

MODEL DETAILED PROJECT REPORT

MAKHANA PROCESSING



Disclaimer: This is just a model DPR prepared based on assumptions for reference purpose only. The project cost and financial projections may vary project to project as per technology selection, nature of civil work, price of raw materials etc.

Directorate of Horticulture
Government of Bihar



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Project at a Glance

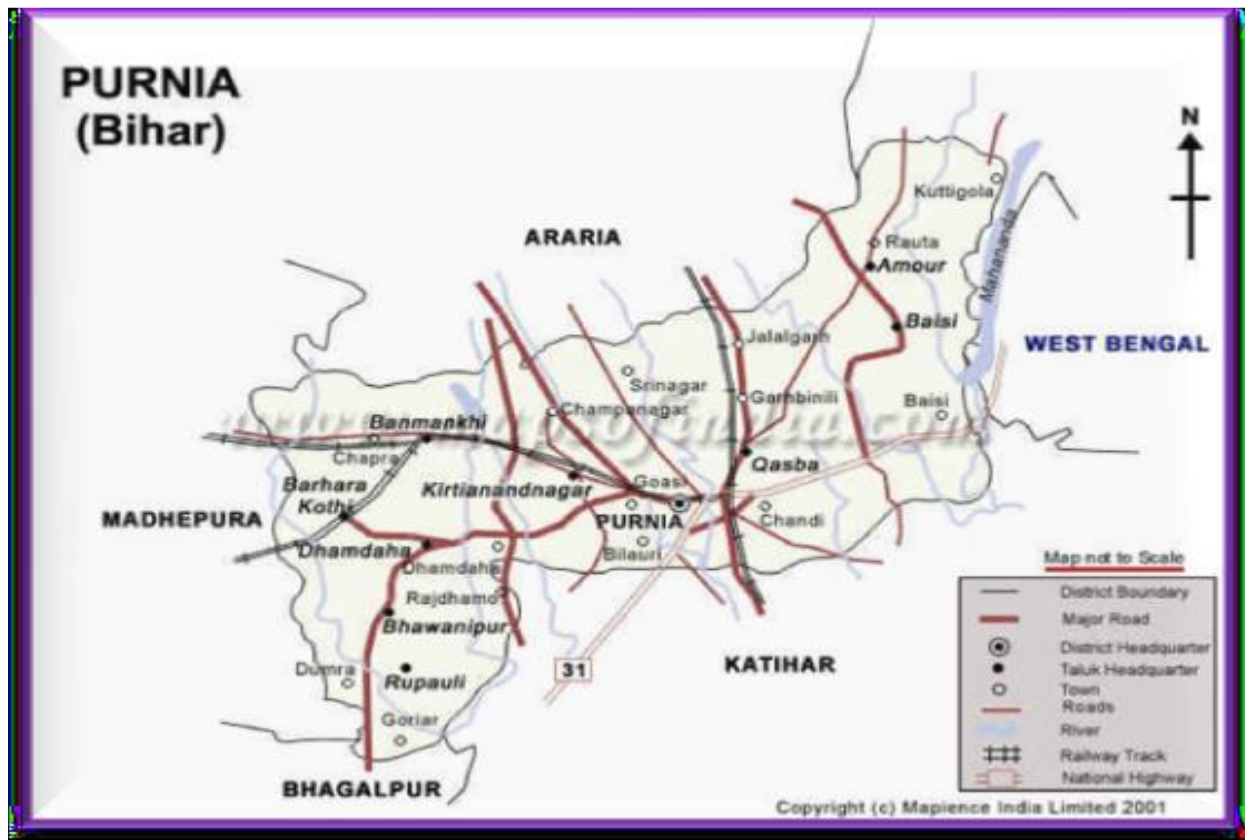
1.	Name of the Unit	:	
2.	Constitution	:	
3.	Date of Incorporation	:	
4.	CIN	:	
5.	PAN	:	
6.	GST		
7.	Registered Office	:	
8.	Factory Address	:	
9.	Name of Directors	:	
10.	Type of Unit	:	
11.	Nature of Project	:	Makhana Pop, Makhana Snacks
12.	Installed Capacity at 100% Capacity Utilisation	:	200 MT/Annum
13.	Cost of the Project	:	
14.	Promoter's Contribution	:	
15.	Proposed Term Loan/ Government Grant	:	
16.	Requirement of Cash Credit Limit	:	
17.	Proposed Employment	:	
18.	Power Load	:	40 Kva
19.	Financial Indicators	:	

Introduction

Gorgon nut or Fox nut, commonly known as Makhana, is mainly cultivated in the states of Bihar, West Bengal and Assam. Bihar is the leading producer of makhana accounting for more than 85% of the total production of India. Madhubani, Darbhanga, Sitamarhi, Saharsa, Katihar, Purnia, Supaul, Kishanganj and Araria districts are the major producers of Makhana in the state. Cultivation and processing of makhana is a highly cumbersome and labour-intensive activity involving manual collection of seeds, drying, roasting and popping, storage and grading.

