Project Based Components

Model Detailed Project Report

Packhouse

Directorate of Horticulture Department of Agriculture Govt. of Bihar

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.

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1. Project at a Glance

SI. No.	Particulars		Details
1	Name of the Unit/Applicant Name	:	
2	PAN	:	
3	Registration No.		
3	Aadhar No.	:	
4	Factory Address	:	
6	Nature of Project	:	Pack House Unit
7	Pack House Size	:	(9 Meter X 6 Meter)
8	Min Area Requirement	:	500 Meter Square
9	Cost of the Project	:	INR 4.00 lakhs
10	Promoter's Contribution	:	INR 2.00 lakhs
11	Term Loan (If any)	:	NA
12	Grant from BHDS	:	INR 2.00 lakhs
13	Land Possession Certificate	:	
14	Current Land Receipt	:	

2. Introduction

Horticulture has emerged as one of the most important agricultural enterprises in Bihar in the last two decades, as it offers a wide range of opportunities for farmers to diversify their cropping pattern to include f ruits, vegetables, flowers, spices, plantation crops, medicinal and aromatic plants. The increasing diversification provides opportunities for absorption of labour and earning remunerative returns to the farmers. The horticultural products form an important component of food and nut ritional security in Bihar. To meet the growing demand for affordable and high-quality fruits in local, national, and international markets, this sector is experiencing substantial competition. Since horticultural crops are highly perishable and seasonal in nature, they require adequate post-harvest infrastructure. The State Government is promoting horticulture sector in a big way in Bihar to help the farmers.

1. Fruits Area and Production in Bihar

The total area under f ruits cultivation in State was found to be 3.24 lakh Ha with an annual production of 42. 56 lakh tons in 2019-20. Among fruits mango constituted largest area in the State with 49% of total area under f ruit cultivation followed by litchi, banana and guava with 11%, 10% and 9% of total area under f ruit cultivation in State. The last f ive year trend of area and production of fruits shows that the area under f ruit cultivation has increased by 6% with a CAGR of 1.17% and production by 1%.

The area and production of key fruits has been mentioned in the table below:

Table 1: Area and Production of Fruits in Bihar-2019-20

Fruits	Area (Ha)	Production (MT)
Amla/Gooseberry	2207.5	16578.34
Banana	34973.45	1368548.76
Guava	29777	434076.59
Limes and Lemons	19365.75	115084.08
Litchi	36263.78	307996.67
Mango	160242.16	1541286.68
Muskmelon	3129.85	16714.14
Рарауа	2572.25	47939.07
Pineapple	4245.5	111890.50
Sweet Orange /Mosambi	445	4645.00
Watermelon	2352.5	36143.60
Other Citrus	29014.23	255309.99
Total	324588.97	4256213.42

Source: Directorate of Horticulture, GoB

The major districts of fruit cultivation in State includes- Muzaffarpur, East Champaran, West Champaran, Patna, Vaishali, Madhubani, Katihar, Samastipur, Rohtas, Sitamarhi, Darbhanga, Purnia, Nalanda and Bhagalpur, together constitute about two-third of area and production of fruits in the State.

2. Vegetables Area and Production in Bihar

Bihar is one of the leading producer of vegetables in the country. The total area under vegetable cultivation in the State was 8.24 lakh Ha with annual production of 163.15 lakh tons during 2019-20. Potato cultivation was found to be highest in State and it constituted about 31% of the total area und er vegetables, followed by cauliflower, brinjal, okra and onion with 8%, 7.5%, 7% and 7%, respectively. The last f ive-year trend of vegetable cultivation shows that through the area has declined by 2%, the production increased by 13% with a CAGR of 2.53%.

