Detail Project Report

on

Pulses Processing

Under MKUY

Name of the Entrepreneur/Entity:

Address:

Contents

1. Project Summary

1	Name of the Enterprise (as per the Illustrative List of Enterprises)	Pulses Processing
2	Sector (as per the Illustrative List of Enterprises)	Agriculture
3	Project Capacity[1]	1200 kg/day
4	Key components of the project (Example: Dairy, Vermicomposting, Biogas, Apiary, Solar Lighting)	Pulses Processing and Packaging
5	Project Address (Village/Ward, Gram Pranchayat/Municipality, Block, District)	
6	Products/Output from the project	Green gram, Black gram, Pigeon pea
7	Total Project Cost	Rs. 84,15,500
8	Fixed Capital Cost	Rs. 72,07,500
9	Working/Recurring capital	Rs. 12,08,000
10	Bank Finance/ Self Finance	Bank Financed
11	Bank Loan Amount	Rs. 74,53,150
12	Promoter Contribution (min 10% in case of bank loan)	Rs. 9,62,350
13	Assumed Rate of Interest	11%
14	Subsidy Eligibility (40%, 50%)	
15	Repayment Terms (Tenure, Moratorium, Frequency, Mode of Repayment: equal principal/equal instalment)	Equal Monthly Instalment
16	Key Financial Indicators: 1. Average Annual Net Profit 2. Debt Service Coverage Ratio (DSCR) 3. Internal Rate of Return 4. Break Even Point (BEP)	 Rs. 27,34,595 2.27 29.86% 3 Years and 3 Months
17	Estimated employment to be generated (nos.)	12

Note: The price quoted in the DPR is indicative. Final CIS will be calculated as per the Rate in MKUY guideline.

[1] Capacity can be in terms of area or quantity

2. Project Profile

2.1 Entrepreneur/Entity Profile

1	Name of the Entrepreneur/Entity	
2	Legal status (Individual/ Group/ FPO/ FPC/ Proprietorship/ Partnership firm/ Company/ Cooperative/ Federation/ Society/ Trust)	
3	Name of Representative[2] in Ease of entity	
4	Gender (Male/ Female/ Third Gender/ Not Applicable)	
5	Date of Birth of Individual/Representative of Entity	
6	Date of Incorporation/Registration of Entity	
7	Category opted for (Women/ ST/ SC/ Differently Abled/ Third gender/ Agri & Allied Graduate)	
8	Educational Qualification of Individual/Representative of Entity	
9	Passport size photograph of the Individual/ Representative of entity	
10	Local Address for Correspondence of the Individual/ Representative of entity	
11	Registered Address of Entity	
12	Main Office/Branch Address of Entity	
13	Phone no. of Individual/Representative of Entity	
14	Email Id of Individual/Representative of Entity	
15	AADHAR No. of Individual/Representative	
16	PAN of Individual/Representative of Entity, if available	
17	Farmer Id of Individual, if available	
18	Details of other Partner/Director/ President/Secretary	
19	Registration No./ CIN of the Entity[3]	
20	PAN/TAN of Entity	
21	GSTIN of Entity, if available	
22	Details of experience and exposure relevant to the proposed enterprise/project (family business, work experience, e-learning/certificate courses, trainings undertaken etc.)	

[2] Representative should be authorized by the board/governing body of the entity.

[3] Registration document:
Groups (SHG/PG/: FPO: Proprietorship firm: Registration Certificate under Shops & Establishment Act, Partnership firm: Registration Certificate from IGR of state, Company (Pvt. Ltd., Public Ltd., LLP, OPC, FPC): Certification of Incorporation, Cooperative/ Federation: Certificate of Registration from Registrar of Cooperative Societies, Society/Trust: Darpan Unique Id

2.2. Project Consultant Details

DPR prepared by: APICOL

Please provide further details of the consultant:

2.3. Concept and Scope of the Project

Pulses refer to the dried, edible seeds of leguminous crops. Pulses play a fundamental role as a low-fat source of protein and an essential component of traditional food baskets. These are most essential element for a well-balanced diet and major source of protein to vegetarian people of India. There are several varieties of pulses in India. Most of them are produced and consumed locally.

Chickpeas (Chana), pigeon peas (Arhar/Toor Dal), Urad (Urad Dal), Mung (Moong) and red lentils (Masoor) are the top five pulses grown in India. These pulses account for over 80 per cent of the total production in the country. The conversion of pulses seed into Dal is done through the process of milling. A Dal mill should be located in rural or semi-urban area which have excess production of pulses and connected to market. The project deals with variety of dal such as Masoor Dal, Chana Dal, Urad Dal, etc.

Regular consumption of dals and pulses is a great way to attain nutrients like protein and calcium. They can substitute seafood and animal products in terms of nutrients if you are a vegetarian. A nutritious diet is very important especially when you are in your growing stages. Children and adolescents need a balanced diet so that they get required energy, and their body and mind can develop properly. Many children, who are underweight, weak or fall sick easily, need to inculcate healthy foods like dals and pulses in their daily diet.

