



# *Seed Processing Unit Model DPR*

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1.	Name of the Unit	:	
2.	Constitution	:	
3.	Date of Incorporation	:	
4.	CIN	:	
5.	PAN	:	
6.	GST		
7.	Registered Office	:	

## ***1. Project at a Glance***

8.	Factory Address	:	
9.	Name of Directors	:	
10.	Type of Unit	:	
11.	Nature of Project	:	Seed Processing Unit
12.	Installed Capacity at 100% Capacity Utilization	:	2 MT/Hr. in 3 seasons (Kharif, Rabi and Zaid)
13.	Cost of the Project	:	INR 76.03 Lakh
14.	Promoter's Contribution	:	INR 41.82 Lakh
15.	Proposed Term Loan	:	INR 34.21 Lakh
16.	Requirement of Cash Credit Limit	:	INR 13Lakh
17.	Proposed Employment	:	Direct Employment - 19 nos.
18.	Power Load	:	21kW

## 2. Introduction

Seed being the most critical element in crop production system has been used since thousands of years. People used quality cleaned seed by winnowing. This is still an important process, but it is no longer adequate to supply the kind of seed needed by farmer.

Seed processing is a vital part of the seed production needed to move the improved genetic materials of the plant breeder into commercial channels for feeding the rapidly expanding world population. The farmer must get the quality seed that is free from all undesired materials because farmer's entire crop depends on it.

Seed sold to farmers contains weed or crop seed or inert material that make them unfit for sale without processing. These seed have various admixtures such as stems, seeds of other crops, spoil and sand particles, weeds, which hamper the germination quality and cropping yield.

Seed processing is an important constituent before seed is ready for use. There are various agencies government or private which are responsible for upgrading seed, improving planting condition of seed.

Advantages of seed processing:

1. This makes more uniform planting rates by proper sizing
2. Improve seed germination quality
3. Prevent financial losses for the farmers
4. Prevent crops losses and other spread of diseases
5. Promote trust and better services to farmers

### 3. Background

The seed industry has witnessed a substantial growth in the past century, with farmers relying on purchasing seeds from market with better traits rather than relying on seeds from previous season's harvest. Developments in seed technology have increased the momentum of the industry's growth, and the introduction of genetically modified crops has further boosted the seed market. The shift in farming practices worldwide has necessitated adoption of commercially produced enhanced seed varieties by the farmers as opposed to using seeds from the last harvest. High yield, improved nutritional quality, reduced crop damage, disease resistance, etc. motivated farmers in investing in commercial seeds.

#### 1. Global Scenario

<sup>1</sup>The seeds market was found at USD 59.71 billion in 2018 across globe, with a CAGR of 7% during 2011 - 2018. It is being expected that the market would rise to USD 90.37 billion in 2024 with a CAGR of 7.9% during the 2019-2024. There has been a rising demand for grains, oils, and vegetables which is a key driver for the seeds industry. Grains represent the biggest portion of daily calorie intake across globe, and therefore, the demand for grains is expected to be one of the most critical stimulants for the seed industry.

#### 2. Indian Scenario

Indian seed industry has changed over years. Earlier, farmers use the saved seeds from the previous crop which led to poor yield and sometimes germination failures. Many plant diseases were widely spread. But with onset of Bt Cotton seeds, the dynamics of seed industry has changed. Now it is the most advanced seeds developed country.

<sup>2</sup>In 2018, the Indian seeds market valued at US\$ 4.1 Billion, with a CAGR of 15.7% from 2011- 2018. It is further expected to grow at a CAGR of 13.6% during 2019-2024, reaching a value of US\$ 9.1 Billion by 2024. The rising domestic demand accompanied with demand for quality seeds in various foreign countries, mainly the South East Asian countries, seed industry in India is witnessing new paradigms of growth and development.

The access to information and better extension services to farmers have created better awareness among the farmers related to the benefits of using certified/ quality seeds has led to an increase in the demand for seeds over the past few years. This has resulted in an increasing willingness among the farmers to pay higher price for quality seeds.

