DETAILED PROJECT REPORT

BAJRA FLOUR MILL UNIT

UNDER PMFME SCHEME

National Institute of Food Technology Entrepreneurship and Management

Ministry of Food Processing Industries

Plot No.97, Sector-56, HSIIDC, Industrial Estate, Kundli, Sonipat, Haryana-131028

Website: http://www.niftem.ac.in

Email: pmfmecell@niftem.ac.in

Call: 0130-2281089

TABLE OF CONTENTS

1. PROJECT SUMMARY

1. Name of the proposed project	:	Bajra Flour Mill Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	360000 Kg/annum(60,65,70,75,&80% capacity utilization in 1st to 5th Year respectively)
4. Raw materials	:	Whole Pearl Millets, Packing material
5. Major product outputs	:	Bajra Flour
6. Total project cost	:	Rs. 33.38 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 24.40 Lakh
• Miscellaneous Fixed Assets	:	Rs. 1.2 Lakh
• Working capital	:	Rs. 7.78 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 8.96 Lakh
• Promoter's contribution (min10%)	:	Rs. 3.34 Lakh
• Term loan	:	Rs. 14.08 Lakh
• Working Capital Requirement	:	Rs. 7.00 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1st year	:	Rs. 3.93 Lakh
• 2nd year	:	Rs. 5.84 Lakh
• 3rd year	:	Rs. 7.71 Lakh
• 4th year	:	Rs. 9.36 Lakh
• 5th year	:	Rs. 11.41 Lakh
11. Average DSCR	:	Rs. 3.14
12. Term loan repayment	:	5 Years with 6 months grace period

2. ABOUT THE PRODUCT

2.1. PRODUCT INTRODUCTION:

Millets are a group of highly variable small-seeded grasses that are widely cultivated around the world for fodder and human food as cereal crops or grains. In the semi-arid tropics of Asia and Africa (in particular in India, Mali, Nigeria and Niger), millets are important crops, with 97 percent of millet production in developing countries. Due to its productivity and high-temperature conditions, short growing season under dry conditions for the crop is preferred.

Millets are native to many parts of the globe. Pearl millet, which is a significant crop in India and parts of Africa, is the most widely grown millet. Significant crop species also include finger millet, proso millet, and foxtail millet. Just one of several styles of millet is Bajra pearl millet. Some other common millet varieties are:

- Pearl Millet
- Fonio,
- Finger millet (ragi),
- Job's tears, foxtail
- kodo millet.

The predominant crop in India is pearl millet, also known as cumbu. It has the same protein quantity as wheat. The protein contains a high proportion of globulin and albumin-followed prolamine. Pearling bajra leaves most of the germs intact to around 8 percent polish, and the nutritional value is not significantly affected. Pearling enhances the products look and taste.It is more usually ground into flour and made into chappathi. It is rendered into thin porridge as well.

2.2. MARKET POTENTIAL:

India, led by China, is one of the major countries dominating the millet market in the Asia Pacific. The amount of protein Bajra has is the same as wheat. A high proportion of prolamine, followed by globulin and albumins, is found in the protein. Pearling enhances the look and taste of the products. Until dehusked and prepared in the same way as rice, it is eaten.More regularly, it is ground into flour and turned into sheets. It is rendered into thin porridge as well. After it is parched, the grain is occasionally consumed. The commodity is equivalent to popcorn. The grain is suited for malt preparation. From its malted seeds, an intoxicating drink is obtained.The size of the global demand for millets was US$ 9,407. In 2018, 8 million and is anticipated to rise at a CAGR of 4. 6 per cent to cross US$ 14,026 from 2019 to 2027. By 2027, 3 million. Millets are small-seeded grasses that are commonly cultivated as cereal crops or grains for food and human food throughout the world.

