Detailed Project Report

on

Maize Processing Unit (Flour)

Under MKUY

Name of the Entrepreneur/Entity:

Address:

Contents

1. Project Summary

1	Name of the Enterprise (as per the Illustrative List of Enterprises)	Mazie Flour Processing
2	Sector (as per the Illustrative List of Enterprises)	Agriculture
3	Project Capacity[1]	1500 kgs/day
4	Key components of the project	Procurement, Cleaning, Milling and Packing
5	Project Address (Village/Ward, Gram Pranchayat/Municipality, Block, District)	
6	Products/Output from the project	Packed Maize Flour
7	Total Project Cost	Rs. 75,06,000
8	Fixed Capital Cost	Rs. 65,56,000
9	Working/Recurring capital	Rs. 9,50,000
10	Bank Finance/ Self Finance	Bank Loan
11	Bank Loan Amount	Rs. 64,70,400
12	Promoter Contribution (min 10% in case of bank loan)	Rs. 10,35,600
14	Assumed Rate of Interest	11%
15	Subsidy Eligibility (40%, 50%)	
16	Repayment Terms (Tenure, Moratorium, Frequency, Mode of Repayment: equal principal/equal instalment)	Monthly equated instalments for 7 years
17	Key Financial Indicators:	
	1. Average Annual Net Profit	Rs. 22,25,377
	2. Debt Service Coverage Ratio (DSCR)	2.11
	3. Internal Rate of Return	26.70%
	4. Break Even Point (BEP)	3 Years and 6 Months
18	Estimatsed employment to be generated (nos.)	11

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	
	Farmer Id of Individual, if available	
17	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:

Please provide further details of the consultant:

2.3. Concept and Scope of the Project

Product

Maize is one of the top three important crops in India, ranking after rice and wheat. It is widely applied in food process, diet cooking, feed products and industrial fuel raw material. The development of maize processing has a direct contribution to the economy in India.

Maize processing industry in India is largely influenced by the price of maize, the consumption and its supply. With the increasing use for alcohol production, the consumption of maize will go over its supply. The agricultural department in India predicts that the price of maize may continue to rise in the short terms. The increasing need of maize industrial use largely encourages the development of maize processing industry in India, and meanwhile the price of downstream products such as feeding products, and maize flour product.

For the maize processing factory owners, keeping an eye on the maize price in India and global market and government export-import policy is an important measure to deal with the potential risk. Maize processing in India is correlated with the price of raw material, the global market situation. The continuous rise of maize will lead to a great change in a series of maize processing industry such as maize flour mill factory, feed product, industrial fuel and poultry feed.

Market Potential

Maize Flour market is estimated to be valued at 1.37 Billion in 2018 and is estimated to grow at a CAGR of 3.9% during the forecast period 2019–2024. India Corn Starch market growth can be attributed to the easy availability of corn and its wide range of applications in various industries such as food and beverage, pharmaceutical, animal feed, textile industry, paper industry, and others. The Food and Beverage industry dominated the application segment of India Corn Starch Market. The rapid growth of population, as well as rapid industrialization, have propelled the growth of India corn starch market. Even the increase in local food stalls and restaurants has increased the demand of Maize/Corn flour for making various eatable products.

Raw Material

The only major raw material required for Maize Flour Production is Maize Corn. The process flow chart for Maize processing is mentioned below:

Procurement: Dried maize kernels are procured from appropriate vendors and stored in raw material warehouse for normal plant operation.