As per the estimates of the National Research Center for Makhana, Darbhanga (ICAR), total area under makhana cultivation in India is estimated to be 15000 Ha. It yields 120,000 MT of makhana seeds, which after processing yields 40,000 MT of makhana pop. The estimated value of the production at farmers end is Rs. 250 Crore and it generates revenue of Rs. 550 Crore at trader's level.

Though, Bihar is the major producer of makhana in the country, yet the major wholesale markets are Khari Bowli (New Delhi), Nayaganj (Kanpur), Gola Dinanath and Vishweshwarganj (Varanasi) etc. It is also exported to USA, Middle East etc.



Clusters of districts Darbhanga, Madhubani and Purnia has traditionally been the production hub of makhana. However, there is a gradual shift in the recent years with emergence of district Katihar and Purnia as an important centre for makhana production and trade.

Gullobara bazar in Darbhanga city is a major trading centre in district Darbhanga and approximately 2000 MT of makhana is traded annually. Madhubani town is another important trading hub of the state where around 3500 MT of makhana is traded every year. Approximately 3000 MT of makhana is traded annually in the district of Katihar and about 3500 MT in Purnia. Katihar town and Kada Gola are the two important markets in district Katihar, while Harda, Sapni, Khushkibagh, Belauri and Gulabbagh are important markets in district Purnia.

1. Background

Definition:

Makhana (Foxnut), also known as Gorgon Nut, is grown in India, Korea, Japan and Russia. It comes from the lotus seeds. Foxnut (Makhana) can be mixed with vegetables, popped like corn and made into yummy porridge. Makhana has been proven to be high nutrients food which is rich in medicinal properties and good for daily health diet. The nutrients contained are vitamin, minerals and fibers. Makhana is a high value commodity commercially cultivated only in Bihar and certain parts of eastern India. Besides this, it is grown as a natural crop in Madhya Pradesh, Rajasthan, Jammu & Kashmir, Tripura and Manipur.

Global Scenario

The Makhana market will grow at a CAGR of almost 7% during the forecast period of 2019-2023. The global Makhana market size will grow by USD 72.5 million during 2019-2023. Makhana is highly popular in countries such as India, China, Japan, and Thailand. The potential of the Makhana market in Western countries such as the UK and the US is still untapped. With growing consumer awareness about the several health benefits of Makhana, its demand is expected to increase rapidly in coming years. The presence of large number of untapped markets will also encourage new players to enter the market. The demand for Fox nut is increasing and is considered as a substitute for popcorn.

CHINA

In China, it has been cultivated in the Hainan and Taiwan islands for 3 – 4 millennia and widely used in Chinese medicine. Raw makhana seed powder is an essential ingredient of the baby foods in China. Its distribution includes the islands of Taiwan (Formosa) and Kyusyu, Shikoku and Honshu in Japan.

The most common use of the seed is in the form of lotus seed paste, which is used extensively in Chinese pastries as well as in Japanese desserts.

Dried lotus seeds must be soaked in water overnight prior to use. They can then be added directly to soups and congee or used in other dishes. Fresh lotus seeds are sold in the seed heads of the plant and eaten by breaking the individual seeds out of the cone-shaped head and removing the rubbery shell. Crystallized lotus seeds, made by drying lotus seeds cooked in syrup, are a common Chinese snack, especially during Chinese New Year.

UNITED KINGDOM

Nuto a London-based start-up have started producing popped lotus seeds manufactured in India and shipped to the U.K. the supply of fox nut is stable, as it is harvested twice per year. CEO of the company was inspired to create a brand that is healthier and provides savoury snacks to the masses. With growing

popularity of fox nut in France, Germany, and Italy has also created high growth opportunity of the fox nut producers, due to the large customer base in these regions.

COLOMBIA

Lotus seeds are also common in the northern part of Colombia, especially in cities like Barranquilla and Cartagena. Locals usually refer to lotus seeds as "martillo." Fresh lotus seeds are sold in street markets and are generally eaten raw by the locals.

Driving factors for Makhana/ Fox nut

- Increasing demand for healthy food from an increasingly health conscious consumer base.
- A great snack food for diabetics and heart patients as they contain the good fat and have a low quantity of saturated fats.
- Growing popularity of snack food category (ready-to-eat packed foods)
- Rising demand for Demand for Gluten Free Protein Foods
- Rising Use in the Cosmetic Products.

MAKHANA SECTOR – INDIA

INDIA

A significant contributor to demand for fox nut when two Indian players Makhanawala's and Too Yum introduced packed fox nut snacks including chatpata masala and classic homestyle flavors that has undoubtedly changed the consumption for fox nut in the region.

Bihar accounts for more than 85 percent of the makhana produced in the country. Northern part of Bihar, constituting districts of Madhubani, Darbhanga, Sitamarhi, Saharsha, Katihar, Purnia, Supaul, Kishanganj and Araria, is agro climatically suitable for makhana cultivation. As per the estimates of the National Research Center 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 5 pop. The estimated value of the production at farmers end is Rs 250 Crore and it generates revenue of Rs 550 Crore at traders' level.