The global production of millet has been estimated at 27.8 million tons. With a 41.0 percent global market share, India is the largest global producer. The importance of millet as a food staple, particularly in India, has declined over the last two decades due to various factors, including growing incomes, increasing urbanization, and government policies.More than 50 percent of millet production, as opposed to its use only as a staple, is currently finding its way into alternative uses. Demands for food and beverage products are further driven by the increasing population, which in turn contributes to growth in the millet market in India.The bakery sector is one of the fastest-growing sectors of consumer goods with high demand opportunities for foreign businesses. Due to its immense potential for value addition, especially within the food processing industry, the Indian food sector has emerged as a high growth and high-profit sector.

2.3. RAW MATERIAL DESCRIPTION:

Higher fibre content millets contribute significantly to the nutritional protection of a wide section of the population living in millet growing areas, considered the most vulnerable communities, and their protein quality and mineral composition contribute significantly. Millets are best known nutritionally for being a healthy source of magnesium, manganese and phosphorus minerals.Research has linked magnesium to a reduced risk of heart attack, and for body tissue growth and energy metabolism, phosphorus is essential. Millets are also abundant in phytochemicals, including phytic acid, which is thought to reduce cholesterol, and phytate, which is associated with a decreased risk of developing cancer.Therefore, in terms of their food, nutritional and livelihood protection and their position in local agro-ecosystems, millets are strategic.

However, the food uses of millets were restricted to conventional consumers only; they were limited, in particular, to their cultivation areas and were still underutilized. Their food uses will definitely be diversified by processing those using conventional as well as contemporary methods for the preparation of value added and convenience items.Their exploitation for the preparation of ready-to-use or ready-to-cook items will lead to the increase of millet consumption among non-millet consumers and thus to food protection.

3. PROCESS FLOW CHART

- **Grain delivery**: The grain is supplied by covered trucks and hopper railcars to factories. The distance travelled by the grain varies tremendously. In several times, the 110-car unit train has covered hundreds of miles. In other situations, it is shipped in the same county from a nearby plant. After arriving at the mill, grain stocks will often have gone through a variety of

accumulation processes (farmer, country elevator, terminal elevator, etc.).The number of conveyances carrying grain can vary based on the time of harvesting and delivery.

- **Grain standard:** Before Pearl Millet is unloaded in a factory, the assessment is required with samples. The millets grain is tested for moisture, test weight, unsound seeds, and foreign material. The grains are categorized according to Indian Grain Standards and are also subject to the ISO trade standards. Product management chemists start experiments to identify Pearl Millet and assess end-user values during unloading.

- **Cleaning the Pearl Millet:** After inspection, the grain is unloaded directly from the truck into the unloading container and transferred into large bins or silos through conveyors and bucket lifts. Grain storing is a science. It is necessary to maintain the correct moisture, heat, and air or mildew, sprout, or ferment Pearl Millet. The grain can also be fumigated to eradicate insect pests during transportation. During the process In terms of nutrient level and consistency, Pearl Millet is stored. The time of storage varies.

- **Cleaning the Pearl Millet:**It can take as many as six steps. The machines that clean the grain are collectively called the cleaning house.
  - ✓ Magnetic separator – The grain first passes by a magnet that removes ferrous metal particles. It will pass through other metal detectors after milling to ensure that no metal pieces are in the finished product. Magnets are also positioned throughout the milling process and at the last step prior to load-out.

  - ✓ Separator – Vibrating or rotating drum separators remove bits of wood, straw, and almost anything else too big or too small to be the desired grain.

  - ✓ Aspirator – Air currents act as a vacuum to remove dust and lighter impurities.

  - ✓ De-stoner – Using gravity, the machine separates the heavy material from the light to remove stones that may be the same size as the desired grain.

- ✓ Disc separator – The grain passes through a separator that identifies the size of the kernels even more closely. It rejects anything longer, shorter, more round, more angular or in any way a different shape.

- ✓ Scourer – The scourer eliminates the outer husks, the soil in the kernel crease, and other minor impurities with vigorous scouring action. Currents of air are dragging up all the loose stuff.