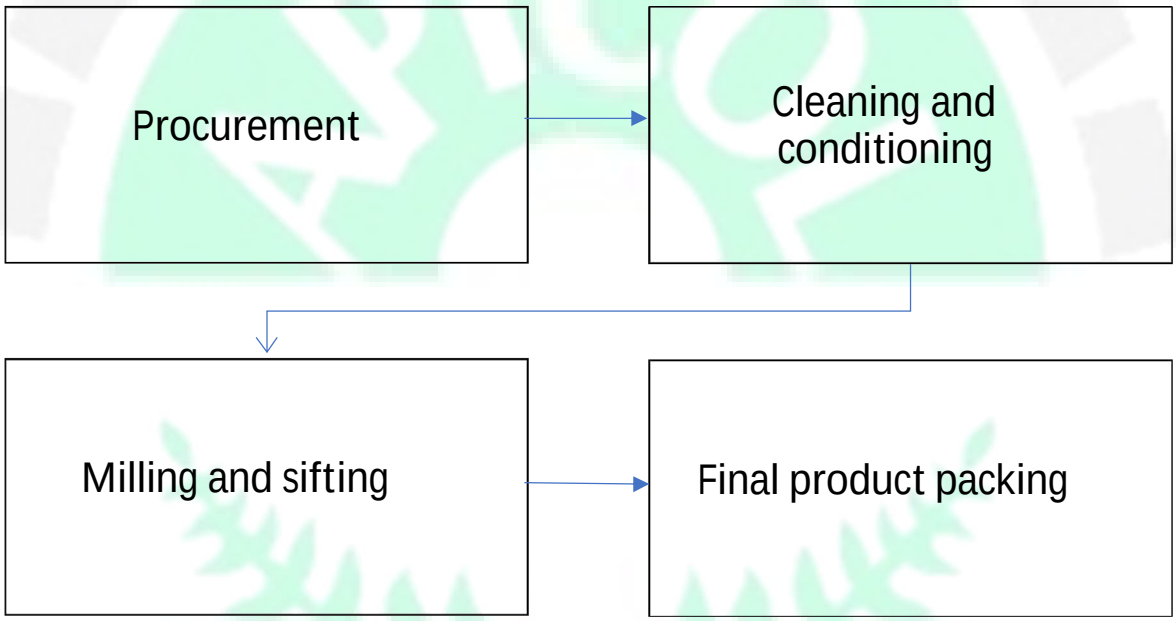
Cleaning and conditioning: Cleaning and conditioning of the maize is an important step in the process and refers to the removal of foreign material and all that is not maize kernels from the to-be milled grain that lowers the quality of the product such as husk, straw, dust, sand, and everything too big or toosmall and lighter than a maize kernel. It also refers to the removal of other seeds, and materialharmful to the milling equipment such as metal and stones. Cleaning Process involves an array of cleaning machine vibro separator, aspirators, destoners, magnetic separators etc. Each of this machine has its own contribution to cleaning effect.

Conditioning refers to the addition of moisture to the maize to allow the bran to be peeled off inflakes during milling with plate or roller mills, allowing easy separation in a sifter and, most importantly, to add mass to the meal

Milling and sifting: Roller type flour mills are used to grinding the grain, the different roller mills single roller mill,double roller mill and pneumatic roller mill, the mill adopted defines quality of flour produced. In a complete maize milling plant, there are several roller mills that work together, they have different functions, the first mill mainly primary grinding & separation of the hard outer covering, the second and third will grinding the maize into granular size, and meanwhile to get some super fine flour, and the granular sized product will go to the next mill to continue grinding.

After each successive grinding double bin sifter or square plan sifter are used to sift the meal from the miller, classification and sifting more super flour. In general, the sifting is used to separate the flour and bran, also separate large size and small size to ensure flour quality. This process of grinding, sifting & blending flour is repeated until required quality flour is obtained.

Final product packing: After the maize is processed, it will come out in different final products like flour and grits. Theyare different from their granular size. For the packing, a Flour packing machine is used, and the flour is packed into 1 kg, 5 kg, 10 kg, 25 kg or 50 kg bags as per the requirement.



Types of Machines and Equipment's for the Mazie flour mill unit

Vibrating Separator	It's composed of a vibrating sieve, powered by an exciter which is in turn is powered by an appropriate motor which is used to remove most of the dirt & large impurities from given grain.	
Destoner	It's a machine which is used to remove stones from the given grain, widely used in various grain mills in cleaning section.	
Disc Separator	It's a separator class machine, generally used to remove foreign grains from required grain efficiently.	

