DETAILED PROJECT REPORT

WHEAT 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

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1. PROJECT SUMMARY

1. Name of the proposed project	:	Wheat Flour Mill Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	480000 Kg/annum(60,65,70,75,&80% capacity utilization in 1st to 5th Year respectively)
4. Raw materials	:	Whole Wheat, Packing material
5. Major product outputs	:	Wheat Flour
6. Total project cost	:	Rs. 35.04 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. 9.44 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 8.96 Lakh
• Promoter's contribution (min10%)	:	Rs. 3.5 Lakh
• Term loan	:	Rs. 14.08 Lakh
• Working Capital Requirement	:	Rs. 8.50 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1st year	:	Rs. 2.87 Lakh
• 2nd year	:	Rs. 4.96 Lakh
• 3rd year	:	Rs. 6.90 Lakh
• 4th year	:	Rs. 8.91 Lakh
• 5th year	:	Rs. 10.69 Lakh
11. Average DSCR	:	Rs. 2.92
12. Term loan repayment	:	5 Years with 6 months grace period

2. ABOUT THE PRODUCT

2.1. PRODUCT INTRODUCTION:

Among cereal grain flours, wheat flour is unusual in that its protein components, when mixed with water, form an elastic network capable of retaining gas and forming a strong spongy structure during baking. The protein substances that contribute to these properties (gliadin and glutenin) are known collectively as gluten when combined with water and mixed together. Generally speaking, the suitability of flour for biscuit making is determined by its gluten. Gluten attributes are determined by genetics, the growing conditions of the wheat, and the method of milling. India mainly grows three kinds of wheat:

- 95% "triticum aestivum" or the popular wheat bread
- 4%' triticum durum' or pasta wheat
- 1% "triticum dicoccum" or emmer wheat (also known as khapli, samba godumai, diabetic wheat) is the world's largest emmer wheat grower in India.

On the basis of product categories that primarily include all-purpose, semolina, whole-wheat, fine wheat and bread, the wheat flour industry has been segmented. Amongst these, the most popular flour products are all-purpose and whole-wheat. A whole-meal wheat flour, originating from the Indian subcontinent, is Atta or Chakki Atta, used for making flat-breads such as chapati, roti, naan, paratha and puri. It is the most plentiful flour on the Indian subcontinent. Hard wheat, used to make atta, has a high content of gluten that provides elasticity, so it is solid and can be rolled into thin sheets with dough made from atta flour. Traditionally, Atta was ground in a stone chakki mill at home. When using a tandoor, where the flatbread is stuck to the inside of the oven, this is helpful and also makes chapatis smoother as more water is absorbed by the dough.

2.2. MARKET POTENTIAL:

In 2019, the global demand for wheat flour reached a consumption volume of 391 million tons, with steady growth during 2014-2019. Wheat flour is currently one of the most common food ingredients used in the world. It provides health benefits, such as reducing levels of cholesterol, improving metabolism, managing obesity, and controlling blood sugar levels. Because of the presence of gluten, a protein that gives strength and elasticity to the dough as well as contributes to the texture of baked goods, wheat flour is used extensively. The global demand for wheat flour has been further strengthened by factors such as population growth, growing disposable incomes, increasing consumption of bakery goods and changing lifestyles.

India's packaged wheat flour market is rising by almost 21% at a whooping CAGR . If the growth trend stays the same, by the end of the current fiscal year (2020-21) itself, the market could be likely to hit a new height of Rs 20,000 Cr. The numerous micro- and macroeconomic variables pave the way for the growth of the market. However, wheat flour, which was still packed, remained an urban phenomenon, with the urban market occupying more than 90% of the overall market. But with the market penetration of the leading players in the market expanding, the rural market would also see a steady increase in demand for packaged wheat flour in India.

2.3. RAW MATERIAL DESCRIPTION:

Wheat grains, or kernels, consist of about 85 percent of the starchy endosperm, or food-storage portion; about 13 percent of several outer layers that make up the bran; and about 2 percent of the oily germ, or embryo plant. The aim of the milling process in the manufacture of refined flour is to distinguish the endosperm from the other kernel parts. Both parts of the kernel are used in processing whole wheat flour.