- ✓ Impact Entoleter– The centrifugal force cuts down some unsound kernels or insect eggs and the aspiration rejects them from the flow of the mill. From the meet, the sound of the Pearl Millet flows into the grinding bins, large hoppers that regulate the feeding of the Pearl Millet to the actual milling process.

- ✓ Colour Separator – Newer mills may also utilize electronic color separators to simplify the cleaning process.

- **Grinding Pearl Millet**: The kernels of Pearl Millet are now ready to be milled into flour.

The modern milling process is a gradual reduction of the Pearl Millet kernels through the grinding and sifting process. This science of analysis, blending, grinding, sifting, and blending results in consistent end product. Pearl Millet kernels are weighed or fed from bins to roller mills, corrugated cylinders made of chilled steel. The rolls are paired and rotated inward to each other at varying speeds. Passing through the corrugated "first break" rolls, the separation of the bran, endosperm, and germ begins.

There are about five roller mills or breaks in the system. Again, the aim is to remove the endosperm from the bran and the germ. To get as much pure endosperm as possible, each break roll must be set. The "break" rolls, each has successively finer corrugations, through the break rolls. The grist is sent back upstairs to drop through sifters after each trip. The system reworks the coarse stocks from the sifters and reduces the Pearl Millet particles to granular “middling” that are as free from bran as possible.

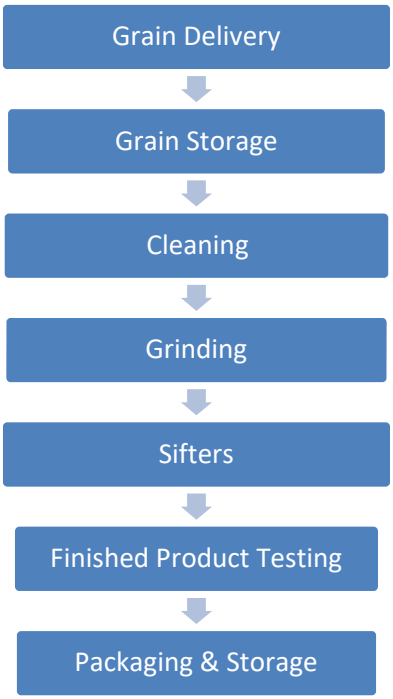
- **Sifters-** Through pneumatic tubes, the broken particles of Pearl Millet are elevated and then dropped into huge, vibrating, box-like sifters where they are shaken to separate the larger from the smaller particles by either a series of bolting cloths or screens.

  There may be as many as 27 frames inside the sifter, each covered with either a screen or nylon or stainless steel, with square holes that get narrower and smaller and the farther down they go. It is probable that up to six different particle sizes come from a single sifter.

- **Blending:** From the fibre, the flour is separated and the process is repeated again.

- **Testing of the final product**: Lab checks are carried out after milling to ensure that the flour follows the specification and standards. Millers also conduct routine monitoring of indicator natural organisms. While dry flour does not provide an atmosphere that is conducive to microbial development, it is important to note that flour is not a ready-to-eat food and is a minimally processed agricultural ingredient. Flour is not meant for raw use. Baking, baking, boiling, and cooking heat processes are sufficient to kill any pathogens that may be found in flour and lower the possible risk of food borne disease.

- **Packaging of Product:** The packaging is carried out in a much simple process then milling, the Pearl millet flour is fed to holding tank of the packaging machine, which simply seals one end of continuous packaging first, then it simply fills the packet as per required weight & seals the other end, generating the required packet.



4. ECONOMICS OF THE PROJECT

4.1. BASIS & PRESUMPTIONS

1. Production Capacity of Bajra flour is 150 kg per hr. First year, Capacity has been taken @ 60%.

2. Working shift of 8 hours per day has been considered.

3. Raw Material stock is for 10 days and Finished goods Closing Stock has been taken for 15 days.

4. Credit period to Sundry Debtors has been given for 15 days.

5. Credit period by the Sundry Creditors has been provided for 7 days.

6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.