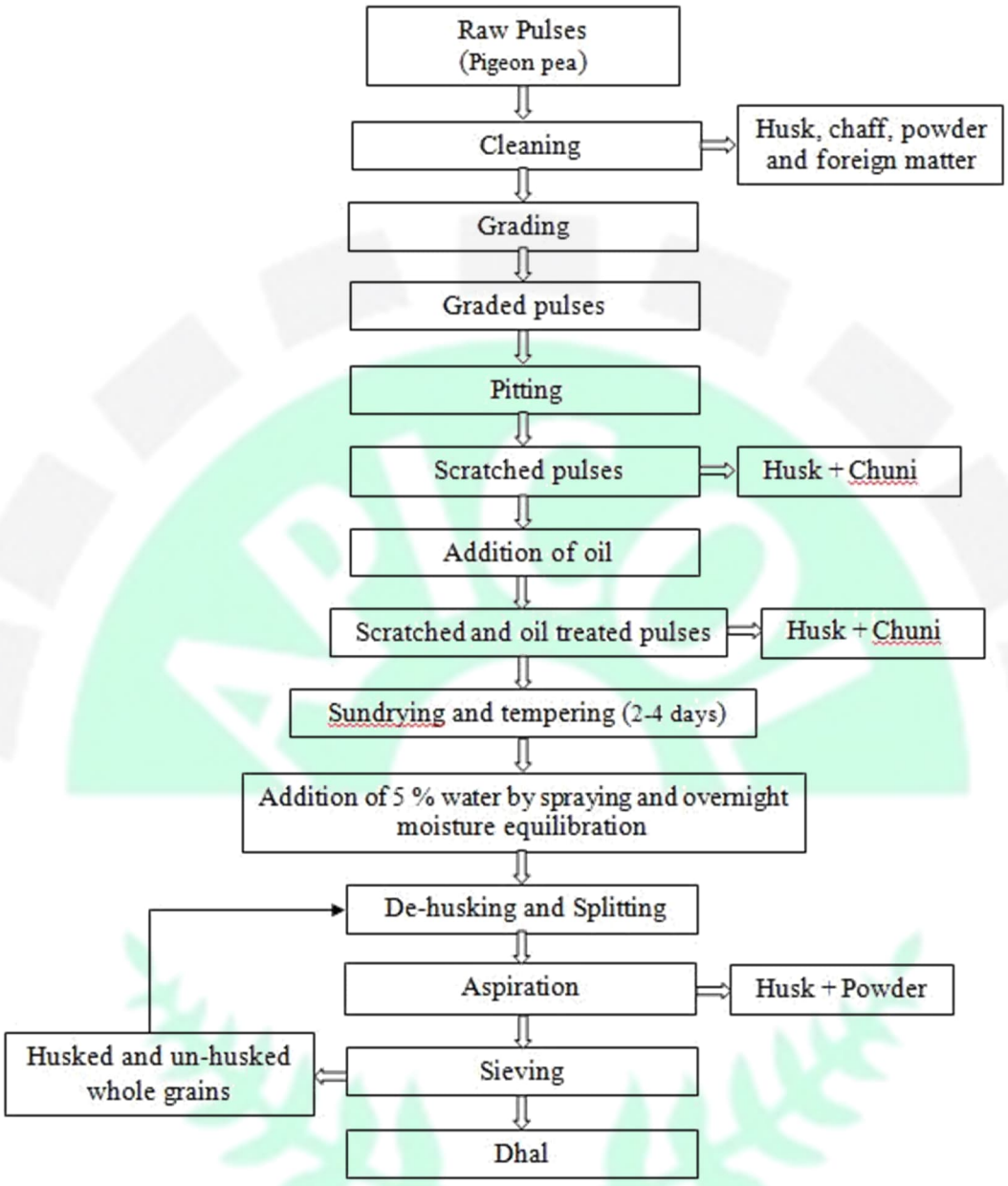
Milling Process

Generally milling of pulses is done in two ways i.e., wet milling and dry milling. The milling process may vary from depending on the type of pulses and scale of processing. CFTRI has developed a method for milling. The flow chart for different milling methods are as below;

1. **Dry milling method of pigeon pea**

It is generally practiced in Madhya Pradesh and Uttar Pradesh. In this, the pulses are subjected to pitting in a roller and then oil treatment by applying 0.5-2.0 per cent linseed oil or any edible oil. Then the pulses are spread in the drying yard for sun drying for 2 – 4 days. The pulses are tempered by heaping and covering during the nights in between these days. After sundrying, again pulses are moistened uniformly with about 5 % water and kept as such on heaps overnight for moisture equilibrium. Then, these pulses are allowed to pass from the roller for splitting and dehusking. About, 50 % of the pulses are dehusked and split in first operation. After this, the husk are removed by aspiration and split dhal are separated from the mixture of husked and un- husked whole pulses. The mixture is once again moistened and dried in the sun and then dehusked and split. This process of alternate wetting and drying is repeated until almost all the remaining pulses are converted in to split dhal. The average yield of dhal ranges from 68-75 %.