#### 3. State Scenario

Bihar is a net borrower for meeting the seed demands and seeds are sourced from different states. Seeds for staples such as Paddy and Wheat are sourced from states such as Uttarakhand, Telangana and West Bengal. Various other seeds, as per their production regions are sourced suitably from other states such as Telangana, Andhra Pradesh, Karnataka, Uttar Pradesh, Uttarakhand, West Bengal etc. The overall statedemand and supply of certified seeds at the current SRR<sup>3</sup>.

The current demand for certified seeds is 15 Lakh Qtl and is met majorly through the private sector followed by NSC, TDC and BRBN. Total in-house production of seeds is ~3.5 lakh Qtl, meeting approximately 23% of current state demand and is produced through BRBN, NSC, local growers and others. With an increase in SRR the current demand for seeds is poised to increase further.

In the recent past, Bihar has also emerged as an important consumer of hybrid corn seeds, especially in winter maize. The winter maize seed segment is almost 83 % of the entire maize market and is mainly catered through multinational private players (Monsanto India Limited and PHI seeds, contributing >50% of total market), with production centres located in Telangana and Andhra Pradesh and marketing it here through there strong seed distribution channel. Even in other seeds, where the production is possible in Bihar, the state looks up to other states for supply.

The scenario connotes for encouraging seed production in the pockets which are 'agro-ecologically' suitable for production of select seed crops. Seed productions and processing have been carried out in North as well as South Bihar. South Bihar has pronounced advantage in Paddy and Wheat seeds; whereas other vegetable crops including Maize seed have been observed in north Bihar.

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<sup>1</sup> Seed World 2019 Report, Indian Council of Food and Agriculture

<sup>2</sup>Seed World 2019 Report, Indian Council of Food and Agriculture

<sup>3</sup> Current SRR as per GoB and economic survey data for different crops are as follows: Paddy (40%), Wheat (37%), Pulses (25%), and Oilseeds (49%);

North Bihar districts are leading in Maize, Pulses and vegetable seed production. Seed production centers for pulses, especially Arhar and Lentil are spread across districts comprising Siwan, Gopalganj and Chhapra. Seed production in vegetable crops, especially cauliflower is located in Nalanda, Hajipur and Patna. Other vegetable crops grown in the state include Peas, Tomato, Spinach etc.

The South Bihar districts, such as Buxar, Bhojpur, Kaimur and Rohtas have been the key seed production centers for Paddy and Wheat, contributing more than 80% of total seed produced within state.

Other districts such as Gaya, Aurangabad, Khagaria, Banka, Katihar and Araria are also involved in the seed production for Paddy and Wheat. There are few sporadic patches for seed production of hybrid and research maize, adjoining the Kosi belt (Motihari, Sitamarhi, Muzaffarpur, Purnia and Katihar).

Seed production has the potential to not only transform the skills and price realization for growers, but also attract significant investments in seed sector, while unfolding multiple lateral opportunities for Agricultural development. Bihar, with a promising market demand and conducive Agro-ecological conditions needs a suitable direction and support to unfold this sector to reach its potential benefitting the farmers and state at large.

## 4. Project Background

The Unit propose to install paddy and wheat seed processing unit having an installed capacity of 2 MT/Hr. respectively, in ..... The processing will be done for about 3seasons in a year.

The capacity of the unit has been arrived at after giving due consideration to the market demand, the capacity of the promoters to procure raw material, and forward linkages of the promoters.

### Current status of the unit:

- a. **Items to be manufactured: ProcessedPaddy and Wheat Seed**
- b. **Capacity of the plant:** 2 MT/Hr.
- 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:**19 nos.
- i. **Marketing:**
- j. **Waste disposal:** ETP/STP

### A Calendar of Seed Processing in Bihar

Particulars	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
construction of 1st phase of civil work	X	X	X									
Purchase of processing machinery, delivery and installation		X	X									
2nd phase construction work, outside electrification, etc				X	X	X	X	X				
Operationalization of seed processing									X	X	X	X

## 5. Organization and Promoter Details

### 1. 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 on .....The 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	
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