7. Interest on working Capital Loan and Term loan has been taken at 11%.

8. Salary and wages rates are taken as per the Current Market Scenario.

9. Power Consumption has been taken at 12KW.

10. Increase in sales and raw material costing has been taken @ 5% on a yearly basis.

4.2. CAPACITY, UTILIZATION, PRODUCTION & OUTPUT

COMPUTATION OF PRODUCTION OF BAJRA FLOUR		
Items to be Manufactured		
Bajra Flour		
Machine capacity Per hour	150	Kg
Total working Hours	8	
Machine capacity Per Day	1,200	Kg
Working days in a month	25	Days
Working days per annum	300	
Machine capacity per annum	360000	Kg
Final Product to be packed in 1 kg Packet		
Number of Packets per annum	360000	1 Kg Packet

Production of Bajra Flour		
Production	**Capacity**	**KG**
1st year	60%	2,16,000
2nd year	65%	2,34,000
3rd year	70%	2,52,000
4th year	75%	2,70,000
5th year	80%	2,88,000

Raw Material Cost

Year	Capacity	Rate (per Kg)	Amount (Rs. in lacs)
1st year	60%	18.00	38.88
2nd year	65%	19.00	44.46
3rd year	70%	20.00	50.40
4th year	75%	21.00	56.70
5th year	80%	22.00	63.36

COMPUTATION OF SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year
Op Stock	-	10,800	11,700	12,600	13,500
Production	2,16,000	2,34,000	2,52,000	2,70,000	2,88,000
Less : Closing Stock	10,800	11,700	12,600	13,500	14,400
Net Sale	**2,05,200**	**2,33,100**	**2,51,100**	**2,69,100**	**2,87,100**
sale price per packet	40.00	42.00	44.00	46.00	48.00
Sales (in Lacs)	82.08	97.90	110.48	123.79	137.81

4.3. PREMISES/INFRASTRUCTURE

The approximate total area required for complete factory setup is 2000-2500 Sq. ft. for smooth production including storage area. It is expected that the premises will be on rental.

4.4. MACHINERY & EQUIPMENTS

Machine Name	Description	Machine Image.
Unloading Bins	These are large bins designed for unloading of grains & similar product; they are equipped with large rod mess to prevent big	

	impurities from entering system.	
Silos	These Equipments are class of storage Equipments which are specifically designed for dry grain raw material of small granule composition. Usually used to store grains but can also be used to store cement & aggregate.	
Vibrating Pre-Cleaner	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.	
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.	
Flour testing kit	This is the type of kit that measure moisture of flour before packaging	

	of final product. In this case considering moisture test, sealing test and shelf life test.	
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 after sealing one end & after filling sealing the other end also to generate packet of product.	

Machine	**Unit**	**Rate**	**Price**
Silos (Capacity- 2.5 Tonne)	2	100000	200000
Vibrating Pre-Cleaner (Capacity- 400 Kg/hr)	1	150000	150000
Heavy duty Pulveriser Mill (Capacity-450 Kg/hr)	1	500000	500000
Flour Sifter Machine (Capacity- 300Kg/hr)	2	175000	350000
Flour testing kit	-	-	200000
Packet Filling & Packaging Machine	1	220000	220000
Bins and other material handling equipments. (Unloading Bins, escalator, elevator, conveyor, storage bins, etc.)	-	-	820000

Note: Approx. Total Machinery cost shall be Rs 24.40 lakh including equipment's but excluding GST and Transportation Cost.

4.5. MISCELLANEOUS FIXED ASSETS

- Water Supply Arrangements
- Furniture & Fixtures
- Computers & Printers

4.6. TOTAL COST OF PROJECT

COST OF PROJECT (in Lacs)	
PARTICULARS	**Amount**
Land & Building	Owned/Rented
Plant & Machinery	24.40
Miscellaneous Assets	1.20
Working capital	7.78
Total	**33.38**

4.7. MEANS OF FINANCE

MEANS OF FINANCE	
PARTICULARS	**AMOUNT**
Own Contribution (min 10%)	3.34
Subsidy @35%(Max. Rs 10 Lac)	8.96
Term Loan @ 55%	14.08
Working Capital (Bank Finance)	7.00
Total	**33.38**

