

**PROJECT PROFILE**  
*on*  
**MAKHANA SNACKS**

Product Code : NA

Quality & Standard : As per FSSAI and Customer's requirement

Production Capacity : Qty - 240 MT. P.A.  
: Value- Rs. 15.03 Crore.

Month & Year of Preparation : August, 2016

Prepared By : Mr. A K Ojha  
Assistant Director (Food)  
MSME-Development Institute  
Shaheed Captain Gaur Marg, Okhla  
New Delhi-110020  
Ph. - 011-26838118, 011-26838269  
Fax: 011-26838016  
E-mail:- [dcdi-ndelhi@dcmsme.gov.in](mailto:dcdi-ndelhi@dcmsme.gov.in)  
Website: [www.msmedinewdelhi.gov.in](http://www.msmedinewdelhi.gov.in)

## **Introduction**

Euryale which is also known as Makhana, Phool Makhana, Foxnut, lotus seeds, Gorgon nut, Euryale Ferox commonly found in Bihar and in Loktak Lake Manipur. The Makhana plant is cultivated for its seeds in lowland ponds in India, China, and Japan. As per the National Research Centre for Makhana, Darbhanga (ICAR), total area under makhana cultivation in India is estimated to be 15000 Ha. It yields 1,20,000 MT of makhana seeds, which after processing yields 40,000 MT of makhana pop. In India around 63% of the total Makhana production comes from Bihar. Makhana is highly nutritious, fully organic non-cereal food superior to dry fruits such as almonds, walnut, coconut and cashewnut in term of sugar, protein, ascorbic acid and phenol content. 100 gm Makhana contains 350 kcal, 9.7gm easily digestible protein, 77gm carbohydrate, 12.8gm moisture, 0.1gm fat, 90mg phosphorus & 1.4mg iron. Makhana seeds are often roasted or fried then eaten with a sprinkling of oil and spices. The present project profile envisages manufacturing of ready to eat Makhana snacks in different flavours.

## **Market Potential: -**

The market of ready-to-eat snacks and namkeens is estimated at more than Rs.50,000 crore, having grown at a compounded annual growth rate of around 13% since 1998 till 2014 and expected to grow at a CAGR of 22% during 2014-2019. Major growth drivers for the segment are attributed to changing lifestyle, growing urbanization, increase in nuclear families and rise in disposable income. Other factors which have contributed to its growth include product innovations, strong marketing initiatives and low cost pricing strategies making products more affordable for consumers. The sale of snack food category (ready-to-eat packed foods like chips, extracted food, etc.) alone has grown more than six-fold. The world demand for nutritious and organically produced foods is growing rapidly in developed countries like Europe, USA, Japan and Australia. Therefore, there is a huge potential of marketing makhana as a ready to eat snacks in domestic as well as international market. The product positioning should be done carefully to target defined customer segment and promote it as a high value item.

## **Basis and Presumption:-**

1. This project is based on single shift and 300 working days in a year.
2. The yield of 99.80 Kg product is considered with the input of Makhana 82.5kg + seasoning 10 kg and oil 15 kg.
3. The cost of machinery and equipments/materials refer to a particular make and the prices are approximate to those prevailing at the time of preparation of this profile.
4. Interest on total investment has been taken @12% p.a.
5. Depreciation has been taken on building @5% and plant and machinery@ 15%.

## **Implementation Schedule:-**

The main steps are selection of site, company formation, feasibility report preparation, arrangement of finance, construction of building, procurement of plant & machinery, erection & electrification, arrangement of packaging material and raw

material, FSSAI licence, tax registration, NOC from pollution board, power and water connection, selection of market channel and manpower recruitment etc., Normally one year is required to implement the project. Efficient planning and simultaneous operations will be major factors for timely start of the production:

**Technical Aspect:-**

**Manufacturing Process:** Makhana pop. procured from market cleaned, weighed and subjected to roasting followed by slurry flavouring in flavour drum then packing in desired pack size of different packing material i.e. metallised polyester poly , flexible can and tin can etc. The indicative quantity of oil, flavour and raw Makhana for 100 kg product detailed in basis and presumptions of this profile.

**Quality control:-** The quality of finished product and raw material will adhere to FSSAI standard and Consumer requirement

**Capacity: -** 100 Kg ready to eat snacks per hour.

**Motive Power: -** 40 KW

**Financial Aspects**

**Fixed Capital**

**a) Land and Building**

S. No.	Description	Area (Sq. Mtr.)	Value (Rs.)
1	Land	500	Own
2	Built-up Area	350 @ 10,000 per sq.mtr.	35,00,000
3	Open Area	150	NIL
<b>Total</b>			<b>35,00,000</b>

**b) Machinery and Equipment:-**

S.No.	Description	Qty/Nos.	Price	Value (Rs.)
1	Three Layer Roaster (12+1 KW) with accessories 5KW	1	6,00,000	6,00,000
2	Vibrator with Hopper (1/2 KW)	1	1,00,000	1,00,000
3	Conveyer (1/2 KW)	1	1,00,000	1,00,000
4	Seasoning Tank (200L) 4KW	1	1,50,000	1,50,000
5	Seasoning Drum (1KW)	1	2,25,000	2,25,000