Magnetic Separator	It's a type of separator which is used to magnetic impurities from given product using powerful electromagnets, used in wide range of industries for separation.	
Aspirator	It's a more fine-tuned separator designed to remove finer impurities like remaining dirt, similar sized impurities, leaves etc.	
Heavy duty Pulveriser Mill	It basically a grinder class machine, which may employ any possible grinding arrangement to achieve, required grinding as per product to be grinded.	
Flour Sifter Machine	It's basically an industrial version of the sieve used to sieve out, large fibers, particles etc, to achieve required particle size in flour.	

Packet Filling & Packaging Machine	It's a simple packaging machine, designed to fill the given food grade plastic material's continuous pouch with required product aftersealing one end & after filling sealing the other end also to generate packet of product.	

3. Techno-commercial Assumptions

Sl. No.	Parameter	Value	Unit
1	Increase in Rate of Product	5	%
2	Increase in Electricity consumption	8	%
3	Collection from Debtors (First Year)	10	Days
4	Collection from Debtors	10	Days
5	Payable to Creditors	15	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)	5	Days
13	Promoter's Contribution (Term Loan)	10	%
14	Promoter's Contribution (Working Capital)	30	%
15	Working Capital Requirement	1	Months
16	Working Capital Utilisation	100	%
17	Working Days per Annum	295	Days
18	Yield of Flour	90	%

4. Financial Details

4.1. Project Fixed Capital

Details of Fixed Assets					
Sl. No.	**Particulars**	**Unit**	**Qty.**	**Cost per unit**	**Total (Rs)**
A	**Land**				
1	Land Development	sq. ft	10000	0.70	7,000
2	Site Renovation	ft	400	60.00	24,000
	Sub Total				**31,000**
B	**Civil Construction**				
1	Plant Processing area	sq. ft	4000	400.00	16,00,000
2	RM and FG Store	sq. ft	1500	400.00	6,00,000

Details of Fixed Assets					
Sl. No.	**Particulars**	**Unit**	**Qty.**	**Cost per unit**	**Total (Rs)**
3	Office	sq. ft	400	850.00	3,40,000
4	Labour Shed	sq. ft	200	350.00	70,000
	Sub Total				**26,10,000**
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**	**Specification**	**Qty**	**Unit Price**	**total**
1	Vibrating Separator	(200 kg/hr)	1	3,50,000	3,50,000
2	De-stoner	(300 kg/hr)	1	3,65,000	3,65,000
3	Disc Separator	(200 kg/hr)	1	2,20,000	2,20,000
4	Magnetic Separator		1	2,00,000	2,00,000
5	Aspirator		1	2,00,000	2,00,000
6	Heavy duty Pulveriser Mill	(250 kg/hr)	1	5,00,000	5,00,000
7	Flour Sifter Machine	(300 kg/hr)	1	3,00,000	3,00,000
8	Packet Filling & Packaging Machine		1	10,00,000	10,00,000
	Total				**31,35,000**
F	**Miscellaneous Expenditure**				
1	Insurance premium on fixed asset				30,000
	DPR Cost				
	Other Misc. Exp.				
	Total Misc. Exp				**30,000**

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**	**Total Cost (Rs)**
1	Maize Corn	Kg	23.00	1,800	5,31,000	1,22,13,000
2	Packaging and Printing Cost	No.	15.00	28	8,363	1,25,499
	Total				**4,50,863**	**1,03,02,949**

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	Supervisors	1	15,000	1,80,000
2	Skilled Worker	3	12,000	4,32,000

Details of salary and other benefits				
Sl. No.	**Type of workers**	**No. of Worker**	**Salary Per Month/head (Rs)**	**Total Salary per annum (Rs)**
3	Purchase and store	1	12,000	1,44,000
4	Unskilled worker	6	8,000	5,76,000
5	**Grand Total**	**11**	**47,000**	**13,32,000**