4.8. TERM LOAN: Term loan of Rs. 14.08 Lakh is required for project cost of Rs. 33.38 Lakh

4.9. TERM LOAN REPAYMENT & INTEREST SCHEDULE

REPAYMENT SCHEDULE OF TERM LOAN							
					Interest		11.00%
Year	**Particulars**	**Amount**	**Addition**	**Total**	**Interest**	**Repayment**	**Closing Balance**
1st	Opening Balance						
	1st month	-	14.08	14.08	-	-	14.08
	2nd month	14.08	-	14.08	0.13	-	14.08
	3rd month	14.08	-	14.08	0.13	-	14.08
	4th month	14.08	-	14.08	0.13		14.08
	5th month	14.08	-	14.08	0.13		14.08
	6th month	14.08	-	14.08	0.13		14.08
	7th month	14.08	-	14.08	0.13	0.26	13.82
	8th month	13.82	-	13.82	0.13	0.26	13.56
	9th month	13.56	-	13.56	0.12	0.26	13.30
	10th month	13.30	-	13.30	0.12	0.26	13.04
	11th month	13.04	-	13.04	0.12	0.26	12.78
	12th month	12.78	-	12.78	0.12	0.26	12.52
					1.38	1.56	
2nd	Opening Balance						
	1st month	12.52	-	12.52	0.11	0.26	12.25
	2nd month	12.25	-	12.25	0.11	0.26	11.99

	3rd month	11.99	-	11.99	0.11	0.26	11.73
	4th month	11.73	-	11.73	0.11	0.26	11.47
	5th month	11.47	-	11.47	0.11	0.26	11.21
	6th month	11.21	-	11.21	0.10	0.26	10.95
	7th month	10.95	-	10.95	0.10	0.26	10.69
	8th month	10.69	-	10.69	0.10	0.26	10.43
	9th month	10.43	-	10.43	0.10	0.26	10.17
	10th month	10.17	-	10.17	0.09	0.26	9.91
	11th month	9.91	-	9.91	0.09	0.26	9.65
	12th month	9.65	-	9.65	0.09	0.26	9.39
					1.22	**3.13**	
3rd	Opening Balance						
	1st month	9.39	-	9.39	0.09	0.26	9.13
	2nd month	9.13	-	9.13	0.08	0.26	8.87
	3rd month	8.87	-	8.87	0.08	0.26	8.60
	4th month	8.60	-	8.60	0.08	0.26	8.34
	5th month	8.34	-	8.34	0.08	0.26	8.08
	6th month	8.08	-	8.08	0.07	0.26	7.82
	7th month	7.82	-	7.82	0.07	0.26	7.56
	8th month	7.56	-	7.56	0.07	0.26	7.30
	9th month	7.30	-	7.30	0.07	0.26	7.04
	10th month	7.04	-	7.04	0.06	0.26	6.78
	11th month	6.78	-	6.78	0.06	0.26	6.52
	12th month	6.52	-	6.52	0.06	0.26	6.26

					0.87	**3.13**	
4th	Opening Balance						
	1st month	6.26	-	6.26	0.06	0.26	6.00
	2nd month	6.00	-	6.00	0.05	0.26	5.74
	3rd month	5.74	-	5.74	0.05	0.26	5.48
	4th month	5.48	-	5.48	0.05	0.26	5.21
	5th month	5.21	-	5.21	0.05	0.26	4.95
	6th month	4.95	-	4.95	0.05	0.26	4.69
	7th month	4.69	-	4.69	0.04	0.26	4.43
	8th month	4.43	-	4.43	0.04	0.26	4.17
	9th month	4.17	-	4.17	0.04	0.26	3.91
	10th month	3.91	-	3.91	0.04	0.26	3.65
	11th month	3.65	-	3.65	0.03	0.26	3.39
	12th month	3.39	-	3.39	0.03	0.26	3.13
					0.53	**3.13**	
5th	Opening Balance						
	1st month	3.13	-	3.13	0.03	0.26	2.87
	2nd month	2.87	-	2.87	0.03	0.26	2.61
	3rd month	2.61	-	2.61	0.02	0.26	2.35
	4th month	2.35	-	2.35	0.02	0.26	2.09
	5th month	2.09	-	2.09	0.02	0.26	1.83
	6th month	1.83	-	1.83	0.02	0.26	1.56
	7th month	1.56	-	1.56	0.01	0.26	1.30
	8th month	1.30	-	1.30	0.01	0.26	1.04
	9th month	1.04	-		0.01	0.26	0.78

