

# PROJECT REPORT

Of

## MAKHANA SNACKS

### PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Makhana Snacks**.

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 / Spouse Name : xxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx  
Pin: xxxxxxx  
Mobile xxxxxxx
- State: xxxxxxxx
- 5 Product and By Product : **MAKHANA SNACKS**
- 6 Name of the project / business activity proposed : **MAKHANA SNACKS UNIT**
- 7 Cost of Project : Rs.40.56 Lakhs
- 8 Means of Finance  
Term Loan Rs.31.5 Lakhs  
Own Capital Rs.4.06 Lakhs  
Working capital Rs.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.18
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 24%
- 13 Employment : 8 Persons
- 14 Power Requirement : 35.00 HP
- 15 Major Raw materials : Makhana,Seasoning/Flavour, Edible Oil, Packing Material
- 16 Estimated Annual Sales Turnover (Max Capacity) : 268.76 Lakhs
- 17 Detailed Cost of Project & Means of Finance

**COST OF PROJECT**

(Rs. In Lakhs)

Particulars	Amount
	Own/Rented
Land / Building shed	34.00
Plant & Machinery	1.00
Furniture & Fixtures	5.56
Working Capital	40.56
<b>Total</b>	<b>40.56</b>

**MEANS OF FINANCE**

Particulars	Amount
Own Contribution	4.06
Working Capital(Finance)	5.00
Term Loan	31.50
<b>Total</b>	<b>40.56</b>

## MAKHANA SNACKS

**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. 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.



**Uses & Market Potential:** Makhana is rich in protein which is extremely beneficial to the body. Lotus seed contains an abundant amount of magnesium which is the highest channel blocker and significantly improves the blood and oxygen. It has various other nutritional benefit and is widely consumed in India on different occasions too. 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%. Major growth drivers for the segment are attributed to changing lifestyle, growing 3 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.

**Raw Material:** Major raw material requirements are as follows:

1. Makhana
2. Seasoning/Flavour
3. Edible Oil
4. Packing Material

**Machinery & Equipments:** Major machineries & equipments are as follows:

<b>S No.</b>	<b>Machine</b>	<b>Unit</b>	<b>Price</b>
1.	Three Layer Roaster (12+1 KW) with accessories 5KW	1	600000
2.	Vibrator with Hopper (1/2 KW)	1	100000
3.	Conveyer (1/2 KW)	1	100000
4.	Seasoning Tank (200L) 4KW	1	150000
5.	Seasoning Drum (1KW)	1	225000
6.	Multi Head Packing Machine with table and accessories (3KW)	1	1500000
7.	Nitrogen Plant (8NMQ), 3KW	1	350000
8.	Air Dryer cum compressor (40CFM),	1	150000
9.	De-Humidifier , 2 KW	1	175000
10.	Other machines & equipments	Ls	50000
	<b>Total Amount</b>		<b>3400000</b>

**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.

**Area:**

The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1500 to 2000Sqft.

**Power Requirement:** The power consumption required to run all the machinery could be approximated as 35hp.

**Manpower Requirement:** There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 8 including 1 Supervisor, 1 Plant operator, 1 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

**Bank Term Loan:** Rate of Interest is assumed to be at 11%

**Depreciation:** Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

### **Approvals & Registration Requirement:**

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require
- NOC from State Pollution Control Board
- FSSAI License

### **Implementation Schedule:**

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

## **FINANCIALS**

<b>PROJECTED CASH FLOW STATEMENT</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
Own Contribution	4.06	-			
Reserve & Surplus	7.54	11.61	15.62	21.91	28.53
Depriciation & Exp. W/off	5.20	4.43	3.77	3.20	2.73
Increase In Cash Credit	5.00				
Increase In Term Loan	31.50	-	-	-	-
Increase in Creditors	2.78	0.46	0.32	0.32	0.32
<b>TOTAL :</b>	<b>56.08</b>	<b>16.50</b>	<b>19.71</b>	<b>25.44</b>	<b>31.58</b>
<b>APPLICATION OF FUND</b>					
Increase in Fixed Assets	35.00	-	-	-	-
Increase in Stock	4.44	0.69	0.56	0.57	0.58
Increase in Debtors	3.96	0.65	0.54	0.55	0.57
Repayment of Term Loan	3.50	7.00	7.00	7.00	7.00
Taxation	0.75	3.48	4.68	6.57	8.56
Drawings	4.00	4.50	6.00	9.00	14.00
<b>TOTAL :</b>	<b>51.65</b>	<b>16.32</b>	<b>18.78</b>	<b>23.69</b>	<b>30.70</b>
Opening Cash & Bank Balance	-	4.42	4.60	5.53	7.27
Add : Surplus	4.42	0.18	0.92	1.75	0.88
Closing Cash & Bank Balance	<b>4.42</b>	<b>4.60</b>	<b>5.53</b>	<b>7.27</b>	<b>8.15</b>