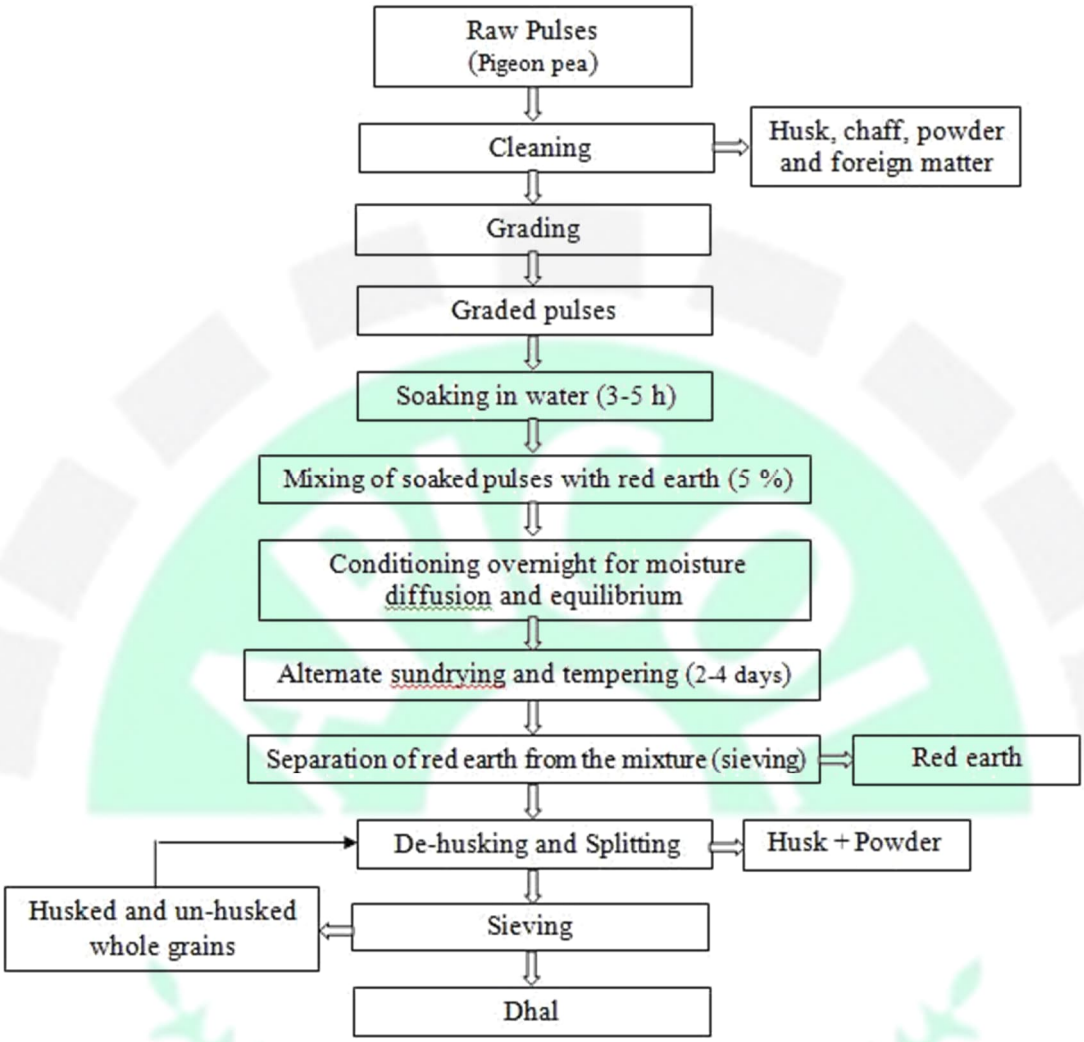
Flow diagram of dry milling method of pigeon pea



2. Wet milling method of pigeon pea

The grains are soaked in water for 3-12 hours in this method of milling. The soaked pulses are mixed with red earth at about 5 % thoroughly. The mixture is kept in heaps overnight. The whole mixture is then dried in the sun for 2-4 days until the husk of the grain are shriveled and loosened. The pulses are tempered overnight in between these days. By sieving, the red earth is separated from the pulses. The dried grains are dehusked and split in disc sheller. The dhal and other fractions are separated. In a single milling operation, about 95 % of the pulses are dehusked and split. The rest material again pretreated and milled to convert in to dhal. The red earth may facilitate in increasing the rate of drying and in loosening the husk. This method requires about 5 to 7 days for processing of a batch of pulses.