Source: website of agriexchange.apeda.gov.in

2. Project Background

The unit has proposed to set up a 200 MT/Annum makhana pop and snacks processing unit at XYZ location. Proposed project would include warehouse for storage, processing and packing facilities of makhana pop and snacks. This unit will be equipped with modern machineries for cleaning, sorting, grading, processing and packing equipment. Makhana will be packed for different consumer and aesthetic and standard packaging will be done to retain the quality of the product and increase shelf life and will fetch better price of the produce. After processing, the products would be supplied to the market through distributors/ wholesalers/ retailers.

Current status of the unit:

- a. **Items to be manufactured: Makhana Pop and snacks**
- b. **Capacity of the plant:** 200 MT/Annum.
- c. **Source of power generation/electricity:** Electricity form BSPHCL/SBPDCL, DG Set
- d. **Source of water supply:** Own Borewell
- e. **Connectivity to road/railways:** NH/SH details along with distance
- f. **Mode of transport:** Pickup/Truck/Others
- g. **Market:** Details of local market/other market
- h. **Employment Generation:** 9 nos.
- i. **Marketing:**
- j. **Waste disposal:** ETP/STP/Others

3. Organizational and Promoters Details

Organizational details

The M/s XYZ is a proprietorship/partnership/private company is associated with fruit trading for about 10 years. The unit was incorporated on as private limited company under Company's Act. The authorized capital of the company is Rs. lakh and the paid-up capital is Rs. as onThe details of the unit as per MCA website (only for private/public ltd. companies) are given below:

Company Master Data	
CIN	
Company / LLP Name	
ROC Code	
Registration Number	
Company Category	
Company Sub-Category	

Company Master Data	
Class of Company	
Authorized Capital(Rs)	
Paid up Capital(Rs)	
Number of Members(Applicable in case of company without Share Capital)	
Date of Incorporation	
Registered Address	
Email Id	
Whether Listed or not	
Date of last AGM	
Date of Balance Sheet	
Company Status(for e-filing)	

Directors/Signatory Details			
DIN/PAN	Name	Begin date	End date

Promoters' Background

The proprietor/ partners/ promoters of the firm has experience in trading of makhana in local as well as national market. He has identified makhana as a profitable business seeing its ever-increasing demand in the locally as well globally. Brief profile of the proprietor/ partners/ promoters is given below:

Brief profile of promoters is given below:

- a) **Mr. ABC**
- b) **Mrs. XYZ**
- c) **Mr. DEF**

Network: The details of the network of the unit is given below:

Particulars		Rs. In lakh
Movable assets	A	
	B	
	C	
	Subtotal (A)	
Immovable assets	A	
	B	
	C	
	Subtotal (B)	
	Total	

The total net-worth is more than the proposed grant of the unit.

4. Project Description & Flow Sheet:

Technology for the unit has been chosen carefully keeping in mind the best practices observed in India and local processes that may add unique value to the final produce. The proposed technology has also taken into consideration the market factors affecting the quality of the final produce. The technology has been arrived at after detailed discussion with the Makhana experts and local stakeholders. Details of the technology and process are given below:

Makhana which is cultivated in ponds, collection is done through a specialized process and is done only by experienced workers who gained this knowledge by generations. The growing, collection and puffing are hereditary traditional knowledge of Mallah community of Bihar. After collection makhana passed to various stages till it comes to shape of Puffed.

1. COLLECTION, POPPING AND STORAGE OF MAKHANA

The project would source popped makhana from the villages of district Purnia, Darbhanga and Madhubani districts which accounts for 90% of makhana production of Bihar, estimated 75,000 tons of its annual production.

The project site location is also at a strategic location where there are about 10 families which are into makhana popping business. They collect makhana from various places of Darbhanga, Madhubani, Purnia etc regularly and do the popping-up. During the cultivation season more families of makhana popping up community do this business in this village, which would be advantageous for the proposed unit in sourcing raw material. After collecting Popped Makhana it is then stored in warehouse for further processing.

2. CLEANING SORTING AND GRADING

Popped makhana is stored in old jute bag and PP bag in the warehouse. For the processing of makhana following steps are taken.