			1.04			
10th month	0.78	-	0.78	0.01	0.26	0.52
11th month	0.52	-	0.52	0.00	0.26	0.26
12th month	0.26	-	0.26	0.00	0.26	-
				0.19	**3.13**	

DOOR TO DOOR	60	MONTHS
MORATORIUM PERIOD	6	MONTHS
REPAYMENT PERIOD	54	MONTHS

4.10. WORKING CAPITAL CALCULATIONS

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Finished Goods					
	3.39	3.85	4.29	4.77	5.25
Raw Material					
	1.30	1.48	1.68	1.89	2.11
Closing Stock	**4.69**	**5.33**	**5.97**	**6.66**	**7.36**

COMPUTATION OF WORKING CAPITAL REQUIREMENT					
TRADITIONAL METHOD					(in Lacs)
Particulars	**Amount**	**Own Margin**		**Bank Finance**	
Finished Goods & Raw Material	4.69				
Less : Creditors	0.91				
Paid stock	**3.78**	**10%**	**0.38**	**90%**	**3.40**
Sundry Debtors	**4.10**	**10%**	**0.41**	**90%**	**3.69**
	7.88		**0.79**		**7.09**
MPBF					**7.09**
WORKING CAPITAL LIMIT DEMAND (from Bank)					**7.00**
Working Capital Margin					**0.78**

4.11. SALARY & WAGES

BREAK UP OF LABOUR CHARGES

Particulars	Wages Rs. per Month	No of Employees	Total Salary
Plant Operator	15,000	1	15,000
Supervisor	20,000	1	20,000
Skilled (in thousand rupees)	12,000	4	48,000
Unskilled (in thousand rupees)	8,500	4	34,000
Total salary per month			**1,17,000**
Total annual labour charges	**(in lacs)**		**14.04**

BREAK UP OF STAFF SALARY CHARGES

Particulars	Salary Rs. per Month	No of Employees	Total Salary
Administrative Staff	6,000	3	18,000
Manager	20,000	1	20,000
Accountant	15,000	1	15,000
Total salary per month			**53,000**
Total annual Staff charges	**(in lacs)**		**6.36**

4.12 POWER REQUIREMENT

Utility Charges (per month)		
Particulars	**value**	**Description**
Power connection required	12	KWH
consumption per day	96	units
Consumption per month	2,400	units
Rate per Unit	10	Rs.
power Bill per month	24,000	Rs.

4.13. DEPRECIATION CALCULATION

COMPUTATION OF DEPRECIATION			(in Lacs)
Description	**Plant & Machinery**	**Miss. Assets**	**TOTAL**
Rate of Depreciation	**15.00%**	**10.00%**	
Opening Balance	-	-	-
Addition	24.40	1.20	25.60
Total	24.40	1.20	25.60
Less : Depreciation	3.66	0.12	3.78
WDV at end of Year	**20.74**	**1.08**	**21.82**
Additions During The Year	-	-	-
Total	20.74	1.08	21.82
Less : Depreciation	3.11	0.11	3.22
WDV at end of Year	**17.63**	**0.97**	**18.60**
Additions During The Year	-	-	-
Total	17.63	0.97	18.60
Less : Depreciation	2.64	0.10	2.74
WDV at end of Year	**14.98**	**0.87**	**15.86**
Additions During The Year	-	-	-
Total	14.98	0.87	15.86
Less : Depreciation	2.25	0.09	2.34
WDV at end of Year	**12.74**	**0.79**	**13.52**
Additions During The Year	-	-	-
Total	12.74	0.79	13.52
Less : Depreciation	1.91	0.08	1.99
WDV at end of Year	**10.83**	**0.71**	**11.53**