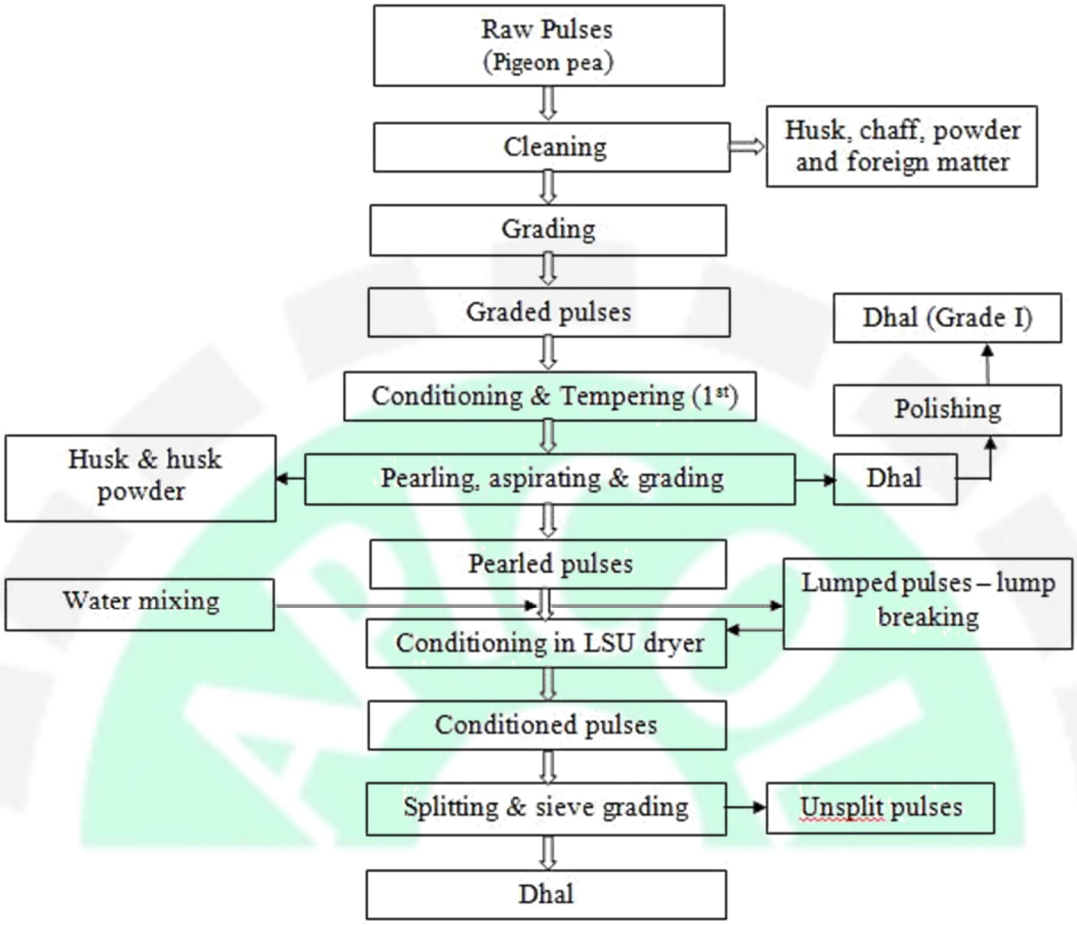
Flow diagram of wet milling method of pigeon pea



3. CFTRI method of Pigeon Pea milling

There are some other methods like CFTRI method, which eliminates mixing of oil and water for loosening the husk. Clean and graded grains are conditioned by dry heat treatment by two passes through LSU drier with hot air. After each pass through the dryer the grains are tempered for 6 hours in tempering bin. The preconditioned pulses are conveyed to the pearler or dehusker where almost all pulses are dehusked in single operation. The gota (dehusked whole grain) are separated from split pulses and mixture of husk, brokens, etc. Water is added at controlled level to Gota and then collected and allowed to remain as such for about 1 hour. Some of the moistened Gota form lumps of varying sizes. These lumps are fed to the lump breaker to separate them. These Gota are conveyed to LSU dryer where it is exposed to hot air for few hours. The Gota are dried to proper moisture level for splitting. The hot, conditioned and dried dehusked whole pulses are split in the emery roller. The mixture is graded in to Grade I pulses, dehusked whole pulses and small brokens. The unsplit dehusked pulses are again fed to the conditioner for subsequent splitting. Average yield by this method is 80 %, in lesser time and lesser processing cost compared to other methods.