Carbohydrate	**70%**
Protein	**9-15%**
Fat	**2-2.2%**
Fiber	**2-2.5**
Ash	**1.8 %**
Moisture	**9-13%**[i]

Starch's health effects largely depend on its digestibility, which determines its effect on levels of blood sugar. After a meal, high digestibility can cause an unhealthy spike in blood sugar and have harmful health effects, particularly for individuals with diabetes. Wheat produces small quantities of soluble fibers or fructans that can cause digestive symptoms in individuals with irritable bowel syndrome (IBS). Gluten, a large protein family, accounts for up to 80% of the total protein content. It's responsible for wheat dough's peculiar elasticity and stickiness, the properties that make it so useful in making bread. A good source of various vitamins and minerals is whole wheat. The quantity of minerals depends on the soil it is grown in, as with other cereal grains.

- Selenium: In your body, this trace factor has numerous critical functions. In some regions, including China, the selenium content of wheat depends on the soil and is very low.
- Manganese: Present in high quantities in whole grains, legumes, fruits and vegetables, due to its phytic acid content, manganese may be poorly absorbed from whole wheat
- Phosphorus: In the preservation and development of body tissues, this dietary mineral plays an important role.
- Copper: Copper, an important trace element, is often low in the Western diet. Deficiency may have detrimental effects on the health of the heart.
- Folate: Often known as folic acid or vitamin B9, folate is one of the B vitamins. During pregnancy, it is especially necessary.

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 wheat grains are unloaded in a factory, the assessment is required with samples. The 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 grain and assess end-user values during unloading.

- **Cleaning:** 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 Wheat . The grain can also be fumigated to eradicate insect pests during transportation. During the process In terms of nutrient level and consistency, barely is stored.

- **Cleaning the wheat grains:** 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 Wheat flows into the grinding bins, large hoppers that regulate the feeding of the Wheat to the actual milling process.

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

- ➢ **Grinding**: The grains of wheat are now ready to be milled into flour.The modern milling process is a gradual reduction of the wheat grains through the grinding and sifting process. This science of analysis, blending, grinding, sifting, and blending results in consistent end product. Wheat 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 Wheat particles to granular "middling" that are as free from bran as possible.

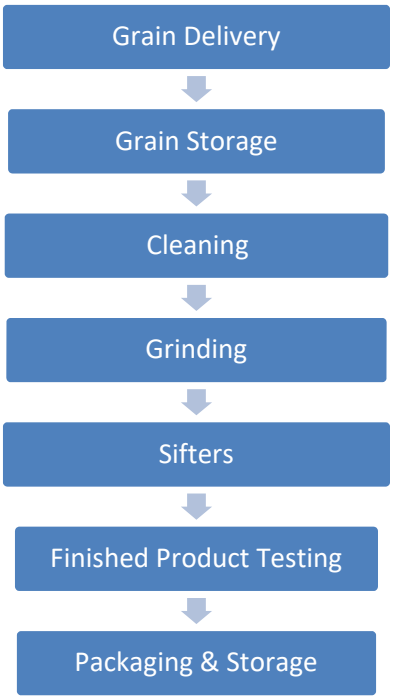
- **Sifters-** Through pneumatic tubes, the broken particles of Wheat are elevated and then dropped into huge, vibrating, box-like sifters where they are shaken to separate the larger from the smaller particles by either a series of bolting cloths or screens.

  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.

- **Packaging of Product:** The packaging is carried out in a much simple process then milling, the Wheat 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 Wheat flour is 200 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 15KW.

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 WHEAT FLOUR

Items to be Manufactured
Wheat Flour

Machine capacity Per hour	200	Kg
Total working Hours	8	
Machine capacity Per Day	1,600	Kg
Working days in a month	25	Days
Working days per annum	300	
Machine capacity per annum	480000	Kg
Final Product to be packed in 1 kg Packet		
Number of Packets per annum	480000	1 Kg Packet

Production of Wheat Flour

Production	Capacity	KG
1st year	60%	2,88,000
2nd year	65%	3,12,000
3rd year	70%	3,36,000
4th year	75%	3,60,000
5th year	80%	3,84,000

Raw Material Cost			
Year	Capacity Utilisation	Rate (per Kg)	Amount (Rs. in lacs)
1st year	60%	18.00	51.84
2nd year	65%	19.00	59.28
3rd year	70%	20.00	67.20
4th year	75%	21.00	75.60
5th year	80%	22.00	84.48