 Table 2: Area and Production of Vegetables in Bihar-2019-20

Vegetables	Area (Ha)	Production (MT)
Beans (All Including Lab-lab (Sem))	17076.4	116215.08
Bitter Gourd	11861.36	95569.37
Bottle Gourd	44027.85	660553.6
Brinjal	61888.17	1320501.57
Cabbage	41241.79	722150.96

Vegetables	Area (Ha)	Production (MT)
Carrot	13580.21	144972.89
Cauliflower	68477.62	1031568.75
Cucumber	5043.52	30776.13
Elephant Foot Yam/Amorphophallus/Jimikand	1650.9	30130.83
Green Chilly	47622.51	489239.32
Kaddu/Pumpkin	1420.72	15974.75
Mushroom	-	1374.8
Okra /Ladies Finger	60447.31	842010.51
Onion	60086.83	1319535.23
Peas (Green)	11549.63	66826.15
Pointed Gourd /Parwal	8859.38	89580.95
Potato	257989.62	7710073.41
Radish	24318.83	232636.03
Sweet Potato	1904	13634.8
Tomato	52210.94	964221.93
Other Vegetables	32770.23	417470.86
Total	824027.82	16315017.92

Source: Directorate of Horticulture, GoB

The major districts of vegetable cultivation in State includes- Patna, Vaishali, Madhubani, Muzaffarpur, East Champaran, West Champaran, Saran, Gopalganj, Katihar, Samastipur, Rohtas, Darbhanga, Nalanda, Begusarai and Bhagalpur, together constitute more than two-third of area and production of fruits in the State.

3. **Project Rationale**

Though State is one of the largest producer of various F&Vs however due to lack of various p ost -harvest management infrastructures, there is considerable volume loss. This is not only commodity loss b ut also has considerable impact on farmer/producers of F&Vs who has to make immediate sale of the produce due to the low shelf life and lack of any storage infrastructures. The key reasons driving the huge volume of wastages are poor post-harvest system, inefficient supply chains, lack of proper storage and processing infrastructure.

As per the latest estimates, by Central Institute of Post-Harvest Engineering and Technology (CIPHET), Ludhiana, in India, the wastage of fresh horticultural produce is up to 18 p ercent d ue to p oor postharvest management practices. The prevailing scenario in Bihar cannot be very different. Lack of storage infrastructures during peak production season acts as a major handicap for producers. During good harvest, respondents sell their products at throwaway prices.

- **Minimizing Loss:** The structure would support better handling practices, storage through cold rooms, thus helping in minimizing the losses.
- **Cost reduction:** The structure would help in minimizing costs of wastages and other handling costs through promoting value creation and storage.
- Value creation: The structure would promote post-harvest management practices through ensuring proper sorting, grading and packaging, substantially higher values can be realized from marketing of p rocessed commodities.
- **Ensured Quality**: The structure will have various units in the form of cold room, waxing, packaging house etc. which would ensure quality of the produce and high shelf-life.
- **Maintains the commodity market price**: The storage helps in normalising the price of crops throughout the year through the making available quality produce during lean period ensuring uninterrupted supply and thereby minimizing food inflation.
- Enhanced market linkage: It empowers farmers with the ability to capture a larger buyer base and helps to bring their harvest to more valuable.

3. Background

A. Brief Details

Primary Processing such as- washing, cleaning, sorting, grading, waxing and packing lines is an important component of Pack House. These components add shelf life to the products and ease the hand ling by packing into smaller and big packs as required. These systems alone can bring s ignificant red uction in spoilage. Also, in most cases well-packaged products will attract better prices.

B. Operation

We propose to install an Pack House infrastructure of 9MX 6M size capacity which will be utilized by the sorted and graded fruits and vegetables produced in the region.