Flow diagram of CFTRI method of pigeon pea



4. Method of Black gram milling

After cleaning the black grams are subjected to pricking in a rough roller mill for some scratching as well as partial removal of the waxy coating on the black grams. The scratched grains are then coated with 1 to 2 percent oil in the grains. The scratched and oil coated pulses are sprayed in drying yards for sun drying for 4 to 6 hours. The partially dried grains are moistened with a spray of 4 to 5 percent water and kept overnight for moisture equilibration. The wetted pulses are then dried in the sun for 3 to 4 days and tempered over nights. Thoroughly dried pulses are de-husked in a roller machine. About, 40 to 50 percent pulses are de-husked and split in first milling operation. The husk and powder are then aspirated off. Then, the split 'dhal' is separated from the de-husked whole dhal and un-husked pulses by sieving. Both husked and un-husked whole grains are again dried in the sun and milled as above, and the same process is repeated until the desired milling of pulses is achieved. The average yield of dhal is 70-71 percent. Sometimes, the last part of the unsplit grains and partially husked grains are allowed to pass through sheller and polisher machines for splitting and removal of the husk and polisher machines for splitting and removal of the husk, which result in a large amount of losses due to formation of powder and brokens. In some cases, policing is done in a buffing machine. In order to give a white finish and to protected from insect attack a coating of soapstone powder is generally given to these 'dhals'.

Market Potential

Pulses are generally used along with rice and Chapatti as Dal. Dal, garnished with onions, tomatoes and spices is an indispensable nibble in household. The various pulses are part of the normal diet of all vegetarians and are also used frequently by non-vegetarians too. They are the main sources of protein. The pulses are used for preparing hot dishes, sweet dishes and other varieties. Pulses are the most common diet part of Indian families. Dal is dry cereal, which is taken to fulfil the requirements of protein for a normal human being. Due to the high content of proteins pulses are mixed in other cereal foods to increase the quality of proteins to be injected in the body.

India pulses market reached a volume of 27.5 million Tons in 2019. The market for pulses/Dal is present largely in India where ninety per cent of the produce is consumed locally. Pulses are now increasingly being used in the processing of ready-to-eat (RTE) food products. As a result of rapid urbanization, changing lifestyle and hectic work schedules, healthy snack foods are becoming popular amongst the working population. The demand for pulses will never end but will increase in an increasing rate and rise in population also drives the demand for pulses.

Raw Material Description

Basic raw material that is used in pulse processing are different types of pulses that are directly procured from farmers and packing material used to pack finished product. Average Raw Material Cost is Rs. 67-80 kg.

3. Techno-commercial Assumptions

Sl. No.	Parameter	Value	Unit
1	Increase in Rate of Product	5	%
2	Increase in Electricity consumption	5	%
3	Collection from Debtors (First Year)	15	Days
4	Collection from Debtors	15	Days
5	Payable to Creditors	20	Days
6	Drawing By Promoter	30	%
7	Increase in Staff Salary	5	%
8	Rate of Interest on TL	11	%
9	Rate of Interest on WC	9	%
10	Loan Repayment (in year)	7	Years
11	Raw Material in Stock (on sales)	15	Days
12	Finished Goods in stock (on sales)	3	Days
13	Promoter's Contribution (Term Loan)	10	%
14	Promoter's Contribution (Working Capital)	20	%
15	Working Capital Requirement	15	Days
16	Working Capital Utilisation	100	%
17	No. of working Days	295	Days
18	Yield of A-grade pulses	70	%
19	Yield of B-grade pulses (Broken)	15	%
20	Quantity of By-product	10	%
21	Losses	5	%

4. Financial Details

4.1. Project Fixed Capital

Details of Fixed Assets					
Sl. No.	**Particulars**	**Unit/Specification**	**Qty.**	**Cost per unit**	**Total**
A	**Land**				
1	Land Development	Sq. ft	7000	LS	4,900
2	Fencing (Barbed wire/Green Fencing)	ft	335	60.00	20,100
	Sub Total				**25,000**
B	**Civil Construction**				
1	Production area	sq. ft	3000	400.00	12,00,000
2	RM and FG Store	sq. ft	2000	400.00	8,00,000
3	Office	sq. ft	200	850.00	1,70,000
4	Labour Shed	sq. ft	250	350.00	87,500
	Sub Total				**22,57,000**
C	**Water Supply**				
1	Water Supply with overhead tank, pump and pipeline				**2,50,000**
D	**Electrification**				
1	Electrical Installation (with transformer and DG Unit as required)				**5,00,000**
E	**Plant & Machinery**				
Sl. No.	**Particulars**	**Unit/Specification**	**Qty**	**Unit Price**	**total**
1	Separator	G.I. mesh & accessories - 6 HP	1	1,30,000	1,30,000
2	Destoner Double Blower Type	3 HP	1	1,50,000	1,50,000
3	Pre-aspiration with High Pressor Blower	6 HP	1	45,000	45,000
4	Emery Roll	MS & G.I Sheet,2.5mm thickness.	1	1,50,000	1,50,000
5	Elevator Box type	With Cotton Belt & Pulley Set	1	3,00,000	3,00,000
6	Conveyer	2 HP	1	65,000	65,000
7	Grinding Machine	5 HP	1	55,000	55,000
8	Aspiration system (with Low Pressor Blower & Connection Pipes)	10 HP	1	1,80,000	1,80,000
9	Electric Motor & Panel Board		1	4,50,000	4,50,000
10	Dryer (With Heating Chamber, Including Blower and accessories)	15 HP	1	6,50,000	6,50,000
11	Colour Sorter		1	11,50,000	11,50,000
12	Air Compressor	7.5 HP	1	1,20,000	1,20,000
13	Lather Polisher	15 HP	1	2,50,000	2,50,000
14	Packing Machine		1	5,00,000	5,00,000
	Total				**41,95,000**