<b>PROJECTED BALANCE SHEET</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>SOURCES OF FUND</b>					
<b>Capital Account</b>					
Opening Balance	-	6.84	10.47	15.40	21.74
Add: Additions	4.06	-	-	-	-
Add: Net Profit	6.78	8.13	10.93	15.34	19.97
Less: Drawings	4.00	4.50	6.00	9.00	14.00
<b>Closing Balance</b>	<b>6.84</b>	<b>10.47</b>	<b>15.40</b>	<b>21.74</b>	<b>27.71</b>
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	28.00	21.00	14.00	7.00	-
Sundry Creditors	2.78	3.25	3.57	3.90	4.22
<b>TOTAL :</b>	<b>42.62</b>	<b>39.71</b>	<b>37.97</b>	<b>37.63</b>	<b>36.93</b>
<b>APPLICATION OF FUND</b>					
<b>Fixed Assets ( Gross)</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>	<b>35.00</b>
Gross Dep.	5.20	9.63	13.39	16.60	19.32
Net Fixed Assets	29.80	25.38	21.61	18.40	15.68
<b>Current Assets</b>					
Sundry Debtors	3.96	4.61	5.15	5.70	6.27
Stock in Hand	4.44	5.12	5.68	6.25	6.83
Cash and Bank	4.42	4.60	5.53	7.27	8.15
<b>TOTAL :</b>	<b>42.62</b>	<b>39.71</b>	<b>37.97</b>	<b>37.63</b>	<b>36.93</b>

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<b>PROJECTED PROFITABILITY STATEMENT</b>					
<b>PARTICULARS</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>A) SALES</b>					
Gross Sale	169.92	197.67	220.77	244.46	268.76
<b>Total (A)</b>	<b>169.92</b>	<b>197.67</b>	<b>220.77</b>	<b>244.46</b>	<b>268.76</b>
<b>B) COST OF SALES</b>					
Raw Material Consumed	119.25	139.13	153.04	166.95	180.86
Electricity Expenses	2.36	2.62	2.88	3.14	3.40
Repair & Maintenance	16.99	17.79	22.08	24.45	26.88
Labour & Wages	4.79	5.08	5.53	6.09	6.69
Depreciation	5.20	4.43	3.77	3.20	2.73
<b>Cost of Production</b>	<b>148.59</b>	<b>169.03</b>	<b>187.29</b>	<b>203.83</b>	<b>220.56</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>2.45</b>	<b>2.81</b>	<b>3.13</b>	<b>3.47</b>
<b>Less: Closing Stock /WIP</b>	<b>2.45</b>	<b>2.81</b>	<b>3.13</b>	<b>3.47</b>	<b>3.81</b>
<b>Cost of Sales (B)</b>	<b>146.14</b>	<b>168.68</b>	<b>186.97</b>	<b>203.49</b>	<b>220.22</b>
<b>C) GROSS PROFIT (A-B)</b>	<b>23.78</b>	<b>28.99</b>	<b>33.80</b>	<b>40.97</b>	<b>48.53</b>
	<b>14.00%</b>	<b>14.67%</b>	<b>15.31%</b>	<b>16.76%</b>	<b>18.06%</b>
D) Bank Interest (Term Loan )	3.42	2.79	2.02	1.25	0.48
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	3.78	4.16	4.57	5.03	5.53
F) Selling & Adm Expenses Exp.	8.50	9.88	11.04	12.22	13.44
<b>TOTAL (D+E)</b>	<b>16.24</b>	<b>17.38</b>	<b>18.18</b>	<b>19.06</b>	<b>20.00</b>
<b>H) NET PROFIT</b>	<b>7.54</b>	<b>11.61</b>	<b>15.62</b>	<b>21.91</b>	<b>28.53</b>
	<b>4.4%</b>	<b>5.9%</b>	<b>7.1%</b>	<b>9.0%</b>	<b>10.6%</b>
I) Taxation	0.75	3.48	4.68	6.57	8.56
<b>J) PROFIT (After Tax)</b>	<b>6.78</b>	<b>8.13</b>	<b>10.93</b>	<b>15.34</b>	<b>19.97</b>