C. Bihar Potential for production of F&Vs

1. Fruits

- a) Mango: Mango constitutes the largest area under f ruit cultivation in Bihar. The key varieties such as Jardalu Aam, Maldah Aam are some of the famous varieties cultivated in the State. Jardalu Mango has been GI tagged. The total area and production under mango during 2019-20 was 1.6 lakh Ha and 15. 41 lakh tons, respectively. Bhagalpur, Darbhanga, Muzaffarpur, West and East Champaran, Samastipur, Madhubani, Patna, Sitamarhi and Vaishali are top ten producers of mango in the State among other districts.
- b) Litchi: Bihar is the leading producer of Litchi in the country contributing almost half the total national production during 2018-19, i.e. 45%. Litchi cultivation covered an area of about 0. 36 lakh ha in 2019 -20 and production volume of 3.07 lakh tons. It contributes to 11.2 % of fruit crop acreage and 7. 2% of f ruit production in Bihar. Muzaffarpur is the largest Litchi producing district followed by Vaishali, Sitamarhi, East Champaran and Madhubani.
- c) Banana: Banana is the third largest growing fruits in State in terms of area and cultivated in an area of 0.34 lakh Ha with a production of 13.68 lakh tons. It constitutes an area of 10.8% under fruits and 32.2% of total f ruit production. Katihar, Muzaffarpur, Samastipur, Vaishali and Darbhanga are top five producing re g ions of Banana in addition to other districts.
- d) **Guava:** Guava is cultivated in area of 0.29 lakh Ha with a total production of 4.34 lakh tons constituting about 9.2% and 10.2% to the total area and production of fruits in Bihar. Nalanda, Muzaffarpur, Patna, Rohtas and Vaishali are top five producing districts of guava in the State.
- e) Limes and lemons: The total area under limes and lemons cultivation in the State was found to be 6% and 2.7% of the total area and production of fruits in the State. Major producing districts include- East and West Champaran, Patna, Samastipur and Bhagalpur.
- f) Pineapple: Pineapple cultivation is confined only to three major districts of- Katihar, Purnia and Kishanganj. Pineapple cultivation occupy an area of 1.3% with production of 2.6% of the total area and production off ruits in the State.
- g) Papaya: The cultivation of papaya has gained momentum in the State with key initiatives of Directorate of Horticulture in providing quality panting materials and improving the agronomic practices. The to tal area under Papaya cultivation in the State was found to be 0.8% and total production was 1.1% of the total area and production of fruits in the State. Papaya was found to be cultivated uniformly across all districts with Darbhanga, Muzaffarpur, Nalanda, East Champaran, and Vaishali being the largest producers.

2. Vegetables

- a) Potato: Bihar is one of the leading producer of potato in the country and the crop constitutes largest area and production among all other vegetables in the State. Potato was cultivated in an area of 2. 58 lakh Ha and production of 77.10 lakh tons which is 31.3% and 47.3% of the total area and production of vegetables in the State. Almost half of vegetable production is constituted by potato crop. Patna, Nalanda, Begusarai, Bhagalpur, Darbhanga, Katihar, Mahbubani, Muzaffarpur, East and West Champaran, Nalanda, Purn ia, Rohtas, Samastipur, Sitamarhi and Vaishali are top 15 producing districts of potato in the State.
- b) Cauliflower: Cauliflower is cultivated in large parts of the State and of constitutes about 8.3% of the total area under vegetable production and second highest after potato. The total area under cauliflower was

found to be 0.68 lakh Ha and production was 10.32 lakh tons during 2019-20. Vaishali, Nalanda, Katihar, Samastipur and West Champaran are top five producing districts of cauliflower in the State.

- c) Brinjal: The total area and production under brinjal cultivation was found to be 0.62 lakh Ha and 13.21 lakh tons which is 7.5% and 8.1% respectively, of total area and production of vegetables in the State. Tho ugh brinjal is cultivated across the State among all districts- Vaishali, Patna, Muzaffarpur, Begusarai and Darbhanga are major cultivating regions of brinjal in State.
- d) Okra/ Ladies Finger: Okra is cultivated Patna, Muzaffarpur, Vaishali, Begusarai, Bhagalpur are major growing regions, with cultivation spread across the State. Total area under okra in State was 0.60 lakh Ha with production of 8.42 lakh tons.
- e) Onion: The total area under Onion cultivation was found to be 0.6 lakh Ha with a production of 13.20 lakh tons during 2019-20 in the State. It constitutes about 7.3% and 8.1% of the total area and production of vegetables in the State. Nalanda, Vaishali, Patna, East and West Champaran and Katihar are major onion producing regions in State.
- f) Tomato: Tomato is cultivated in an area of 0.52 lakh Ha with a total production of 9.64 lakh tons, which constitutes about 6.3% and 5.9% of the total area and production of vegetables in State. Patna, Vaishali, Begusarai, Nalanda and Muzaffarpur are major production regions of tomato in the State.
- g) Green Chilly: The total area under green chilly 0.48 lakh Ha and production of 4.89 lakh tons which constitutes about 5.8% and 3% of total area and production of vegetables in State. Patna, Vaishali, East Champaran, Katihar and Begusarai are some of the major growing regions of green chilly in State.
- h) Bottle Guard: The total area under bottle guard cultivation in the State was 0.44 lakh Ha with a total production of 6.61 lakh tons which constitutes about 5.3% and 4% of total area and production und er vegetable in State. Vaishali, Muzaffarpur, Sitamarhi, West Champaran and Katihar are the major producing districts of bottle guard in State.
- i) **Cabbage:** Cabbage was cultivated in a total area of 0.41 lakh Ha and 7.22 lakh tons which constates about 5% and 4.4% of total area and production in State. It is largely cultivated across State with Patna, Nalanda, Vaishali, Samastipur, Katihar and West & east Champaran districts being the largest producers of cabbage in the State.
- j) Beans (Sem): The beans cover an area of 0.17 lakh Ha and production 1.16 lakh tons which constitutes about 2% and 0.7% of total area and production of vegetables in State. Vaishali, Patna, Nalanda, East & West Champaran, Purnia and Samastipur are major districts for beans cultivation in State.