4.14. REPAIR & MAINTENANCE: Repair & Maintenance is 2.5% of Gross Sale.

4.15. PROJECTIONS OF PROFITABILITY ANALYSIS

PROJECTED PROFITABILITY STATEMENT					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Capacity Utilisation %	**60%**	**65%**	**70%**	**75%**	**80%**
SALES					
Gross Sale					
Bajra Flour	82.08	97.90	110.48	123.79	137.81
Total	**82.08**	**97.90**	**110.48**	**123.79**	**137.81**
COST OF SALES					
Raw Material Consumed	38.88	44.46	50.40	56.70	63.36
Electricity Expenses	2.88	3.31	3.81	4.38	4.82
Depreciation	3.78	3.22	2.74	2.34	1.99
Wages & labour	14.04	16.15	17.76	19.54	21.10
Repair & maintenance	2.05	2.45	2.76	3.09	3.45
Packaging	6.16	7.34	8.29	9.28	10.34
Cost of Production	67.79	76.93	85.76	95.33	105.05
Add: Opening Stock /WIP	-	3.39	3.85	4.29	4.77
Less: Closing Stock /WIP	3.39	3.85	4.29	4.77	5.25
Cost of Sales	64.40	76.47	85.32	94.85	104.56
GROSS PROFIT	**17.68**	**21.43**	**25.17**	**28.93**	**33.25**
	21.54%	**21.89%**	**22.78%**	**23.37%**	**24.12%**
Salary to Staff	6.36	7.31	8.41	9.67	10.64
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Interest on working Capital	0.77	0.77	0.77	0.77	0.77
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	1.64	1.96	2.21	2.48	2.76
TOTAL	**13.76**	**15.22**	**16.62**	**18.24**	**19.62**
NET PROFIT	3.93	6.21	8.54	10.69	13.62
	4.78%	**6.34%**	**7.73%**	**8.64%**	**9.89%**
Taxation	-	0.37	0.83	1.33	2.21
PROFIT (After Tax)	3.93	5.84	7.71	9.36	11.41

4.16. BREAK EVEN POINT ANALYSIS

BREAK EVEN POINT ANALYSIS					
Year	**I**	**II**	**III**	**IV**	**V**
Net Sales & Other Income	82.08	97.90	110.48	123.79	137.81
Less : Op. WIP Goods	-	3.39	3.85	4.29	4.77
Add : Cl. WIP Goods	3.39	3.85	4.29	4.77	5.25
Total Sales	**85.47**	**98.36**	**110.93**	**124.26**	**138.29**
Variable & Semi Variable Exp.					
Raw Material Consumed	38.88	44.46	50.40	56.70	63.36
Electricity Exp/Coal Consumption at 85%	2.45	2.82	3.24	3.72	4.10
Wages & Salary at 60%	12.24	14.08	15.70	17.53	19.04
Selling & adminstrative Expenses 80%	1.31	1.57	1.77	1.98	2.20
Interest on working Capital	0.77	0.77	0.77	0.77	0.77
Repair & maintenance	2.05	2.45	2.76	3.09	3.45
Packaging	6.16	7.34	8.29	9.28	10.34
Total Variable & Semi Variable Exp	**63.86**	**73.48**	**82.93**	**93.08**	**103.25**
Contribution	**21.61**	**24.88**	**28.00**	**31.19**	**35.04**
Fixed & Semi Fixed Expenses					
Electricity Exp/Coal Consumption at 15%	0.43	0.50	0.57	0.66	0.72
Wages & Salary at 40%	8.16	9.38	10.47	11.68	12.70
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Depreciation	3.78	3.22	2.74	2.34	1.99
Selling & adminstrative Expenses 20%	0.33	0.39	0.44	0.50	0.55
Rent	3.60	3.96	4.36	4.79	5.27
Total Fixed Expenses	**17.68**	**18.67**	**19.45**	**20.49**	**21.42**
Capacity Utilization	**60%**	**65%**	**70%**	**75%**	**80%**
OPERATING PROFIT	**3.93**	**6.21**	**8.54**	**10.69**	**13.62**
BREAK EVEN POINT	**49%**	**49%**	**49%**	**49%**	**49%**
BREAK EVEN SALES	**69.94**	**73.81**	**77.07**	**81.66**	**84.53**