COMPUTATION OF MAKING OF MAKHANA SNACKS			
<b>Item to be Manufactured Makhana Snacks</b>			
Manufacturing Capacity per day		200	Kg
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		60,000	Kg
Total Production per Annum		60,000	Kg
Year		Capacity Utilisation	MAKHANA SNACKS
I		45%	27,000.00
II		50%	30,000.00
III		55%	33,000.00
IV		60%	36,000.00
V		65%	39,000.00

COMPUTATION OF RAW MATERIAL					
Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)	
Makhana	60.00	MT	4,00,000.00	2,40,00,000.00	
Seasoning/Flavour	8.00	MT	150000	12,00,000.00	
Edible Oil	10.00	MT	80000	8,00,000.00	
Packing material				5,00,000.00	
<b>Total</b>				<b>2,65,00,000.00</b>	
Total Raw material in Rs lacs					265.00

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)	
I	45%	119.25	
II	50%	139.13	5% Increase in Cost
III	55%	153.04	5% Increase in Cost
IV	60%	166.95	5% Increase in Cost
V	65%	180.86	5% Increase in Cost

<b>COMPUTATION OF SALE</b>					
Particulars	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
Op Stock	-	450.00	500.00	550.00	600.00
Production	27,000.00	30,000.00	33,000.00	36,000.00	39,000.00
	27,000.00	30,450.00	33,500.00	36,550.00	39,600.00
Less : Closing Stock(5 Days)	450.00	500.00	550.00	600.00	650.00
Net Sale	26,550.00	29,950.00	32,950.00	35,950.00	38,950.00
Sale Price per Kg	640.00	660.00	670.00	680.00	690.00
<b>Sale (in Lacs)</b>	<b>169.92</b>	<b>197.67</b>	<b>220.77</b>	<b>244.46</b>	<b>268.76</b>

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b>					
PARTICULARS	I	II	III	IV	V
<b>Finished Goods</b>					
(5 Days requirement)	2.45	2.81	3.13	3.47	3.81
<b>Raw Material</b>					
(5 Days requirement)	1.99	2.32	2.55	2.78	3.01
<b>Closing Stock</b>	<b>4.44</b>	<b>5.12</b>	<b>5.68</b>	<b>6.25</b>	<b>6.83</b>

<b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b>			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	4.44		
Less:			
Sundry Creditors	2.78		
<b>Paid Stock</b>	<b>1.65</b>	<b>0.17</b>	<b>1.49</b>
Sundry Debtors	3.96	0.40	3.57
<b>Working Capital Requirement</b>			<b>5.06</b>
<b>Margin</b>			0.56
<b>MPBF</b>			<b>5.06</b>
<b>Working Capital Demand</b>			<b>5.00</b>

<b>BREAK UP OF LABOUR</b>				
Particulars		Wages Per Month	No of Employees	Total Salary
Supervisor		12,000.00	1	12,000.00
Plant Operator		10,000.00	1	10,000.00
Unskilled Worker		6,000.00	1	6,000.00
Helper		4,000.00	1	4,000.00
Security Guard		6,000.00	1	6,000.00
				38,000.00
Add: 5% Fringe Benefit				1,900.00
Total Labour Cost Per Month				39,900.00
Total Labour Cost for the year ( In Rs. Lakhs)			5	4.79

<b>BREAK UP OF SALARY</b>				
Particulars		Salary Per Month	No of Employees	Total Salary
Manager		12,000.00	1	12,000.00
Accountant cum store keeper		10,000.00	1	10,000.00
Sales		8,000.00	1	8,000.00
Total Salary Per Month				30,000.00
Add: 5% Fringe Benefit				1,500.00
Total Salary for the month				31,500.00
Total Salary for the year ( In Rs. Lakhs)			3	3.78