COMPUTATION OF SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year
Op Stock	-	14,400	15,600	16,800	18,000
Production	2,88,000	3,12,000	3,36,000	3,60,000	3,84,000
Less : Closing Stock	14,400	15,600	16,800	18,000	19,200
Net Sale	**2,73,600**	**3,10,800**	**3,34,800**	**3,58,800**	**3,82,800**
sale price per packet	35.00	37.00	39.00	41.00	43.00
Sales (in Lacs)	95.76	115.00	130.57	147.11	164.60

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.	
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	9.44
Total	**35.04**

4.7. MEANS OF FINANCE

MEANS OF FINANCE	
PARTICULARS	**AMOUNT**
Own Contribution (min 10%)	3.50
Subsidy @35%(Max. Rs 10 Lac)	8.96
Term Loan @ 55%	14.08
Working Capital (Bank Finance)	8.50
Total	**35.04**

4.8. TERM LOAN: Term loan of Rs. 14.08 Lakh is required for project cost of Rs. 35.04 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	-		0.01	0.26	1.04

			1.30			
9th month	1.04	-	1.04	0.01	0.26	0.78
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					
	4.14	4.71	5.28	5.88	6.52
Raw Material					
	1.73	1.98	2.24	2.52	2.82
Closing Stock	**5.87**	**6.69**	**7.52**	**8.40**	**9.34**

COMPUTATION OF WORKING CAPITAL REQUIREMENT					
TRADITIONAL METHOD					(in Lacs)
Particulars	**Amount**	**Own Margin**		**Bank Finance**	
Finished Goods & Raw Material	5.87				
Less : Creditors	1.21				
Paid stock	**4.66**	**10%**	**0.47**	**90%**	**4.19**
Sundry Debtors	**4.79**	**10%**	**0.48**	**90%**	**4.31**
	9.45		**0.94**		**8.50**
MPBF					**8.50**
WORKING CAPITAL LIMIT DEMAND (from Bank)					**8.50**
Working Capital Margin					**0.94**

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	15	KWH
consumption per day	120	units
Consumption per month	3,000	units
Rate per Unit	10	Rs.
power Bill per month	30,000	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					
Wheat Flour	95.76	115.00	130.57	147.11	164.60
Total	**95.76**	**115.00**	**130.57**	**147.11**	**164.60**
COST OF SALES					
Raw Material Consumed	51.84	59.28	67.20	75.60	84.48
Electricity Expenses	3.60	4.14	4.76	5.48	6.02
Depreciation	3.78	3.22	2.74	2.34	1.99
Wages & labour	14.04	16.15	17.76	19.54	21.49
Repair & maintenance	2.39	2.87	3.26	3.68	4.12
Packaging	7.18	8.62	9.79	11.03	12.35
Cost of Production	82.84	94.28	105.52	117.66	130.44
Add: Opening Stock /WIP	-	4.14	4.71	5.28	5.88
Less: Closing Stock /WIP	4.14	4.71	5.28	5.88	6.52
Cost of Sales	78.69	93.71	104.96	117.05	129.80
GROSS PROFIT	**17.07**	**21.28**	**25.61**	**30.06**	**34.80**
	17.82%	**18.51%**	**19.62%**	**20.43%**	**21.14%**
Salary to Staff	6.36	7.76	9.31	10.80	12.53
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Interest on working Capital	0.94	0.94	0.94	0.94	0.94
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	1.92	2.30	2.61	2.94	3.29
TOTAL	**14.19**	**16.17**	**18.09**	**20.00**	**22.21**
NET PROFIT	2.87	5.11	7.53	10.06	12.59
	3.00%	**4.44%**	**5.76%**	**6.84%**	**7.65%**
Taxation	-	0.15	0.63	1.14	1.90
PROFIT (After Tax)	2.87	4.96	6.90	8.91	10.69