F	Miscellaneous Expenditure				
1	Insurance premium of assets				30000
2	DPR Cost				
3	Other Misc. Exp				
	Total Misc. Exp.				**30000**

4.2. Project Variable Expenses

Details of Recurring Expenditure						
A	**Details of raw material**					
Sl. No.	**Items**	**Unit**	**Rate/Unit (Rs)**	**Qty/day**	**Qty/annum (kg)**	**Total Cost (Rs)**
1	Green gram	Kg	78.00	400	1,18,000	92,04,000
2	Black gram	Kg	66.00	400	1,18,000	77,88,000
3	Pigeon pea	Kg	66.00	400	1,18,000	77,88,000
4	Packing material	No	15.00	22.8	6726	100890
	Total			**1,200**	**3,60,726**	**2,48,80,890**

Details of salary and other benefits				
Sl. No.	**Type of workers**	**No. of Worker**	**Salary Per Month/head (Rs)**	**Total Salary per annum (Rs)**
1	Manager	1	20000	240000
2	Unskilled	6	10000	720000
3	Skilled	3	12,000	4,32,000
4	Domain Skilled	1	15,000	1,80,000
5	Purchase and Store	1	20,000	2,40,000
	Grand Total	12	**77,000**	**18,12,000**

4.3. Details of Sales

G	Details of sales					
Sl. No.	**Type of products**	**Unit**	**Rate/Unit (Rs)**	**Quantity/day**	**Quantity/annum**	**Total (Rs)**
1	Green gram (A grade)	Kg	125	280	82,600	1,03,25,000
2	Black gram (A grade)	Kg	130	280	82,600	1,07,38,000
3	Pigeon pea (A grade)	Kg	120	280	82,600	99,12,000
4	Green gram (Broken)	Kg	70	60	17,700	12,39,000
5	Black gram (Broken)	Kg	75	60	17,700	13,27,500
6	Pigeon pea (Broken)	Kg	65	60	17,700	11,50,500
7	By-product (Husk)	Kg	15	120	35,400	5,31,000
	Total			**1,140**	**3,36,300**	**3,52,23,000**

4. Project Balance Sheet

Liabilities	I	II	III	IV	V	VI	VII
Opening Capital		**19,95,431**	**25,41,204**	**32,52,490**	**41,38,317**	**51,69,494**	**63,29,227**
Add: Introduced	9,62,350						
Add: Profit	14,77,081	16,35,772	21,05,287	26,59,826	32,47,177	38,72,733	41,44,286
Less: Drawing	4,44,000	10,90,000	13,94,000	17,74,000	22,16,000	27,13,000	31,43,000
Closing Capital	**19,95,431**	**25,41,204**	**32,52,490**	**41,38,317**	**51,69,494**	**63,29,227**	**73,30,513**
Term Loan from Bank	58,35,269	51,08,399	42,97,416	33,92,588	23,83,053	12,56,697	-
Current Liabilities							
Cash Credit from Bank	9,66,400	9,66,400	9,66,400	9,66,400	9,66,400	9,66,400	9,66,400
Sundry Creditors	10,78,172	13,06,267	14,63,067	16,32,267	18,14,733	20,11,333	21,11,933
Expenses Payable	3,50,300	3,98,700	4,34,800	4,73,500	5,15,100	5,59,600	5,87,700
Current Provisions	3,65,178	4,33,188	6,34,409	8,72,068	11,23,790	13,91,885	15,08,266
Total Current Liabilities	**27,60,050**	**31,04,555**	**34,98,675**	**39,44,235**	**44,20,024**	**49,29,219**	**51,74,299**
Total Liabilities	**1,05,90,750**	**1,07,54,157**	**1,10,48,582**	**1,14,75,139**	**1,19,72,571**	**1,25,15,142**	**1,25,04,812**
Assets							
Fixed Assets	72,07,500	72,07,500	72,07,500	72,07,500	72,07,500	72,07,500	72,07,500
Less Depreciation	9,50,000	17,69,788	24,77,666	30,89,315	36,18,174	40,75,767	44,71,976
Net Fixed Assets	**62,57,500**	**54,37,713**	**47,29,834**	**41,18,185**	**35,89,326**	**31,31,733**	**27,35,524**
Current Assets							
Sundry Debtors	11,44,800	13,87,000	15,53,400	17,33,100	19,26,800	21,35,500	22,42,300
Inventories	10,41,530	12,12,530	13,79,392	15,40,146	17,13,585	19,00,381	20,18,339
Cash and Bank Balance	2,29,000	2,77,400	3,10,700	3,46,700	3,85,400	4,27,100	4,48,500
Other Current Assets	19,17,920	24,39,515	30,75,256	37,37,008	43,57,461	49,20,428	50,60,149
Total Current Assets	**43,33,250**	**53,16,445**	**63,18,747**	**73,56,954**	**83,83,245**	**93,83,409**	**97,69,288**
Total Assets	**1,05,90,750**	**1,07,54,157**	**1,10,48,582**	**1,14,75,139**	**1,19,72,571**	**1,25,15,142**	**1,25,04,812**