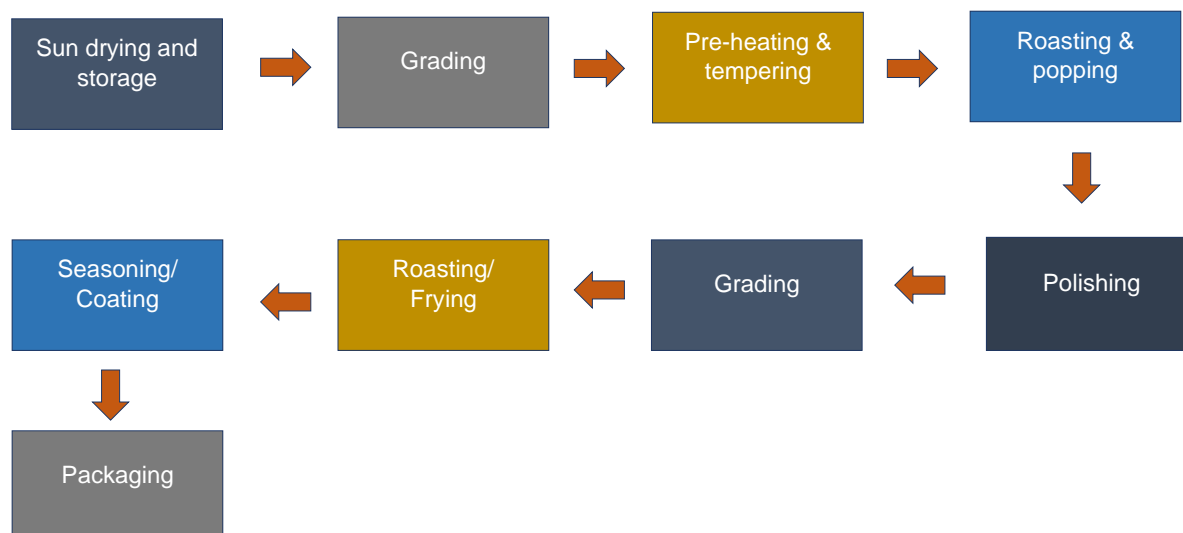
- **Dust and foreign matter removing**
Popped makhana is subjected to various cleaning process where dust, seed portions, un puffed makhana, foreign matter, are removed mechanically.
- **Grading and Polishing of Makhana**
Cleaned Makhana is graded into 4 sizes, 1, Grade A, 2, Grade B, 3, Chipta, 4, Thorri and wastage. After cleaning and size grading Makhana is packed as per the market and sales requirement.

3. PACKING OF MAKHANA POP

Makhana are packed in different sizes as per the market requirement. It varies from 250 Grams to 20 kgs pack

Packaging Facility: The packaging facility in the unit would be between 250 gm to 20 kg. The demand for packaged makhana due to changing lifestyle, awareness towards quality and food standards as compared to traditionally sold loose makhana. Makhana is hygroscopic in nature and becomes soft when is exposed to atmosphere so standard and aseptic packing is very important for increasing its shelf life and demand generation. Standard nitrogen packing would be done in order to maintain its crispness and contamination with dust and microbes.

Manufacturing Process



5. Procurement strategy of raw material & other inputs

The unit is proposed to be set up at a location which has proximity to the production hub of Makhana i.e. Madhubani, Darbhanga and Purnia in Bihar.

Backward Linkages:

The promoter has well established backward linkages for its proposed units and it is expected that the raw material can be procured from the local area.

Forward Linkages

The promoter has very good connect with the buyers and as he was already in the trading business of Makhana so he is well aware of entire supply chain.

6. Marketing strategy

Makhana has a very good demand in national as well as in international market. The consumption of Makhana as a snack is ever increasing due to its nutritional value and taste. Promoter has planned to do a aesthetic packaging as well cater to both normal as well seasoned makhana in the market. The product has great acceptance in the local market. Distribution network shall be given extra emphasis, it is planned to sell the product through the identified marketing channel, franchise model, marts etc.

Quality should be emphasized at each step right from the beginning to the marketing of the Product. Over the years, an image of high-quality products should be cultivated.

Promoters would appoint distributors in targeted towns of Bihar and surrounding states like West Bengal, Jharkhand, Uttar Pradesh. Contacts with retailers of similar kinds will be made and products would be sold in the market with help of them. The product made in this unit will be in the line with top range of products with better quality at the same time cost effective. Company would be sharing more profits with the distributors and retailers.

Company will also explore possibility of marketing their produce to retails shops like Big Bazar, Reliance Trends, Malls etc. It will also try to partnership with local and other hotels and restaurants with good offers

to attract demand of its product. It is assumed that due high quality, cost effectiveness and aesthetic packaging, sale of products may not face much problems.

7. List of Statutory Clearances Required

A suggestive list of clearances that unit would require to take:

S. No.	Approval and clearances required	Department/ Offices to be consented	Status
1	State Investment Promotion Board, Stage – I clearance	Department of Industries	
2	Consent to Establish	Bihar State Pollution Control Board	
3	GST registration	Commercial Taxes	
4	Change in land use	Land Revenue Dept	
5	Electricity Connection	North/South Bihar Power Distribution Company Ltd.	
6	Registration under Factories Act	Office of Inspector of Factories	

8. Land Details

Land Details

In order to set up this facility of the proposed capacity, a land size of approx. 10000 sq. ft. would be ideal however this may vary with increase in capacity.

The land proposed for the unit Details of the proposed land is given below:

Sale deed dated 18.10.2016 in the name of M/s XYZ, cost of the land is Rs. 16.00 lakh

Khata no.	Plot no.	Area	Boundary
Total		10000 sq. ft.	

The total land area is decimal and is in the name of the of the proprietor/firm/company. The proposed land of the unit is an industrial land as per CLU dated Character of the land. The cost of the land is Rs. lakh/ the proposed land is a leased land for a period of years.