### 2. Promoters' Background

The unit is a proprietorship/partnership/private limited company/ firm and the proprietor/partners/promoters of the firm has experience in trading of fruits and vegetables and is associated processors. He/They has/have identified fruit juice industry as a profitable business seeing its ever-increasing demand in the local market as well market in the neighboring districts and States. Brief profile of the proprietor/partners/promoters is given below:

- Mr. ABC
- Mrs. XYZ
- Mr. DEF

Net-worth: The details of the net-worth of the unit is given below:

Particulars		Rs. In lakh
Movable assets	A	
	B	
	C	
	<b>Subtotal (A)</b>	

Immovable assets	A	
	B	
	C	
		<b>Subtotal (B)</b>
		<b>Total</b>

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

## 6. Project Description and Flow Sheet

Proposed project aims for the setting up of seed processing unit. This unit will be equipped with state of art processing, labeling and packing machines.

The company plans to procure raw seeds from local producers as well as from producers of other districts.

### 1. Project components

The project will have following components

- Receiving-cum-drying platform
- Processing area
- Auxiliary building

### 2. Seed Processing Unit 2 tons /Hr. capacity

The Unit would install a seed processing unit having an installed capacity of 2 MT/Hr. in ..... Total raw material requirement of the proposed unit, during the peak season of its production, will be about ..... The processing will be done for about 3 seasons in a year.

The capacity of the unit has been arrived at after giving due consideration to the market demand, the capacity of the promoters to procure raw material, and forward linkages of the promoters.

### 3. Location of the Project

The unit is set up in a land area of .....(preferably in 15,000 sq. ft. as illustrative) in ..... The land is located along the two lanes all weather main road. The site is around .... Km from .....

The selection of the location has been done in consideration with the various favorable aspects related with the plant such as:

- Raw material availability
- Connectivity
- Linkages with markets/procurement center
- Availability of infrastructure such as water
- Availability of manpower

### 4. Raw Material Availability

The South Bihar districts, such as Buxar, Bhojpur, Kaimur and Rohtas have been the key seed production centers for Paddy and Wheat, contributing more than 80% of total seed produced within state.

Other districts such as Gaya, Aurangabad, Khagaria, Banka, Katihar and Araria are also involved in the seed production for Paddy and Wheat. There are few sporadic patches for seed production of hybrid and research maize, adjoining the Kosi belt (Motihari, Sitamarhi, Muzaffarpur, Purnia and Katihar).