4.5. Calculation of Depreciation

Rates of Depreciation		10%	15%	Total depreciation for the year (Rs)
Year	1	2,45,750.00	7,04,250	9,50,000
	2	2,21,175.00	5,98,613	8,19,788
	3	1,99,057.50	5,08,821	7,07,878
	4	1,79,151.75	4,32,498	6,11,649
	5	1,61,236.58	3,67,623	5,28,859
	6	1,45,112.92	3,12,479	4,57,592
	7	1,30,601.63	2,65,608	3,96,209

4.6. Projected P&L

Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
Capacity Utilisation	**65**	**75**	**80**	**85**	**90**	**95**	**95**
Revenue							
Sales	2,28,94,950	2,77,39,000	3,10,68,000	3,46,61,000	3,85,35,000	4,27,10,000	4,48,46,000
Opening Stock of Finished Goods	-	(2,32,830)	(2,82,092)	(3,15,946)	(3,52,485)	(3,91,881)	(4,34,339)
Closing Stock of Finished Goods	2,32,830	2,82,092	3,15,946	3,52,485	3,91,881	4,34,339	4,56,061
Total Income (A)	**2,31,27,780**	**2,77,88,262**	**3,11,01,854**	**3,46,97,539**	**3,85,74,397**	**4,27,52,458**	**4,48,67,722**
Expenditure							
Opening stock of Raw Material	**-**	**8,08,700**	**9,79,700**	**10,97,300**	**12,24,200**	**13,61,100**	**15,08,500**
Purchase (Net) of Material	1,61,72,579	1,95,94,000	2,19,46,000	2,44,84,000	2,72,21,000	3,01,70,000	3,16,79,000
Closing Stock of Raw material	**8,08,700**	**9,79,700**	**10,97,300**	**12,24,200**	**13,61,100**	**15,08,500**	**15,84,000**
Raw Material Consumption	**1,53,63,879**	**1,94,23,000**	**2,18,28,400**	**2,43,57,100**	**2,70,84,100**	**3,00,22,600**	**3,16,03,500**
Repair & Maintenance- Machinery (@5% of Cost)	71,825	75,500	79,300	83,300	87,500	91,900	96,500
Electricity expense	18,31,596	22,19,200	24,85,500	27,72,900	30,82,800	34,16,800	35,89,500
Insurance cost	30,000	31,500	33,100	34,800	36,600	38,500	40,500
Administrative salaries and wages	18,12,000	19,02,600	19,97,800	20,97,700	22,02,600	23,12,800	24,28,500
Other Misc. Expenses [@2% of sales]	4,57,899	5,54,780	6,21,360	6,93,220	7,70,700	8,54,200	8,97,354
Total Cost	**1,95,67,199**	**2,42,06,580**	**2,70,45,460**	**3,00,39,020**	**3,32,64,300**	**3,67,36,800**	**3,86,55,854**

Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
Profit Before Depreciation, Interest and Tax	**35,60,582**	**35,81,682**	**40,56,394**	**46,58,519**	**53,10,097**	**60,15,658**	**62,11,868**
Depreciation	9,50,000	8,19,788	7,07,878	6,11,649	5,28,859	4,57,592	3,96,209
Profit Before Interest and Tax	**26,10,582**	**27,61,894**	**33,48,516**	**40,46,870**	**47,81,237**	**55,58,065**	**58,15,658**
Interest on Term Loan	6,81,346	6,05,958	5,21,845	4,27,999	3,23,293	2,06,471	76,131
Interest on Working Capital Loan	86,976	86,976	86,976	86,976	86,976	86,976	86,976
Total Interest Paid	**7,68,322**	**6,92,934**	**6,08,821**	**5,14,975**	**4,10,269**	**2,93,447**	**1,63,107**
Profit Before Tax	**18,42,259**	**20,68,960**	**27,39,695**	**35,31,895**	**43,70,968**	**52,64,618**	**56,52,552**
Income Tax	3,65,178	4,33,188	6,34,409	8,72,068	11,23,790	13,91,885	15,08,266
Profit after Tax	**14,77,081**	**16,35,772**	**21,05,287**	**26,59,826**	**32,47,177**	**38,72,733**	**41,44,286**