(In case of leased land the minimum lease duration should be 30 years)

9. Project Cost

The proposed project cost of the unit is Rs. 170.76 lakh, the details of the project cost is given below:

Project Cost			
S. No.	Particulars	Amount (Rs. Lakh)	% of total project cost
1	Land	-	0.00%
2	Land and Site Development Cost	16.00	9.29%
3	Plant Area & Building Development Cost	47.72	27.69%
4	Plant and Machinery	61.80	35.87%
5	Misc. fixed assets	23.41	13.59%
6	Preliminary and Pre-operative Expenses	6.72	3.90%
7	Contingency	2.98	1.73%
8	Margin Money for Working Capital	13.68	7.94%
	Total	172.31	100.00%

a. Investment in land and land development

- Investment in land: Proposed land of the project is leased land in name of the company and since it is a leased land no cost is considered towards grant calculation.
- Investment in land development work: The total investment in land development work is **Rs. 16.00 lakh which is 9.73%** of the total project cost. The details of land development work is given below:

Land Development Details		
S. No.	Particulars	Amount (Rs. Lakh)
1	Boundary wall main gate/land development	8.00
2	Domestic sewerage	3.00
3	PCC internal plant road	5.00
	Total	16.00

b. Investment in civil work

The Master Plan has been prepared in accordance with the requirement of the project. Based on the requirement of machines and equipment, the facilities have been planned and user amenities integrated. The planning of the building structures and infrastructure facilities has been done keeping in view the entire functional requirements and location of the various units in the site has been fixed to facilitate smooth process flow.

Proposed master plan meets all plot development and planning norms are as per Standards of the State Govt. Built-up area and open space has been considered as per local by-laws applicable for industrial buildings. (Factory building either be RCC or PEB structure so the layout plan and cost may vary project to project same will be captured in an applicant's DPR).

Promoters propose to construct plant hall, raw material godown, storeroom, finished godown and plant foundation. The proposed estimate of civil work is Rs. 47.72 lakh, and the details are given below:

Proposed Civil Work details:

Proposed civil work			
S. No	Component	Area (sq. ft.)	Amount (Rs. Lakh)
1	Plant hall & office		28.54
2	Raw material godown		4.72
3	Storeroom 1 st floor		3.85
4	Finished godown		8.61
5	Plant foundation		2.00
Total			47.72

Rs. 47.72 lakh has been considered towards civil work for grant calculation.

Plant & machinery

The company proposes to install latest and standard machines from the reputed Indian/International manufacturers. The total proposed investment in plant & machinery is Rs.61.80 lakh. Details of the proposed machinery is given below:

Plant & machinery*			
S. No.	Name of Machinery & Specification	Unit no.	Total Cost
Makhana Popping machine			
1	Roasting Machine cap 100Kgs/hour	1	27.36
2	Popping Machine Model Vardan-100	1	
3	Popping Machine Model Vardan-30	4	
4	Cleaning Machine	1	
5	Pulverizer	1	
Roasting, mixing & Packing machine			
1	Collar type pouch packing machine with load cell	1	17.66
2	Coating Pan	1	
3	Roaster Single cap 150Kg/ hour	1	
4	Dryer 250 Kg/batch	1	
5	Conveyor with multifunction feeder	1	
6	Makhana grading Machine	1	
7	Makhana Seed Grader	1	
8	Oil Spray system	1	
9	Online packaging for raw Makhana	1	
10	Online packaging for Makhana Powder	1	
11	Trays for Roasted Makhana	1	
Humidifier, Packaging machine and Compressor			

Plant & machinery*			
S. No.	Name of Machinery & Specification	Unit no.	Total Cost
1	De-humidity fire NS50	1.00	0.41
2	Auto Farm Fill & seal Machine collar type, 2-head, linear weigher	1.00	8.67
3	Nitrogen Generator -1242		6.95
4	Digital Oxygen analyzer		
5	Compressor	1.00	0.75
Total			61.80

*The make and specification of P&M may vary project to project based on the quotations from different suppliers.

As per scheme guidelines Rs. 61.80 lakh has been considered towards grant-in-aid calculation.

Misc. Fixed Assets

In order to ensure smooth operation of the unit, it would also require certain miscellaneous fixed assets apart from above listed plant & machinery. The miscellaneous fixed assets would include, DG set, office furniture, pick van, etc. Cost of these assets is estimated at Rs. 23.41 lakh.

Misc. Fixed Assets		
S. No	Particulars	Amount (Rs. Lakh)
1	Pick up Van	8.00
2	Office Furniture	2.91
3	DG Set	10.00
4	Office Accessories	2.50
Total		23.41

Preliminary & pre-operative expenses

Pre-operative expenses have been considered considering the tentative expenditure to be incurred related to loan appraisal fees, consultancy fees, administrative exp and interest on term loan during construction period.

Margin money for the working capital

We have worked out the margin money for working capital requirement as per project need and its smooth operation, the proposed amount of margin money is Rs. 12.17 lakh @25% of the working capital requirement. Detail is given in the financial section of the report.

Electricity

The unit will require power load of KVA from North/ South Bihar Power Distribution Company Ltd. for this project. Estimate of power requirement is enclosed with the financial part of this report.

Water

The estimated water consumption is approx. _____KL per day and two deep bore wells would be required to meet water requirement of the unit.