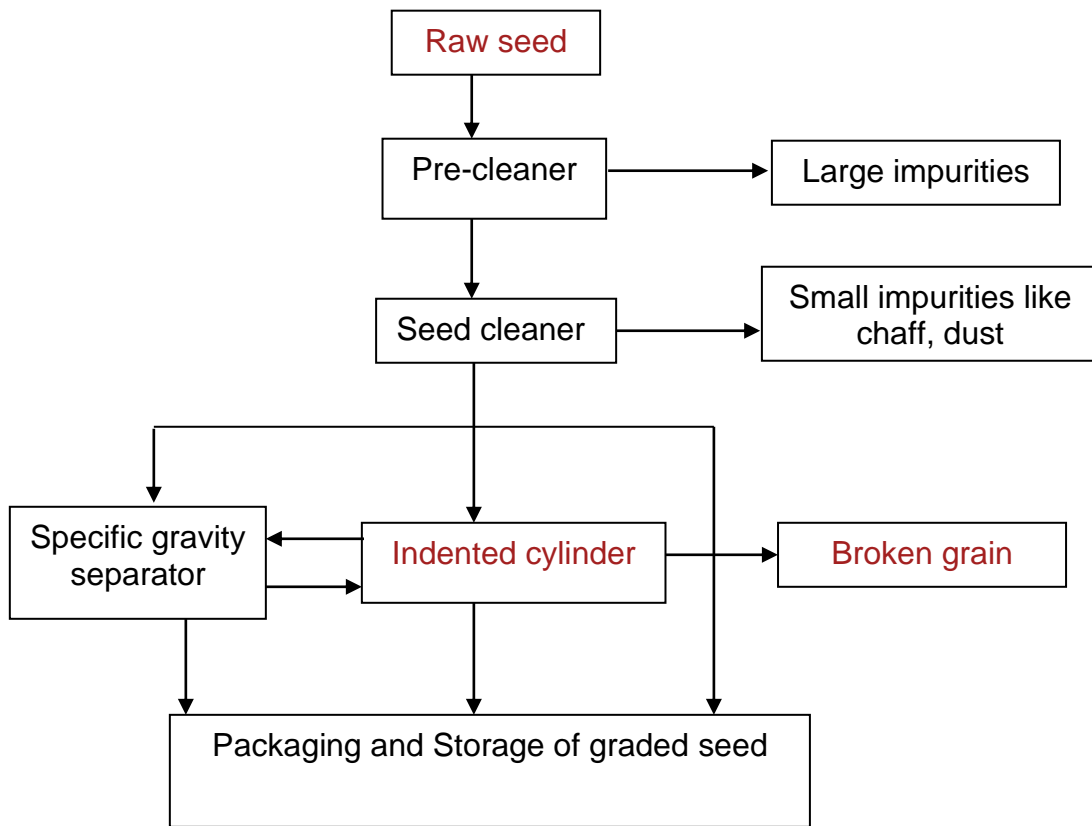
North Bihar districts are leading in Maize, Pulses and vegetable seed production. Seed production centers for pulses, especially Arhar and Lentil are spread across districts comprising Siwan, Gopalganj and Chhapra. Seed production in vegetable crops, especially cauliflower is located in Nalanda, Hajipur and Patna. Other vegetable crops grown in the state include Peas, Tomato, Spinach etc.

Traditionally, many villages in several districts such as Hajipur and Gopalganj are already taking production of seeds in select vegetables viz. Tomato, Okra, Pointed gourds etc.

Further, the Agriculture research organization in the state under GoB and ICAR system have been conducting several varietal research and multiplication programmes, wherein it has been established that hybrids as well as varietal seeds can be successfully grown in Bihar. Varieties such as Rajendra Bhagwati (Paddy), Shaktimaan (QPM- Maize), Rajendra Nenua (Sponge Gourd), Rajendra Masoori (Paddy) etc. have been pioneered from the State Agriculture University and have a wide acceptability in the state.

The processing industry has not kept pace with the increase in quality seed demands in the state with no large processing unit within the state. There are a handful of processing units in the organized sector with most of the processing happening in the unorganized sector with the main being the processing plant run by .....

### Processing of Seeds (Illustrative)



## **7. Technology and Process Description**

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 experts and local stakeholders. Details of the technology and process are given below:

### **1. Technology**

The unit shall use modern technologies such as liquefier, auto moisture removal from honey, homozoneiser and auto filling, labeling and packing line. This has been done to improve the quality of the final produce and overcome quality constraints.

The technology to be used in the unit is well-proven. Plant and machinery for the unit shall be procured from reputed suppliers of India.

### **2. Process description**

Important processes are described below:

#### **2.1 Procurement of raw materials**

Raw material for the certified seed production programme is foundation seed, which would be available from KVKs/University/SSC/NSC without any problem.

Other raw materials, like certification and packing material is available in the market, which would be purchased with printing in the name of the company.

#### **2.2 Processing**

Seed processing plant is designed based on the characteristics of seed grain and the impurities present in it, which need to be separated. Capacity of plant is known by the capacity of the seed cleaner which is the basic machine in the seed processing plant. Other machines, which work on the principle of separating the material, based on difference in characteristics of good seed and impurities are included in the plant. Capacity of such machines are kept matching with that of cleaner to have effective utilization. A scalper can be used to rough clean seed when trash content is high. Air cleaner system removes dust and light chaff before the seed reaches the first screen. Further Seed of same size and general shape can often be separated by specific gravity separator.