4.16. BREAK EVEN POINT ANALYSIS

BREAK EVEN POINT ANALYSIS					
Year	**I**	**II**	**III**	**IV**	**V**
Net Sales & Other Income	95.76	115.00	130.57	147.11	164.60
Less : Op. WIP Goods	-	4.14	4.71	5.28	5.88
Add : Cl. WIP Goods	4.14	4.71	5.28	5.88	6.52
Total Sales	**99.90**	**115.57**	**131.13**	**147.71**	**165.24**
Variable & Semi Variable Exp.					
Raw Material Consumed	51.84	59.28	67.20	75.60	84.48
Electricity Exp/Coal Consumption at 85%	3.06	3.52	4.05	4.65	5.12
Wages & Salary at 60%	12.24	14.34	16.24	18.20	20.41
Selling & adminstrative Expenses 80%	1.53	1.84	2.09	2.35	2.63
Interest on working Capital	0.935	0.935	0.935	0.935	0.935
Repair & maintenance	2.39	2.87	3.26	3.68	4.12
Packaging	7.18	8.62	9.79	11.03	12.35
Total Variable & Semi Variable Exp	**79.18**	**91.42**	**103.57**	**116.46**	**130.04**
Contribution	**20.72**	**24.15**	**27.56**	**31.26**	**35.20**
Fixed & Semi Fixed Expenses					
Electricity Exp/Coal Consumption at 15%	0.54	0.62	0.71	0.82	0.90
Wages & Salary at 40%	8.16	9.56	10.83	12.13	13.61
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%	0.38	0.46	0.52	0.59	0.66
Rent	3.60	3.96	4.36	4.79	5.27
Total Fixed Expenses	**17.85**	**19.04**	**20.04**	**21.20**	**22.62**
Capacity Utilization	**60%**	**65%**	**70%**	**75%**	**80%**
OPERATING PROFIT	**2.87**	**5.11**	**7.53**	**10.06**	**12.59**
BREAK EVEN POINT	**52%**	**51%**	**51%**	**51%**	**51%**
BREAK EVEN SALES	**86.05**	**91.11**	**95.33**	**100.19**	**106.16**

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		11.84	12.80	14.19	16.11
Add:- Own Capital	3.50				
Add:- Retained Profit	2.87	4.96	6.90	8.91	10.69
Less:- Drawings	3.50	4.00	5.50	7.00	8.00
Subsidy/grant	8.96				
Closing Balance	11.84	12.80	14.19	16.11	18.80
Term Loan	12.52	9.39	6.26	3.13	-
Working Capital Limit	8.50	8.50	8.50	8.50	8.50
Sundry Creditors	1.21	1.38	1.57	1.76	1.97
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
TOTAL :	**34.46**	**32.57**	**31.12**	**30.22**	**30.13**
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	4.79	5.75	6.53	7.36	8.23
Stock in Hand	5.87	6.69	7.52	8.40	9.34
Cash and Bank	1.98	1.53	1.22	0.94	1.03
TOTAL :	**34.46**	**32.57**	**31.12**	**30.22**	**30.13**

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	3.50				
Net Profit	2.87	5.11	7.53	10.06	12.59
Depriciation & Exp. W/off	3.78	3.22	2.74	2.34	1.99
Increase in Cash Credit	8.50	-	-	-	-
Increase In Term Loan	14.08	-	-	-	-
Increase in Creditors	1.21	0.17	0.18	0.20	0.21
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	8.96				
TOTAL :	**43.31**	**8.60**	**10.55**	**12.71**	**14.93**
APPLICATION OF FUND					
Increase in Fixed Assets	25.60				
Increase in Stock	5.87	0.82	0.83	0.89	0.94
Increase in Debtors	4.79	0.96	0.78	0.83	0.87
Repayment of Term Loan	1.56	3.13	3.13	3.13	3.13
Drawings	3.50	4.00	5.50	7.00	8.00
Taxation	-	0.15	0.63	1.14	1.90
TOTAL :	**41.32**	**9.06**	**10.86**	**12.98**	**14.84**
Opening Cash & Bank Balance	-	1.98	1.53	1.22	0.94
Add : Surplus	1.98	-0.45	-0.31	-0.28	0.09
Closing Cash & Bank Balance	**1.98**	**1.53**	**1.22**	**0.94**	**1.03**

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	6.65	8.18	9.64	11.25	12.68
Interest on Term Loan	1.38	1.22	0.87	0.53	0.19
Total	8.04	9.40	10.51	11.78	12.86
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	**2.73**	**2.16**	**2.63**	**3.22**	**3.88**
AVERAGE D.S.C.R.					**2.92**