Manpower

An estimate of 9 manpower has been prepared based on the equipment and operations involved. An estimate of manpower cost is given below:

S. No	Particulars	No of Employee	Monthly Salary	Total Salary Per Month (Rs.)	Total Salary Per Annum (Rs.)
A	Technical Staff				
1	Manager	1	15,000	15,000	180,000
2	Storekeeper	1	10,000	10,000	120,000
3	Accountant	1	10,000	10,000	120,000
4	Operator, fitter, electrician	2	12,000	24,000	288,000
5	Helper/ Skilled worker	2	8,000	16,000	192,000
B	Unskilled Staff				
6	Peon/Security Guard	2	8,000	16,000	192,000
	Total	14			1,092,000
	Total Direct Wages (Rs. In lakh)			0.91	10.92

10. Techno-commercial viability of the project

- Technical viability: Project has proposed to install modern and standard machineries from reputed suppliers for production process. It has proposed proper marketing strategy for the sale of the goods in local as well adjoining districts. The project has already been approved for available term loan from bank and promoters of the unit are aware about the business and will also deploy trained and technical staff for running the unit.
- Commercial viability: The financial projections of the unit are positive with standard financial ratios, the list of important financial ratios are given below:

Gross Profit Ratio	24.48	24.04	23.73	23.78	23.46
Net Profit Ratio	9.02	10.52	11.64	12.70	13.38
Current Ratio	1.70	2.31	2.93	3.59	4.30
DSCR	2.61	2.78	2.92	3.06	3.20
BEP	0.55	0.45	0.37	0.31	0.25
IRR	16%				

11. Financial Analysis Assumption

	Kg/hr	Hours		
-				
Production per day from Plant	50	16	0.8	MT
No. of Working Days in a year			250	Days
Total Production per annum @ 100% Capacity Level			200	MT
Total Installed Capacity			200	MT
Calculation of Product Mix:				

Installed Capacity - @ 100 % Installed Capacity						200	MT
Product Mix:-						100.00%	
Makhana						90.00%	
Loss						10.00%	
Production:							
Makhana						180.00	
Loss						20.00	
		<u>Total Installed Capacity</u>					
		<u>(MT)</u>				200.00	-

Working Capital Requirements

Sl No	Particular	Stocking Period in Month	Ist Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
1	Raw Materials	3.00	53.28	57.72	62.16	66.60	71.04
2	Consumable Stores & Packing Material	1.25	0.00	0.00	0.00	0.00	0.00
3	Finished Goods	0.50	11.00	13.75	13.75	16.50	16.50
4	Receivables	0.25	5.96	6.65	7.22	7.68	8.25
5	Expenses for One Month	0.50	0.64	0.70	0.77	0.85	0.93
	Total Current Assets		70.88	78.82	83.90	91.63	96.73
6	Less: Sundry Creditors	1.00	22.20	19.61	21.09	22.57	24.05
7	Working Capital Gap		48.68	59.21	62.81	69.06	72.68
8	Total Required Margin		12.17	14.80	15.70	17.26	18.17
9	Permissible Bank Finance		36.51	44.41	47.11	51.79	54.51
10	Actual Bank Borrowing		35.00	35.00	35.00	35.00	35.00
	on Stock		21.00	21.00	21.00	21.00	21.00
	on Book Debts		14.00	14.00	14.00	14.00	14.00
11	Actual Margin		13.68	24.21	27.81	34.06	37.68

Revenue Projections

Sl No	Particulars	Ist Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
1	Installed Capacity (In MT)	200	200	200	200	200
2	Product Mix					
	-	100%	100%	100%	100%	100%
	Makhana	90%	90%	90%	90%	90%
	Loss	10%	10%	10%	10%	10%
3	Product wise capacity	200	200	200	200	200
	Finished goods--90%	180	180	180	180	180
	Loss-10%	20	20	20	20	20
4	Capacity Utilisation	60%	65%	70%	75%	80%
	Production (In MT)					
	Makhana					
	Actual Production	108.00	117.00	126.00	135.00	144.00
	Add: Opening Stock of FG (In MT)	-	4.00	5.00	5.00	6.00
	Less: Closing Stock of FG (In MT)	4.00	5.00	5.00	6.00	6.00
	Value of Opening Stock (Rs. In lacs)	-	11.00	13.75	13.75	16.50
	Value of Closing Stock (Rs. In lacs)	11.00	13.75	13.75	16.50	16.50
	Quantity to be sold (In MT)	104.00	116.00	126.00	134.00	144.00
	Selling Rate per MT	275,000	275,000	275,000	275,000	275,000
	Sales Value (Rs. In lacs) (A)	286.00	319.00	346.50	368.50	396.00
5	Total Sales Value (Rs. In lacs) (A)	286.00	319.00	346.50	368.50	396.00
6	Closing Stock of Finished Goods (Rs. In lacs)	11.00	13.75	13.75	16.50	16.50

Fund Flow Statement

<u>SL. NO.</u>	<u>PARTICULAR</u>	1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
	<u>CASH INFLOW</u>					
1	Profit before Tax	34.86	45.37	54.49	63.24	71.59
2	Add:- Depereciation	18.95	16.59	14.54	12.75	11.19
3	Priliminery Exps. W.O.	-	-	-	-	-
4	Cash Accurals (1+2+3)	53.81	61.96	69.03	75.99	82.78
5	Receipt of capital subsidy from Bihar Govt.					
6	Increase/(Decrease) in C.L.	22.20	(2.59)	1.48	1.48	1.48
7	Contribution by Shareholder/Promoter	43.08	-	-	-	-
8	Increase in Term Loan from Bank	129.23				
9	Increase in Un. Sec. Loan					
10	Increase in Working Capital	35.00	-	-	-	-
	A.Total (Rs.)(4 to 14)	283.32	59.37	70.51	77.47	84.26
	<u>CASH OUTFLOW</u>					
1	Preliminery & Preoperative Expenses	-				