#### **2.3 Packaging**

After processing, the seed is packed. Bagging is usually the slowest and most costly operation in a seed processing plant. Bagging requires filling the bag to an exact weight, closing and labelling the bag. These operations are done either with hand or with manually operated machines, like weighing scale and bag closer.

#### **2.4 Seed Storage**

Proper storage preserves seed viability, from harvest to sale, and protects the producer, the processor and the user. A special storage unit would be designed with dry cool conditions.

## **8. Procurement Strategy of Raw Materials and Other Inputs**

The unit will require approximately 10 Tons of raw honey per day, The promoters have existing linkages with farmers of nearby areas to procure the required honey. They have also developed linkages with farmers in other parts of the state which includes bee keeping area of..... Promoters to begin with will concentrate mainly on the nearby areas of Rajgir to procure raw honey for the unit.

### **1. 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.

### **2. Forward Linkages**

There is rising demand of quality and certified seeds in the State. The availability of seed processing unit with state of the art technologies are few in region and hence concentrated effort needs to be given to build up the forward linkages of processed seeds.

## 9. Marketing Plan

The unit, shall sale its produce directly to famers, FPCs or it can also become supplier of processed seeds for BRBN and other agencies.

The promoters have existing tie-ups which will be leveraged for selling the produce. The promoters propose to seek the help of the existing marketing intermediaries to develop the market. However, in the future they intend to develop their own marketing team to ensure direct contact with markets for their products.

### 1. Market Segments

The promoters shall target two market segments for marketing of processed seeds. These are:

- 1- Lead dealers/ companies in Bihar and India
- 2- FPCs of Bihar and other States

### 2. Product packing

The company will have bottles of varying weights which is suitable for the retail market. It will also use different packing materials for its product. The product mix is given below:

Product	Targeted customer segment
Processed Paddy	Farmers, BRBN, Companies, FPCs
Processed Wheat	Farmers, BRBN, Companies, FPCs



## 11. Project Cost and Means of Finance

Details of the project cost and means of finance are given below:

### 1. Project Cost

The Project is estimated to cost Rs 101 lacs. The cost estimates are provided by ..... on the basis of quotations received from suppliers and estimates given by chartered engineers. The detailed breakup of the cost of the Project is given below:

Rs in Lacs (Rounded off)

Description	Amount
Land	Nil
Site renovation	5.96
Building& Civil Works	25.00
Plant machinery and equipment	15.20
Utilities & other fixed assets	10.67
Preliminary and Pre-Operative Expenses	2.00
Contingencies	3.79
Margin Money for Working Capital	13.41
<b>Total Project Cost</b>	<b>76.03</b>

### 2. Site renovation

Promoters propose renovation of the existing site which shall be used for further expansion of the project (if any). Total investment proposed for site renovation is Rs.5.96 lakhs. Details of the site renovation plan are annexed to this report.

### 3. Civil construction

Promoters propose to invest Rs.25.00 lakhs in civil construction as a part of the proposed processing unit structure creation. Details of the civil construction are annexed to this report.

### 4. Equipment

The break-up of the estimated cost of major machinery is provided below:

Rs in Lacs

S. No.	Name of machines	Capacity	Qty.	Rate/ Unit, Rs in lakhs	Amount, Rs in lakhs
1.	Pre-cleaner	2 TPH	1 No.	2.00	1.50
3.	Seed Cleaner	2 TPH	1 No.	2.10	1.60
4.	Indent Cylinder	2 TPH	1 No.	1.30	1.30
5.	Specific gravity separator	2 TPH	1 No.	0.50	1.50
6.	Elevator up to 5 m height	2 TPH	4 No.	0.40	1.60
8.	Vacuum cleaner		1 No.	0.10	0.10
9.	Electronic moisture meter (Wet type)	-	1 No.	0.20	0.20
10.	Bag closer heavy duty	Nil	2 No.	0.04	0.08
11.	Weighing machine	100 kg	1 No.	0.40	0.40
		300 kg	1 No.	0.50	0.50
12.	Diesel generating set	45 KVA	1 No.	2.50	2.50
	<b>Total (X)</b>				<b>11.28</b>