There exists a huge scope for the development of cold room type small scale structure across these commodities in the production cluster for enhancing the value of the crops and thus. Income of the farmers.

4. About Muzaffarpur Location

Muzaffarpur is India's Gateway to Nepal and China and even now the trade of cloth and grains is brisk between Kathmandu and Muzaffarpur. Muzaffarpur is spread over an area of 3172 sq. kms and has a population of 3.74 million (as of 2001). The district is bounded on the north by East Champaran and Sitamarhi districts, on the south by the district of Vaishali, on the east by the districts of Darbhanga and Samastipur (part) and on the west by Saran and part of Gopalganj districts. The district head quarters is located at Muzaffarpur.

The district has well developed means of transportation. It has a network of railways and well -maintained roads. Country boats also ply in the larger rivers. All the block headquarters are linked with the d is trict headquarters, Muzaffarpur by metallic roads. Train and buses are the main sources of transportation.



5. Firm/Promoter's Details

M/s is a Farmer/Proprietorship firm/farmer association, registration no. of the firm is Its registered office is located at, Bihar. The firm is promoted by seasoned local entrepreneur having experience in fruits and vegetables trading, storage etc.

6. Civil work and Plant and machineries Details

1. Civil Construction details

Built-up area of room (6 Meter X 4 Meter) Built-up area of Veranda (6 Meter X 5 Meter) Total built-up area (6 Meter X 9 Meter)

Cost of Civil work is INR 2.00 Lakh

2. Technology

The key component of Pack House (tentative list) would be-

S.No.	Tentative list of Machines	No.	Tentative Cost of Machines (In Rs.)
1	Food Grade Barrel (100 Ltrs.)	10	10000
2	Plastic Crates	100	30000
3	Refractometer	1 Set	5000
4	Platform balance	1	18000
5	Salinometer	1 Set	500
6	Water Tank (500 Ltrs.)	5	4000
7	S.S. Knives	1 Set	1000
8	Aluminum Top Table	1	15000
9	Screw Pipe Juice Extractor	1	1000
10	Pedestal Sealing machine	1	3000
11	Submersible pump and boring	1	68000
12	Preservatives, colour, etc.	1	1000
13	Furnace diesel	1	8000
14	Mini Generator Set	1	15000
15	Strip Sealing/Packing machine	1	500
16	Harvestor, Siketiar		2000
17	CFB Box		2000
18	Aluminium Bhagona		5000
19	Plastic Basin		2000
20	Other Items		1000
21	Zero energy Cool Chamber (Outer dia L 8ft X W 6ft, Inner dia L 5ft X W 3ft)		8000
	Total		200000

Cost of Plant and Machineries proposed is Rs. 2.00 Lakh

3. Location of the Project

The firm has rent out/Own.......Sq. mt. of land at, Bihar.

