</b>



**17. Viability analysis**

<b>Sl</b>	<b>Description</b>	<b>Value</b>
1	Net profit before income tax (Rs. Lakhs)	17.678
2	Net profit ratio	8.2%
3	Internal rate of return	20.3%
4	Break even percentage	48%
5	Debt service coverage ratio	1.986

***Texturised Soya Nuggets***

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