4.3. Details of Sales

Details of sales						
Sl. No.	**Type of products**	**Unit**	**Rate/Unit (Rs)**	**Quantity per day**	**Quantity per annum**	**Total (Rs)**
1	Maize Corn Flour	Kg	45.00	1,350	3,98,250	1,79,21,250
	Total			**1,350**	**3,98,250**	**1,79,21,250**

4.4. Project Balance Sheet

Liabilities	I	II	III	IV	V	VI	VII
Opening Capital	**-**	**17,34,576**	**20,42,876**	**27,15,997**	**35,08,919**	**44,27,019**	**52,49,294**
Add: Introduced	10,35,600						
Add: Profit	9,98,976	11,84,300	18,37,121	22,96,922	28,16,100	30,72,274	33,71,945
Less: Drawing	3,00,000	8,76,000	11,64,000	15,04,000	18,98,000	22,50,000	25,87,000
Closing Capital	**17,34,576**	**20,42,876**	**27,15,997**	**35,08,919**	**44,27,019**	**52,49,294**	**60,34,238**
Term Loan from Bank	52,22,348	45,71,827	38,46,028	30,36,240	21,32,744	11,24,697	-
Current Liabilities							
Cash Credit from Bank	6,65,000	6,65,000	6,65,000	6,65,000	6,65,000	6,65,000	6,65,000
Sundry Creditors	3,09,088	4,05,700	4,82,800	5,36,800	5,95,000	6,24,750	6,56,000
Expenses Payable	2,14,000	2,48,300	2,77,100	2,99,700	3,23,700	3,39,900	3,57,100
Current Provisions	-	6,68,271	9,48,052	11,45,109	13,67,614	14,77,403	16,05,833
Total Current Liabilities	**11,88,088**	**19,87,271**	**23,72,952**	**26,46,609**	**29,51,314**	**31,07,053**	**32,83,933**
Total Liabilities	**81,45,013**	**86,01,974**	**89,34,976**	**91,91,768**	**95,11,077**	**94,81,044**	**93,18,172**
Assets							
Fixed Assets	65,56,000	65,56,000	65,56,000	65,56,000	65,56,000	65,56,000	65,56,000
Less Depreciation	8,31,250	14,41,725	20,67,328	26,10,674	30,82,942	34,93,753	38,51,386
Net Fixed Assets	**57,24,750**	**51,14,275**	**44,88,672**	**39,45,326**	**34,73,058**	**30,62,247**	**27,04,614**
Current Assets							
Sundry Debtors	3,58,500	4,70,500	5,59,900	6,22,500	6,89,900	7,24,400	7,60,600
Inventories	4,96,650	5,94,850	7,30,203	8,30,561	9,21,592	9,86,180	10,35,522
Cash and Bank Balance	71,700	94,100	1,12,000	1,24,500	1,38,000	1,44,900	1,52,200
Other Current Assets	14,93,413	23,28,249	30,44,201	36,68,881	42,88,528	45,63,317	46,65,235
Total Current Assets	**24,20,263**	**34,87,699**	**44,46,305**	**52,46,442**	**60,38,020**	**64,18,797**	**66,13,557**
Total Assets	**81,45,013**	**86,01,974**	**89,34,976**	**91,91,768**	**95,11,077**	**94,81,044**	**93,18,172**

4.5. Calculation of Depreciation

Rates of Depreciation		10%	15%	Total depreciation for the year
Year	1	2,86,000	5,45,250	8,31,250
	2	2,57,400	4,63,463	7,20,863
	3	2,31,660	3,93,943	6,25,603
	4	2,08,494	3,34,852	5,43,346
	5	1,87,645	2,84,624	4,72,269
	6	1,68,880	2,41,930	4,10,810
	7	1,51,992	2,05,641	3,57,633