7. 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. 4 lakh. The detailed breakup of the cost of the Project is given below:

Rs in Lacs (Rounded off)

Description	Amount
Civil Work	2.00
Plant and Machinery	2.00
Total Project Cost	4.00

2. 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

SI. No.	Source	Amount
1	Promoter's Contribution	2.00
2	Grant from BHDS	2.00
	Total	4.00

Promoters propose to bring approximately Rs. 2.00 lakhs as their equity contribution. Promoters have the required financial strength to bring an equity capital of this amount.

Under MIDH component, credit linked back-ended subsidy @ 50% of the capital cost of project with maximum cost of INR 2 lakh per unit with size of 9m*6m

8. Financial Analysis

The projected profitability statement, cash flows and balance sheet of the proposed project of M/sare given below.

1. Sales estimation

Estimation of Sales

SI No	Particulars	lst Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
1	Installed Capacity (In MT)	252	252	252	252	252
2	Product Mix					
	-	100%	100%	100%	100%	100%
	Finished Goods	90.0%	90.0%	90.0%	90.0%	90.0%
	Loss	10.0%	10.0%	10.0%	10.0%	10.0%
3	Product wise capacity	252	252	252	252	252
	Finished Goods 90%	227	227	227	227	227
	Loss- 10%	25	25	25	25	25
4	Capacity Utilisation	60%	65%	70%	75%	80%
	Production (In MT)					
	Actual Production (In MT)	136.08	147.42	158.76	170.10	181.44
	Add: Opening Stock of FG (In MT)	-	2.00	2.00	2.00	2.00
	Less: Closing Stock of FG (In MT)	2.00	2.00	2.00	2.00	3.00
	Value of Opening Stock (Rs. In lacs)	-	0.60	0.63	0.66	0.69
	Value of Closing Stock (Rs. In lacs)	0.60	0.63	0.66	0.69	1.09
	Quantity to be sold (In MT)	134.08	147.42	158.76	170.10	180.44
	Selling Rate per MT	30,000	31,500	33,075	34,729	36,465
	Sales Value (Rs. In lacs) (A)	40.22	46.44	52.51	59.07	65.80
5	Total Sales Value (Rs. In lacs) (A)	40.22	46.44	52.51	59.07	65.80

6	Closing Stock of Finished Goods (Rs. In lacs)	0.60	0.63	0.66	0.69	1.09

2. Projected Profitability Statement

Statement of Profitability

Amount in Rs. lacs

Particulars	lst Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
<u>Sales</u>	40.22	46.44	52.51	59.07	65.80
Less- Duty & Taxes	-	-		-	-
Net Sales	40.22	46.44	52.51	59.07	65.80
Other Income	-			-	-
Total	40.22	46.44	52.51	59.07	65.80
Variable Cost					
Raw Materials Consumed	27.22	30.96	35.01	39.38	44.11
Consumables & Packing Materials	0.14	0.14	0.14	0.14	0.15
Wages & Salary	6.62	6.76	6.89	7.03	7.17
Power	1.40	1.52	1.64	1.76	1.87
Repair & Maintenance	0.60	0.61	0.67	0.74	0.81
Manufacturing Expenses, Freight etc	1.20	1.22	1.25	1.27	1.30
Cost of Production	37.18	41.21	45.60	50.33	55.41
Add: Opening Stock of Finished Goods	-	0.60	0.63	0.66	0.69
Less: Closing Stock of Finished Goods	0.60	0.63	0.66	0.69	1.09
Cost of Sales	36.58	41.18	45.57	50.29	55.01
Gross Profit :-	3.64	5.26	6.94	8.78	10.79
Selling & Administrative Expenses	1.21	1.39	1.58	1.77	1.97
- Administrative salary	-	-	-	-	-
- Other Selling & Adm. Exps.	1.21	1.39	1.58	1.77	1.97
Profit before Interest & Depreciation	2.44	3.86	5.37	7.01	8.81

Depreciation	0.50	0.44	0.38	0.33	0.29
Profit before Interest & Taxation	1.94	3.43	4.99	6.68	8.52
Interest on					
Term Loan	-	-	-	-	-
Working Capital	-	-	-	-	-
Total Interest	-	-	-	-	0
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Profit before Taxation	1.94	3.43	4.99	6.68	8.52
Current Tax	-	-	-	0.35	0.73
Profit after Tax	1.94	3.43	4.99	6.33	7.79