6	Multi ad Packing Machine with table and accessories (3KW)	1	15,00,000	15,00,000
7	Nitrogen Plant (8NMQ), 3KW	1	3,50,000	3,50,000
8	Air Dryer cum compressor (40CFM),	1	1,50,000	1,50,000
9	Air conditioners , 2 TON	1	50,000	50,000
10	De-Humidifier , 2 KW	1	1,75,000	1,75,000
11	Can seamer, 1KW	1	2,25,000	2,25,000
12	Can Sealer, ½ Kw	1	50,000	50,000
13	Lab equipments	NA	NA	1,00,000
14	Generator , 40 KVA	1	2,00,000	2,00,000
15	Miscellaneous Equipment and Accessories for Hygiene, Fire Fighting, Safety etc.	NA	NA	80,000
<b>Total</b>				<b>40,55,000</b>
16	Cost of Installation, Power Connection and Electrification Charges @ 10% of Cost of Machinery and Equipment.		-	4,05,500
17	Office Equipment , Furniture & Working tables etc		LS	80,000
<b>Grand Total</b>				<b>45,40,500</b>

C. Pre-operative expenses LS 1,00,000

**Total fixed capital (a+b +c)** = Rs. (35,00,000+ 45, 40,500+ 1, 00,000)  
= **Rs. 81, 40,500**

**Working capital per month**

**i. Staff & Labour:-**

S. No.	Designation	Nos.	Salary/Month (Rs.)	Total Salary (Rs.)
1.	Food Technologist	1	20,000	20,000
2.	Sales Supervisor	2	14,000	28,000
3.	Accountant cum clerk	1	14,000	14,000
4.	Skilled Worker	2	14000	28,000
5.	Un-skilled Worker	6	9,500	57,000
6.	Peon/Watchman	3	9,500	28,500
	Perquisite @10% of Salary	-	-	17,550
<b>Total</b>				<b>1,93,050</b>

ii. **Raw Material /Packaging Material (per month) :-**

S. No.	Material description	Qty. (Kg)	Rate/Kg (Rs.)	Total Value (Rs.)
1.	Makhana	16,500	400	66,00,000
2.	Seasoning/Flavour	2,000	150	3,00,000
3.	Edible Oil	300	80	24,000
4.	Laminate for Flexible packaging of 20 gm	1400	250	3,50,000
5.	Laminate for Flexible packaging of 45gm	222	250	55,500
6.	Composite can for 50gm	1 lakh nos.	16/piece	16,00,000
7.	Tin Can for 50gm	1 lakh nos.	20/ piece	20,00,000
8.	Tap, ink, sanitizer, detergent etc.	L.S.	-	10,000
<b>Total</b>				<b>1,09,39,500</b>

iii. **Utilities (per month):-**

S. No.	Description	Value (Rs.)
1	Power (40 KW x 8 hrs x 25 days @ Rs. 8.40) x 0.75	50,000
2	Fuel (Diesel) L.S.	20,000
3	Water	2,000
<b>Total</b>		<b>72,000</b>

iv. **Other Contingent Expenses (per month ):-**

S. No.	Description	Value (Rs.)
1.	Postage & Stationery	2,000
2.	Advertisement/Publicity	15,000
3.	Repair & Maintenance	4,000
4.	Transport and conveyance Charges	12,000
5.	Insurance	1,000
6.	Miscellaneous Expenses	1,000
<b>Total</b>		<b>35,000</b>



- iv. **Net Profit Ratio** =  $(Profit \times 100) / Sales \text{ turnover}$   
= 6.41%
- v. **Rate of Return** =  $(Profit \times 100) / Total \text{ capital Investment}$   
= 23.02%
- vi. **Break-even point (BEP)**

**Fixed Cost (FC) (per annum):-**

Depreciation on Building @ 5%	1,75,000
Depreciation on machinery & equipment @ 15%	6,08,250
Depreciation on office equipment, furniture @ 20%	16,000
Interest on total capital investment @ 12% (Round off)	50,23,098
40% of Salary & Wages	9,26,640
40% of Other Contingencies (Excluding rent & insurance)	1,63,200
<b>Total Fixed Cost</b>	<b>69,12,188</b>

**Breakeven point (BEP)** =  $(FC / (FC + Profit)) \times 100$   
= 41.77%

**Address of Machinery & Equipments :-**

1. M/s Shrishti Food Equipments Exim . Pvt. Ltd. ,  
Office Address: - G-17 /47 , Sec-15 Rohini , New Delhi  
Factory Address: - M-113, Sec-2 Bavana Industrial Area , New Delhi
2. M/s Shyam Food Engg. Pvt. Ltd. ,  
Sec-63, Noida U.P.
3. M/s Sanya Packaging Solution ,  
C-274, Sec-5 , Bawana Industrial Area New delhi.
4. M/s Fontal Flaxy Pack Ltd. F-415-439, UP , SIDC MG, Road Ind. Area , Ghaziabad

**Raw Material**

Raw Material is available locally