4.17. PROJECTED BALANCE SHEET

PROJECTED BALANCE SHEET					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Liabilities					
Capital					
opening balance		12.22	13.57	15.28	17.64
Add:- Own Capital	3.34				
Add:- Retained Profit	3.93	5.84	7.71	9.36	11.41
Less:- Drawings	4.00	4.50	6.00	7.00	9.00
Subsidy/grant	8.96				
Closing Balance	12.22	13.57	15.28	17.64	20.05
Term Loan	12.52	9.39	6.26	3.13	-
Working Capital Limit	7.00	7.00	7.00	7.00	7.00
Sundry Creditors	0.91	1.04	1.18	1.32	1.48
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
TOTAL :	**33.05**	**31.49**	**30.31**	**29.81**	**29.39**
Assets					
Fixed Assets (Gross)	25.60	25.60	25.60	25.60	25.60
Gross Dep.	3.78	7.00	9.74	12.08	14.07
Net Fixed Assets	**21.82**	**18.60**	**15.86**	**13.52**	**11.53**
Current Assets					
Sundry Debtors	4.10	4.90	5.52	6.19	6.89
Stock in Hand	4.69	5.33	5.97	6.66	7.36
Cash and Bank	2.44	2.67	2.96	3.44	3.60
TOTAL :	**33.05**	**31.49**	**30.31**	**29.81**	**29.39**

4.18. CASH FLOW STATEMENT

PROJECTED CASH FLOW STATEMENT					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
SOURCES OF FUND					
Own Margin	3.34				
Net Profit	3.93	6.21	8.54	10.69	13.62
Depriciation & Exp. W/off	3.78	3.22	2.74	2.34	1.99
Increase in Cash Credit	7.00	-	-	-	-
Increase In Term Loan	14.08	-	-	-	-
Increase in Creditors	0.91	0.13	0.14	0.15	0.16
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	8.96				
TOTAL :	**42.39**	**9.66**	**11.52**	**13.30**	**15.91**
APPLICATION OF FUND					
Increase in Fixed Assets	25.60				
Increase in Stock	4.69	0.64	0.64	0.69	0.71
Increase in Debtors	4.10	0.79	0.63	0.67	0.70
Repayment of Term Loan	1.56	3.13	3.13	3.13	3.13
Drawings	4.00	4.50	6.00	7.00	9.00
Taxation	-	0.37	0.83	1.33	2.21
TOTAL :	**39.95**	**9.43**	**11.23**	**12.82**	**15.75**
Opening Cash & Bank Balance	-	2.44	2.67	2.96	3.44
Add : Surplus	2.44	0.23	0.29	0.48	0.16
Closing Cash & Bank Balance	**2.44**	**2.67**	**2.96**	**3.44**	**3.60**

4.19. DEBT SERVICE COVERAGE RATIO

CALCULATION OF D.S.C.R					
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
CASH ACCRUALS	7.71	9.06	10.45	11.70	13.40
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Total	9.09	10.28	11.33	12.23	13.59
REPAYMENT					
Instalment of Term Loan	1.56	3.13	3.13	3.13	3.13
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Total	2.95	4.35	4.00	3.66	3.32
DEBT SERVICE COVERAGE RATIO	**3.08**	**2.36**	**2.83**	**3.34**	**4.10**
AVERAGE D.S.C.R.					**3.14**