3. **Projected Cash Flow Statement**

PROJECT CASH FLOW AS ON 31ST MARCH

<u>SL.</u> <u>NO</u> .	PARTICULAR	<u>Cons.</u> <u>Year</u>	lst Yr	2nd Yr	3rd Yr	4th Yr	5th Yr
	CASH INFLOW		V				
1	Profit before Tax	0	1.94	3.43	4.99	6.68	8.52
2	Add:- Depreciation		0.50	0.44	0.38	0.33	0.29
3	Preliminary Exps. W.O.		-	-	-	-	-
4	Cash Accruals (1+2+3)	-	2.44	3.86	5.37	7.01	8.81
5	Receipt of capital subsidy from Bihar Govt.						
6	Increase/(Decrease) in C.L.		2.30	0.29	0.34	0.37	0.39
7	Contribution by Shareholder/Promoter	2.00	2.00	-	-	-	-
8	Grant from APEDA	2.00	2.00				
9	Increase in Un. Sec. Loan						
10	Increase in Working Capital	1.50	1.50	-	-	-	-
	A.Total (Rs.)(4 to 14)	5.50	10.24	4.15	5.70	7.37	9.21
1	CASH OUTFLOW Preliminary & Preoperative Expenses	-	-				
2	Increase in Current Asset		6.01	0.86	0.85	0.91	1.30
3	Increase in Cap. Expenditure	4.00	4.00				
4	Decrease in Term Loan		-	-	-	-	-
5	Investment						

	1		1				
			-	-	-	-	-
6	Dividend Paid		-	-	-	-	-
7	Income Tax Paid		-	-	-	0.35	0.73
	B. Total (Rs.) (1 to 9)	4.00	10.01	0.86	0.85	1.26	2.04
C. Si	urplus/Deficit from Project (A-B)	1.50	0.22	3.29	4.86	6.11	7.17
D. O Equi	pening Balance of Cash & Cash valent	-	-	0.22	3.51	8.38	14.48
E. Cl Equi	losing Balance of Cash & Cash ivalent(C+D)	-	0.22	3.51	8.38	14.48	21.64
Balar	nce Sheet Cash & Bank		0.22	0.83	3.21	6.14	9.40

4. Projected Balance Sheet

Other Current Assets

Projected Balance Sheet Amount in Rs. lacs Particulars lst Yr 3rd Yr 4th Yr 5th Yr 2nd Yr Liabilities **Owners Contribution** 2.00 2.00 2.00 2.00 2.00 Grant from BHDS 2.00 2.00 2.00 2.00 2.00 Reserve & Surplus 8.34 2.68 12.24 1.94 5.18 Working Capital 1.50 1.50 1.50 1.50 1.50 Sundry Creditors 3.29 3.68 2.30 2.58 2.92 Provision for Taxation 0.35 0.73 Total 17.47 10.78 22.14 9.74 13.60 <u>Assets</u> Gross Block 4.00 4.00 4.00 4.00 4.00 Less- Accumulated Depreciation 1.64 0.50 0.94 1.31 1.93 Net Block 2.36 3.50 3.07 2.69 2.07 **Current Assets** Inventory **Raw Materials** 0.54 0.37 0.42 0.48 0.60 Consumables Stores & Packing Materials 0.01 0.01 0.01 0.01 0.01 **Closing Stock** 0.69 0.66 0.60 0.63 1.09 Receivables 4.92 3.35 3.87 4.38 5.48 **Other Current Assets Taxation Advance** 0.35 0.73

2.46

	1.68	1.93	2.19		2.74
Cash & Bank Balances	0.22	0.83	3.21	6.14	9.40
Total	9.73	10.78	13.60	17.47	22.14
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9. Project Impact

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

Facilitate market linkage: The said region is one of the key litchi producing areas of the State and this proposed packhouse will provide the required infrastructure to the farmers for p rimary processing of their produce and undertake required packaging activities prior to selling the same to B2B, B2C entities.

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 unit would generate employment of about 9 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.