<b>COMPUTATION OF DEPRECIATION</b>				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		15.00%	10.00%	
<b>Opening Balance</b>	Leased	-	-	-
Addition	-	34.00	1.00	35.00
	-	34.00	1.00	35.00
		-	-	
TOTAL		34.00	1.00	35.00
Less : Depreciation	-	5.10	0.10	5.20
WDV at end of Ist year	-	28.90	0.90	29.80
Additions During The Year	-	-	-	-
	-	28.90	0.90	29.80
Less : Depreciation	-	4.34	0.09	4.43
WDV at end of IInd Year	-	24.57	0.81	25.38
Additions During The Year	-	-	-	-
	-	24.57	0.81	25.38
Less : Depreciation	-	3.68	0.08	3.77
WDV at end of IIIrd year	-	20.88	0.73	21.61
Additions During The Year	-	-	-	-
	-	20.88	0.73	21.61
Less : Depreciation	-	3.13	0.07	3.20
WDV at end of IV year	-	17.75	0.66	18.40
Additions During The Year	-	-	-	-
	-	17.75	0.66	18.40
Less : Depreciation	-	2.66	0.07	2.73
WDV at end of Vth year	-	15.09	0.59	15.68

REPAYMENT SCHEDULE OF TERM LOAN					11.0%		
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
<b>I</b>	Opening Balance						
	Ist Quarter	-	31.50	31.50	0.87	-	31.50
	IInd Quarter	31.50	-	31.50	0.87	-	31.50
	IIIRD Quarter	31.50	-	31.50	0.87	1.75	29.75
	Ivth Quarter	29.75	-	29.75	0.82	1.75	28.00
					3.42	3.50	
<b>II</b>	Opening Balance						
	Ist Quarter	28.00	-	28.00	0.77	1.75	26.25
	IInd Quarter	26.25	-	26.25	0.72	1.75	24.50
	IIIRD Quarter	24.50	-	24.50	0.67	1.75	22.75
	Ivth Quarter	22.75		22.75	0.63	1.75	21.00
					2.79	7.00	
<b>III</b>	Opening Balance						
	Ist Quarter	21.00	-	21.00	0.58	1.75	19.25
	IInd Quarter	19.25	-	19.25	0.53	1.75	17.50
	IIIRD Quarter	17.50	-	17.50	0.48	1.75	15.75
	Ivth Quarter	15.75		15.75	0.43	1.75	14.00
					2.02	7.00	
<b>IV</b>	Opening Balance						
	Ist Quarter	14.00	-	14.00	0.39	1.75	12.25
	IInd Quarter	12.25	-	12.25	0.34	1.75	10.50
	IIIRD Quarter	10.50	-	10.50	0.29	1.75	8.75
	Ivth Quarter	8.75		8.75	0.24	1.75	7.00
					1.25	7.00	
<b>V</b>	Opening Balance						
	Ist Quarter	7.00	-	7.00	0.19	1.75	5.25
	IInd Quarter	5.25	-	5.25	0.14	1.75	3.50
	IIIRD Quarter	3.50	-	3.50	0.10	1.75	1.75
	Ivth Quarter	1.75		1.75	0.05	1.75	-
					0.48	7.00	

Door to Door Period            60 Months  
Moratorium Period                6 Months  
Repayment Period                 54 Months



CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
<b><u>CASH ACCRUALS</u></b>	11.98	12.55	14.70	18.54	22.70
Interest on Term Loan	3.42	2.79	2.02	1.25	0.48
Total	15.40	15.34	16.72	19.79	23.18
<b><u>REPAYMENT</u></b>					
Repayment of Term Loan	3.50	7.00	7.00	7.00	7.00
Interest on Term Loan	3.42	2.79	2.02	1.25	0.48
Total	6.92	9.79	9.02	8.25	7.48
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.23</b>	<b>1.57</b>	<b>1.85</b>	<b>2.40</b>	<b>3.10</b>
<b>AVERAGE D.S.C.R.</b>			<b>2.18</b>		

<b>COMPUTATION OF ELECTRICITY</b>				
<b>(A) POWER CONNECTION</b>				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	35	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
<b>Electricity Charges</b>				4,69,980.00
Add : Minimim Charges (@ 10%)				
<b>(B) DG set</b>				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			<b>0.54</b>	
Total cost of Power & Fuel at 100%				5.24
	<b>Year</b>	<b>Capacity</b>		<b>Amount</b>
				<b>(in Lacs)</b>
	I	45%		2.36
	II	50%		2.62
	III	55%		2.88
	IV	60%		3.14
	V	65%		3.40

## **DISCLAIMER**

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