2	Increase in Current Asset	90.24	22.88	30.01	27.65	35.01
3	Increase in Cap. Expenditure	158.63				
4	Decrease in Term Loan	18.46	18.46	18.46	18.46	18.46
5	Investment	-	-	-	-	-
6	Dividend Paid	-	-	-	-	-
7	Income Tax Paid	9.06	11.80	14.17	16.44	18.61
B.Total (Rs.) (1 to 9)		276.39	53.14	62.64	62.55	72.09
C.Surplus/Deficit from Project (A-B)		6.92	6.24	7.87	14.92	12.17
D. Opening Balance of Cash & Cash Equivalent		-	6.92	13.16	21.03	35.95
E. Closing Balance of Cash & Cash Equivalent(C+D)		6.92	13.16	21.03	35.95	48.12
Balance Sheet Cash & Bank		6.92	13.16	21.03	35.95	48.12

Particulars	Ist Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
<u>Liabilities</u>					
Capital	43.08	43.08	43.08	43.08	43.08
Reserve & Surplus	25.79	59.37	99.69	146.49	199.47
Term Loan	110.77	92.31	73.85	55.38	36.92
Bank Borrowing for Working Capital	35.00	35.00	35.00	35.00	35.00
Sundry Creditors	22.20	19.61	21.09	22.57	24.05
Provision for Taxation	9.06	11.80	14.17	16.44	18.61
Total	245.90	261.16	286.87	318.96	357.13
<u>Assets</u>					
Gross Block	158.63	158.63	158.63	158.63	158.63
Less- Accumulated Deprection	18.95	35.55	50.09	62.84	74.03
Net Block	139.68	123.08	108.54	95.79	84.60
<u>Current Assets</u>					
<u>Inventory</u>					
Raw Materials	53.28	57.72	62.16	66.60	71.04
Consumables Stores & Packing Materials	0.00	0.00	0.00	0.00	0.00
Closing Stock	11.00	13.75	13.75	16.50	16.50

Receivables	5.96	6.65	7.22	7.68	8.25
<u>Other Current Assets</u>					
Taxation Advance	9.06	11.80	14.17	16.44	18.61
Other Current Assets	20.00	35.00	60.00	80.00	110.00
Cash & Bank Balances	6.92	13.16	21.03	35.95	48.12
Miscellaneous Expenditure (not w/o)	-	-	-	-	-
Total	245.90	261.16	286.87	318.96	357.12

Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
<u>Sales</u>	286.00	319.00	346.50	368.50	396.00
Less- Duty & Taxes	-	-	-	-	-
Net Sales	286.00	319.00	346.50	368.50	396.00
Other Income	-	-	-	-	-
Total	286.00	319.00	346.50	368.50	396.00
Variable Cost					
Raw Materials Consumed	213.12	230.88	248.64	266.40	284.16
Consumables & Packing Materials	0.02	0.02	0.03	0.03	0.04
Wages & Salary	10.92	10.92	12.01	13.21	14.53

Power	2.52	2.78	3.06	3.34	3.64
Repair & Maintenance	0.15	0.17	0.18	0.20	0.22
Other Manufacturing Expenses	0.25	0.30	0.36	0.43	0.52
Cost of Production	226.98	245.07	264.28	283.62	303.11
Add: Opening Stock of Finished Goods	-	11.00	13.75	13.75	16.50
Less: Closing Stock of Finished Goods	11.00	13.75	13.75	16.50	16.50
Cost of Sales	215.98	242.32	264.28	280.87	303.11
<u>Gross Profit :-</u>	70.02	76.68	82.22	87.63	92.89
Selling & Administrative Expenses	1.43	1.60	1.73	1.84	1.98
- Other Selling & Adm. Exps.	1.43	1.60	1.73	1.84	1.98
Profit before Interest & Depreciation	68.59	75.08	80.49	85.79	90.91
Depreciation	18.95	16.59	14.54	12.75	11.19
Profit before Interest & Taxation	49.64	58.49	65.95	73.04	79.72
Interest on					
Term Loan	11.63	9.97	8.31	6.65	4.98
Working Capital	3.15	3.15	3.15	3.15	3.15
Total Interest	14.78	13.12	11.46	9.80	8.13
Profit before Taxation	34.86	45.37	54.49	63.24	71.59
Current Tax	9.06	11.80	14.17	16.44	18.61
Deffered Tax	-	-	-	-	-
<u>Profit after Tax</u>	25.79	33.57	40.32	46.80	52.98

Add: Profit B/f from Previous Year	-	25.79	59.37	99.69	146.49
Balances transfer to Reserve & Surplus	25.79	59.37	99.69	146.49	199.47