4.6. Projected P&L

Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
Capacity Utilisation	**60**	**75**	**85**	**90**	**95**	**95**	**95**
Revenue							
Sales	1,07,52,750	1,41,13,000	1,67,95,000	1,86,73,000	2,06,96,000	2,17,31,000	2,28,18,000
Opening Stock of Finished Goods	-	(1,82,250)	(2,39,203)	(2,84,661)	(3,16,492)	(3,50,780)	(3,68,322)
Closing Stock of Finished Goods	1,82,250	2,39,203	2,84,661	3,16,492	3,50,780	3,68,322	3,86,746
Total Income (A)	**1,09,35,000**	**1,41,69,953**	**1,68,40,458**	**1,87,04,831**	**2,07,30,288**	**2,17,48,542**	**2,28,36,424**
Expenditure							
Opening stock of Raw Material	**-**	**3,14,400**	**4,12,600**	**4,91,000**	**5,45,900**	**6,05,100**	**6,35,400**
Purchase (Net) of Material	61,81,769	81,14,000	96,56,000	1,07,36,000	1,19,00,000	1,24,95,000	1,31,20,000
Closing Stock of Raw material	**3,14,400**	**4,12,600**	**4,91,000**	**5,45,900**	**6,05,100**	**6,35,400**	**6,67,200**
Raw Material Consumption	**58,67,369**	**80,15,800**	**95,77,600**	**1,06,81,100**	**1,18,40,800**	**1,24,64,700**	**1,30,88,200**
Repair & Maintenance- Machinery (@5% of Cost)	1,30,500	1,37,100	1,44,000	1,51,200	1,58,800	1,66,800	1,75,200
Electricity expense	8,60,220	11,29,100	13,43,600	14,93,900	16,55,700	17,38,500	18,27,000
Insurance cost	30,000	31,500	33,100	34,800	36,600	38,500	40,500
Administrative salaries and wages	13,32,000	13,98,600	14,68,600	15,42,100	16,19,300	17,00,300	17,85,400
Other Misc Expenses [@2% of sales]	2,15,055	2,82,260	3,35,900	3,73,460	4,13,920	4,34,620	4,56,728

Total Cost	**84,35,144**	**1,09,94,360**	**1,29,02,800**	**1,42,76,560**	**1,57,25,120**	**1,65,43,420**	**1,73,73,028**
Profit Before Depreciation, Interest and Tax	**24,99,856**	**31,75,593**	**39,37,658**	**44,28,271**	**50,05,168**	**52,05,122**	**54,63,395**
Depreciation	8,31,250	7,20,863	6,25,603	5,43,346	4,72,269	4,10,810	3,57,633
Profit Before Interest and Tax	**16,68,606**	**24,54,731**	**33,12,055**	**38,84,925**	**45,32,900**	**47,94,312**	**51,05,762**
Interest on Term Loan	6,09,780	5,42,309	4,67,032	3,83,043	2,89,336	1,84,784	68,134
Interest on Working Capital Loan	59,850	59,850	59,850	59,850	59,850	59,850	59,850
Total Interest Paid	**6,69,630**	**6,02,159**	**5,26,882**	**4,42,893**	**3,49,186**	**2,44,634**	**1,27,984**
Profit Before Tax	**9,98,976**	**18,52,571**	**27,85,173**	**34,42,032**	**41,83,714**	**45,49,678**	**49,77,778**
Income Tax	-	6,68,271	9,48,052	11,45,109	13,67,614	14,77,403	16,05,833
Profit after Tax	**9,98,976**	**11,84,300**	**18,37,121**	**22,96,922**	**28,16,100**	**30,72,274**	**33,71,945**

4.7. Projected Cash Flow

Period Ending:	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**
Cash & Bank Balance at Beginning	-	71,700	2,04,488	2,22,387	2,34,888	2,48,388	2,55,288
Cash Inflow during the Period	89,76,263	27,04,345	28,48,404	31,13,925	35,93,073	36,38,824	39,06,458
Cash Outflow during the Period	89,04,563	25,71,558	28,30,504	31,01,425	35,79,573	36,31,924	38,99,158
Net Cash Inflow	**71,700**	**1,32,788**	**17,900**	**12,500**	**13,500**	**6,900**	**7,300**
Closing Cash & Bank Balance	**71,700**	**2,04,488**	**2,22,387**	**2,34,888**	**2,48,388**	**2,55,288**	**2,62,588**