13.	Spares parts for 3 Years @ 5% of amount (X)				0.564
14.	Installation, testing, commissioning of Machines @ 10% of amount (X)				1.128
15.	Laboratory equipments like germinator, hot air oven, weighing balance, divider etc				1.75
16.	Sum of S. No. 1 to 15				14.722
17.	Contingencies @ 3%				0.44
Grand Total = 15.162 $\approx$ 15.20					

#### Building Structure for seed processing plant

S. No.	Description	Area	Rate/Unit (in Rs.)	Amount (Rs. in lakhs)
1.	Threshing/drying platform with 0.90 m plinth height	100 m <sup>2</sup>	750/m <sup>2</sup>	0.75
2.	Plant building for temporary store of raw seeds, processing machines as per layout plant	200 m <sup>2</sup>	3500/m <sup>2</sup>	7.00
(b)	Room for DG set 45 KVA	25 m <sup>2</sup>	3000/m <sup>2</sup>	0.75
(c)	Room space for Plant Incharge, certification packing material, chemicals, workshop for storing of spare parts, tools, processing screens and toilet etc.	50 m <sup>2</sup>	3500/m <sup>2</sup>	1.75
3.	Seed storage, 250-300 tonnes	200 m <sup>2</sup>	4000/m <sup>2</sup>	8.00
4.	Boundary wall (200 m)		900/m	1.80
5.	Cement concrete Road (125 m x 4 m), 25 cm thick	500 m <sup>2</sup>	500/m <sup>2</sup>	2.50
6.	Site development like drainage, security etc @ 10% total expenditure given above			2.20
	SUB TOTAL			24.25
	Contingency @ 3%			0.73
GRAND TOTAL = 24.98 $\approx$ 25 lakhs (Rs twenty five lakhs)				

The plant and machines to be procured by the promoters are suitable for the design of the project and balances each of the production stages. The suppliers have prior experience in installing similar type of units. The final prices of the equipment may vary depending on the prevailing tax rate at the time of delivery.

Quotation provided by the promoters have been duly verified by ..... team and found to be satisfactory both in terms of cost and technical specification.

#### 5. Miscellaneous Fixed Assets / Utilities

The breakup of the estimated cost of the miscellaneous fixed assets and utilities is provided below:

Rs in Lacs

Misc. Fixed Assets/ Utilities	Nos.	Rate/ Unit	Amount
Computer	2	0.54	1.08
Pick up van	1	4.59	4.59
Other office equipment	LS	LS	5.00
Total Misc. Equip			<b>10.67</b>

## 6. Preliminary & Pre-operative Expenses

The provision towards preliminary & pre-operative expenses includes expenditure towards like salaries & administrative expenses, travel expenses, market development expenses, interest during construction period etc. It is also assumed that the project will be completed over a period of one year. The interest during construction period is capitalized in the project cost. The detailed breakup is given below:

Rs in Lacs

Description	Amount
Interest during construction period	1.30
Misc. expenses (Admin, travel, market development etc.)	0.70
<b>Total</b>	<b>2.00</b>

## 7. Working Capital Requirement

Rs in Lacs

Details	Days	Amount
Raw Materials	15	13.13
Finished Goods	30	29.93
Debtors	10	9.98
Other Expenses	30	0.62
<b>Total Working Capital</b>		<b>53.65</b>
<b>Margin Money</b>		<b>13.41</b>

Going by the second method of working capital lending i.e. 25% of the turnover the working capital requirement would have been come to around Rs.90 lakh in the first year. However, keeping in mind, the nature of the business, the actual working capital requirement is recommended.

## 8. Contingencies

The amount is calculated at 5% of project cost excluding cost of land.

## 9. Means of Finance

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

Rs in Lacs

Source	Share	Amount
Equity*	55%	41.82
Debt**	Remaining	34.21
<b>Total</b>		<b>76.03</b>

\*- Promoters propose to bring approximately Rs.41.82 lakhs as their equity contribution. Promoters have the required financial strength to bring an equity capital of this amount.