SI No.	Particular	Ist Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
1	Profit Before Taxation	34.86	45.37	54.49	63.24	71.59
2	Add: Depreciation	18.95	16.59	14.54	12.75	11.19
3	Less: Depreciation	18.95	16.59	14.54	12.75	11.19
4	Taxable Income	34.86	45.37	54.49	63.24	71.59
5	Tax as per normal provision @26%	9.06	11.80	14.17	16.44	18.61
6	Income Tax provision	9.06	11.80	14.17	16.44	18.61

Financial Ratios

Gross Profit Ratio	24.48	24.04	23.73	23.78	23.46
Net Profit Ratio	9.02	10.52	11.64	12.70	13.38
Current Ratio	1.70	2.31	2.93	3.59	4.30
DSCR	2.61	2.78	2.92	3.06	3.20
BEP	0.55	0.45	0.37	0.31	0.25
IRR	16%				

SI No.	Particular	Total	Ist Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
1	Profit after Taxation	199.47	25.79	33.57	40.32	46.80	52.98
2	Interest on Term Loan	41.54	11.63	9.97	8.31	6.65	4.98
3	Deferred tax Liability	-	-	-	-	-	-
4	Depreciation	74.03	18.95	16.59	14.54	12.75	11.19
5	Preliminary Expenses w/o	-	-	-	-	-	-
	Total	315.04	56.38	60.14	63.17	66.20	69.15
1	Repayment of Term Loan	92.31	18.46	18.46	18.46	18.46	18.46
2	Interest on Term Loan	15.75	3.15	3.15	3.15	3.15	3.15
	Total	108.06	21.61	21.61	21.61	21.61	21.61
	DSCR (Gross)	2.92	2.61	2.78	2.92	3.06	3.20

SI NO	Particulars	1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
A	Net Sales	286.00	319.00	346.50	368.50	396.00
	Add: Closing Stock of F.G	11.00	13.75	13.75	16.50	16.50
	Less: Opening Stock of F.G	-	11.00	13.75	13.75	16.50
	Total	297.00	321.75	346.50	371.25	396.00
B	Variable Cost					
	Raw Materials Consumed	213.12	230.88	248.64	266.40	284.16
	Consumables Packing Materials	0.02	0.02	0.03	0.03	0.04
	Wages & Salary	10.92	10.92	12.01	13.21	14.53
	Power & Fuel	2.52	2.78	3.06	3.34	3.64
	Other Manufacturing Expences	0.25	0.30	0.36	0.43	0.52
	Repair & Maintenance	0.15	0.17	0.18	0.20	0.22
	Other Selling & Administrative Exps	0.29	0.32	0.35	0.37	0.40
	Interest on working Capital	3.15	3.15	3.15	3.15	3.15
	Total	230.42	248.54	267.77	287.14	306.65
C	Contribution	66.58	73.21	78.73	84.11	89.35
	P/V Ratio	22.42	22.75	22.72	22.66	22.56
D	Fixed & Semi-Variable Exps.					
	Salaries	5.46	5.46	5.46	5.46	5.46
	Other Selling & Adm.Exps. (50%)	0.72	0.80	0.87	0.92	0.99
	Interest on Term Loan & Other					

		11.63	9.97	8.31	6.65	4.98
	Depreciation	18.95	16.59	14.54	12.75	11.19
		36.76	32.82	29.17	25.78	22.63
	BREAK EVEN POINT	0.55	0.45	0.37	0.31	0.25

12. Project impact

As discussed earlier, the project will have various positive impacts such as:

Infrastructure for value addition: This unit would aim to integrate and streamline existing value chains in the region by creating centralized infrastructure for value addition and preservation. The unit will thus provide benefits on cost, quality and convenience for sustainable growth in the market driven economy. The unit has been envisaged in a way that it would ensure better returns to all players in each level of value chains ranging from procurement, storage, processing, packaging to distribution of food commodities through vertical integration of functions and horizontal linkages of destinations.

Reduction of Wastages: The infrastructure created at the unit along with the integration of backward and forward linkages would lead to more efficient supply chains and reduction of wastages. This would provide higher value realization to all players in the supply chain including the farmers.

Creation of employment: The project shall generate employments. It is estimated that the it would generate direct employment of about workers and indirect employment of another workers. Most of the manpower requirement will be met from the local area.

Return to farmers: The unit will be benefiting farmers in the region by increasing the returns for farmers by decreasing wastages and increasing demand of the agricultural produce

13. Recommendation

M/s XYZ FOOD PROCESSING PRIVATE LIMITED was incorporated under the Companies Act, 1956 on dated bearing registration number The authorised share capital of the company is lakh and the paid up share capital is lakh

The project is estimated to cost lakh which is as per bank appraisal report and quotations received from suppliers and estimates given by CA and CEs.

The detailed breakup of the cost of the Project is given below:

The cost of the project is proposed to be financed through a mix of equity, grant from Govt. of Bihar and term loans detailed as follow:

The project is eligible for a grant amount of lakh the rate of 15/25% of the Capital Expenditure under the BAIPP 2020.

As per the guidelines of the policy the total grant amount is released in two equal installments. The first installment shall be released on installation of plant & machinery and the last instalment shall be released on successful attaining commercial production.