4.8. Projected Loan Repayment

Year	Interest	EMI	Principal
1	6,09,780	11,92,831	5,83,052
2	5,42,309	11,92,831	6,50,522
3	4,67,032	11,92,831	7,25,799
4	3,83,043	11,92,831	8,09,788
5	2,89,336	11,92,831	9,03,496
6	1,84,784	11,92,831	10,08,047
7	68,134	11,92,831	11,24,697
Total	**25,44,418**	**83,49,818**	**58,05,400**

4.9. Calculation of DSCR, IRR and BEP

Calculation of DSCR							
Year	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**
Net Sales	1,07,52,750	1,41,13,000	1,67,95,000	1,86,73,000	2,06,96,000	2,17,31,000	2,28,18,000
Net Profit	9,98,976	11,84,300	18,37,121	22,96,922	28,16,100	30,72,274	33,71,945
Interest Paid	6,69,630	6,02,159	5,26,882	4,42,893	3,49,186	2,44,634	1,27,984
Cash Accruals (a)	**16,68,606**	**17,86,459**	**23,64,003**	**27,39,815**	**31,65,285**	**33,16,909**	**34,99,929**
Principal	5,83,052	6,50,522	7,25,799	8,09,788	9,03,496	10,08,047	11,24,697
Interest	6,69,630	6,02,159	5,26,882	4,42,893	3,49,186	2,44,634	1,27,984
Total (b)	**12,52,681**	**12,52,681**	**12,52,681**	**12,52,681**	**12,52,681**	**12,52,681**	**12,52,681**
DSCR	1.33	1.43	1.89	2.19	2.53	2.65	2.79
Average DSCR	**2.11**						

Calculation of Break-Even Point (BEP)							
Sales	**1,09,35,000**	**1,41,69,953**	**1,68,40,458**	**1,87,04,831**	**2,07,30,288**	**2,17,48,542**	**2,28,36,424**
Variable Cost	60,82,424	82,98,060	99,13,500	1,10,54,560	1,22,54,720	1,28,99,320	1,35,44,928
Contribution	**48,52,576**	**58,71,893**	**69,26,958**	**76,50,271**	**84,75,568**	**88,49,222**	**92,91,495**
Fixed Cost	38,53,600	40,19,322	41,41,785	42,08,239	42,91,854	42,99,545	43,13,717
BEP Sales	**86,83,865**	**96,99,360**	**1,00,69,291**	**1,02,89,100**	**1,04,97,393**	**1,05,66,898**	**1,06,02,154**
Average BEP sales	**1,00,58,294**						

Calculation of Internal Rate of Return (IRR)				
Sl. No.	**Year**	**PAT**	**Depreciation**	**Cash Accrual**
	Cash outflow at beginning			-75,06,000
1	31-03-2023	9,98,976	8,31,250	18,30,226
2	31-03-2024	11,84,300	7,20,863	19,05,162
3	31-03-2025	18,37,121	6,25,603	24,62,724
4	31-03-2026	22,96,922	5,43,346	28,40,268
5	31-03-2027	28,16,100	4,72,269	32,88,368
6	31-03-2028	30,72,274	4,10,810	34,83,085
7	31-03-2029	33,71,945	3,57,633	37,29,578
IRR		**26.70%**		
Payback Period		**3 Years 6 Months**		

4.10. Summary of Financial Details

Sl. No.	Name of Assets	Amount
1	Land Development	31,000
2	Civil Construction	26,10,000
3	Irrigation/Water Supply	2,50,000
4	Electrification	5,00,000
5	Plant & Machinery	31,35,000
6	Livestock	-
7	Insurance	30,000
8	DPR Cost	-
9	Other Misc. Exp	-
	Total Fixed Cost	**65,56,000**
	Recurring	**9,50,000**
	Total Cost of Project	**75,06,000**