\*\* - Promoters propose to bring in long term debt to the tune of 34.21 lakh for financing the project. They also propose to bring in Rs 13.41 lakh as margin money towards working capital financing.

*Note-1. Govt. of Bihar has recently launched a Bihar Agriculture Investment Promotion Policy (BA-IPP 2020) with capital subsidy of 15% for individual investors, partnership firms, LLP, companies and 25% for Farmer Producer Companies.*

**2. The figures are only tentative and may change depending upon the processing infrastructure capacity and promoter's requirement.**

## 10. Business Plan

The business plan of the Company has been prepared considering its business model, which covers the following stages:

- The Company will process raw honey and sell it in different pack sizes
- Company will procure the raw material from various sources during season and process the same as when it deems fit
- The existing storage capacity shall be used for storing both raw and processed honey
- The infrastructure will be used mainly by the company

The key operating assumptions underlying the business plan of the Company are described below:

- 2 MT/day of processing capacity

## 11. Operating Cost Assumptions

### 11.11.1. Seed Certification and Packaging Cost

Certification and packing material cost includes the cost of bags, labels, leaflets, tags, lead seals etc. For the purpose of financial calculations cost of certification and packing has been taken at the rate of Rs 40 per quintal on processed seed quality.

### 11.11.2. Power Load Requirement

The unit would require 21kW of power load.

### 11.11.3. Employee Cost

The employee cost has been assessed based on an organization structure prepared by the Company which considers the managerial and the support staff required for its proposed level of operations. Total manpower cost per annum is estimated at Rs.4.23 lakhs as detailed out below:

<b><u>Manpower Cost</u></b>			
<b>Grade</b>	<b>Nos.</b>	<b>Sal p.a. Rs</b>	<b>Total (lacs Rs)</b>
<b>Managers</b>	1	90000	0.90
<b>Supervisors</b>	2	67000	1.34
<b>Account/ technicians/ operators</b>	2	50000	1.00
<b>Support staff</b>	2	25000	0.50
<b>Security</b>	1	19000	0.19
<b>Labour</b>	10	3000	0.30
<b>Total</b>			<b>4.23</b>

The manpower planning has been done after analyzing similar units. Proposed manpower will be sufficient to carry out the operation.

### 11.11.4. Cost of insurance and Maintenance

The cost of insurance has been assumed as 1% of cost of plant & machinery, miscellaneous fixed assets and stored raw material. Cost of maintenance has been assumed at 0.5% of the value of fixed assets. The costs are at par with industry standard.

### 11.11.5. Admin & Selling Overheads

Admin & Selling overhead Cost has been assumed @ 0.5% of revenues

## 12. Financial Assumptions

### 11.12.1. Depreciation Rates

Depreciation has been provided on straight-line method, as per the Companies Act, 1956, for book purposes, whereas for tax purposes, written down value method is employed. The rate of depreciation for plant & machinery and miscellaneous fixed assets is taken as 10% for book purposes and 15% for tax purposes.

### 11.12.2. Interest

Interest would be charged to the Project at 11 % p.a. for Term Loan and 12.5% p.a. for working capital loan. A repayment period of 8 years including a moratorium of 6 months has been considered for financial projections.

### 13. Revenue Assumptions

It is assumed that at 100% capacity utilization the unit would generate revenue of Rs. 513 lakhs. The assumption is based on

- 1- Net realization would be 95% of the raw honey
- 2- The average selling price of final produce is Rs.90,000/MT

### 14. Capacity Utilization

Year	Capacity utilization
Year I	70%
Year II	75%
Year III	80%
Year IV onwards	90%

The project has assumed 70% capacity utilization in the first year, which may be regarded as conservative. The actual capacity utilization may be higher than the projected one.