4.7. Projected Cash Flow

Period Ending:	I	II	III	IV	V	VI	VII
Cash & Bank Balance at Beginning	-	2,29,000	2,77,400	3,10,700	3,46,700	3,85,400	4,27,100
Cash Inflow during the Period	1,15,40,750	28,00,065	32,07,285	37,17,035	42,51,826	48,39,520	47,85,576
Cash Outflow during the Period	1,13,11,750	27,51,665	31,73,985	36,81,035	42,13,126	47,97,820	47,64,176
Closing Cash & Bank Balance	**2,29,000**	**2,77,400**	**3,10,700**	**3,46,700**	**3,85,400**	**4,27,100**	**4,48,500**

4.8. Projected Loan Repayment

Year	Interest	EMI	Principal
1	6,81,346.23	13,32,827.57	6,51,481.35
2	6,05,957.56	13,32,827.57	7,26,870.01
3	5,21,845.01	13,32,827.57	8,10,982.56
4	4,27,999.06	13,32,827.57	9,04,828.52
5	3,23,293.35	13,32,827.57	10,09,534.22
6	2,06,471.23	13,32,827.57	11,26,356.35
7	76,130.58	13,32,827.57	12,56,696.99
Total	**28,43,043.02**	**93,29,793.02**	**64,86,750.00**

4.9. Calculation of DSCR, IRR and BEP

Calculation of DSCR							
Year	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**
Net Sales	2,28,94,950	2,77,39,000	3,10,68,000	3,46,61,000	3,85,35,000	4,27,10,000	4,48,46,000
Net Profit	14,77,081	16,35,772	21,05,287	26,59,826	32,47,177	38,72,733	41,44,286
Interest Paid	7,68,322	6,92,934	6,08,821	5,14,975	4,10,269	2,93,447	1,63,107
Cash Accruals (a)	**22,45,404**	**23,28,706**	**27,14,108**	**31,74,801**	**36,57,447**	**41,66,180**	**43,07,393**
Principal	6,51,481	7,26,870	8,10,983	9,04,829	10,09,534	11,26,356	12,56,697
Interest	7,68,322	6,92,934	6,08,821	5,14,975	4,10,269	2,93,447	1,63,107
Total (b)	**14,19,804**	**14,19,804**	**14,19,804**	**14,19,804**	**14,19,804**	**14,19,804**	**14,19,804**
DSCR	1.58	1.64	1.91	2.24	2.58	2.93	3.03
Average DSCR	**2.27**						

Calculation of Break-Even Point (BEP)							
Sales	**2,31,27,780**	**2,77,88,262**	**3,11,01,854**	**3,46,97,539**	**3,85,74,397**	**4,27,52,458**	**4,48,67,722**
Variable Cost	1,58,21,778	1,99,77,780	2,24,49,760	2,50,50,320	2,78,54,800	3,08,76,800	3,25,00,854
Contribution	**73,06,003**	**78,10,482**	**86,52,094**	**96,47,219**	**1,07,19,597**	**1,18,75,658**	**1,23,66,868**
Fixed Cost	54,63,743	57,41,521	59,12,399	61,15,324	63,48,629	66,11,040	67,14,316
BEP Sales	**1,72,95,950**	**2,04,27,279**	**2,12,53,418**	**2,19,94,598**	**2,28,45,498**	**2,37,99,793**	**2,43,59,932**
Average BEP sales	**2,17,10,924**						

Calculation of Internal Rate of Return (IRR)				
Sl. No.	**Year**	**PAT**	**Depreciation**	**Cash Accrual**
1	Cash outflow at beginning			-84,15,500
2	31-03-2023	14,77,081	9,50,000	24,27,081
3	31-03-2024	16,35,772	8,19,788	24,55,560
	31-03-2025	21,05,287	7,07,878	28,13,165
4	31-03-2026	26,59,826	6,11,649	32,71,476
5	31-03-2027	32,47,177	5,28,859	37,76,037
6	31-03-2028	38,72,733	4,57,592	43,30,325
7	31-03-2029	41,44,286	3,96,209	45,40,495
IRR		**29.86%**		
Payback Period		**3 Years 3 Months**		

4.10. Summary of Project Cost

Sl. No.	Name of Assets	Amount (Rs)
1	Land Development	25,000
2	Civil Construction	22,57,500
3	Irrigation/Water Supply	2,00,000
4	Electrification	5,00,000
5	Plant & Machinery	41,95,000
6	Livestock	-
7	Insurance	30,000
8	DPR Cost	-
9	Other Misc. Exp.	-
	Total Fixed Cost	**72,07,500**
	Recurring	**12,08,000**
	Cost of Project	**84,15,500**