**(Note: The figures are only tentative and may change depending upon the processing infrastructure capacity and requirements)**



<b>Net Cash from Operations</b>		6.49	8.22	10.02	11.46	10.80	10.75	10.91
<u>Cash From Financing</u>								
Equity	41.82							
Term Loan	34.21							
Increase in Working Capital Borrowing		40.24	1.25	1.26	2.50	0.01	0.01	0.00
<b>Total Cash inflow</b>	101.14	46.72	9.47	11.28	13.97	10.82	10.77	10.90
<b>Uses</b>								
Capital expenditure	87.72							
Increase in Working capital	0.00	53.65	1.67	1.67	3.34	0.01	0.02	0.00
Repayment of principal	0.00	2.36	4.72	4.72	4.72	4.72	4.72	4.72
<b>Total Uses</b>	87.72	56.01	6.39	6.39	8.06	4.73	4.73	4.71
Opening Cash Balance	0.00	13.41	4.13	7.21	12.09	18.00	24.09	30.12
Surplus/ Deficit	13.41	-9.29	3.08	4.88	5.91	6.08	6.03	6.19
Closing Cash Balance	13.41	4.13	7.21	12.09	18.00	24.09	30.12	36.31

#### 4. Projected Balance Sheet

<u>Years</u>	1	2	3	4	5	6	7
<b><u>Liabilities</u></b>							
Equity Capital	53.94	53.94	53.94	53.94	53.94	53.94	53.94
Reserve & Surplus	-0.55	0.63	3.62	8.04	11.81	15.53	19.4
<b>Net Worth</b>	<b>53.39</b>	<b>54.57</b>	<b>57.56</b>	<b>61.98</b>	<b>65.75</b>	<b>69.47</b>	<b>73.34</b>
Term Loan	44.82	40.1	35.38	30.66	25.95	21.23	16.51
Working Capital Loan	40.24	41.49	42.75	45.25	45.26	45.27	45.27
<b>Total Liabilities</b>	<b>138.5</b>	<b>136.2</b>	<b>135.7</b>	<b>137.9</b>	<b>137</b>	<b>136</b>	<b>135.1</b>
<b><u>Assets</u></b>							
Net Fixed Assets	80.69	73.65	66.62	59.58	52.54	45.51	38.47
Working Capital	53.65	55.32	56.99	60.33	60.35	60.36	60.36
Cash Bal	4.13	7.21	12.09	18	24.09	30.12	36.31
<b>Total Assets</b>	<b>138.5</b>	<b>136.2</b>	<b>135.7</b>	<b>137.9</b>	<b>137</b>	<b>136</b>	<b>135.1</b>

The unit will be equipped with some of the best and modern plant and machinery available today for honey processing. Equipment providers for the unit are reputed firms in their industry. Technology for the unit has been chosen carefully keeping in mind the best practices observed in India.

The unit will have following financial benchmarks:

<b>Year</b>	1	2	3	4	5	6	7
EBITDA Margin	4.64%	4.71%	4.77%	4.89%	4.85%	4.81%	4.82%
PAT margin	-0.15%	0.31%	0.73%	0.96%	0.82%	0.81%	0.84%
Debt-Equity Ratio	0.84	0.73	0.61	0.49	0.39	0.31	0.23
Debt to EBITDA ratio	5.10	4.50	3.99	3.37	3.18	3.00	2.78
Interest Coverage Ratio	1.64	1.83	2.05	2.41	2.53	2.67	2.85

DSCR	1.33	1.24	1.37	1.60	1.65	1.70	1.78
<b>Average DSCR</b>	1.63						
<b>IRR</b>	13.5 %						



**Note: The figures are only tentative and may change depending upon the processing infrastructure capacity and promoter's requirement.**

### 13. Schedule of Implementation

The total time for implementation of project has been estimated at approximately 6 months. The critical time in completion of project is influenced by:

- Obtaining necessary statutory approval
- Resource mobilization
- Civil construction
- Machinery order
- Installation and commissioning of machinery
- Commercial trial runs

Month-wise schedule of implementation is given below:

Month 	1	2	3	4	5	6
Activity 						
Arranging necessary approvals						
Civil construction						
Site renovation						
Order for plant and machine						
Procurement of plant and machinery						
Installation of plant and machinery						
Trial production						
Commercial production						

## 14. *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 8 workers and indirect employment of another 10 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.