DETAILED PROJECT REPORT

CANNED MUSHROOM 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

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1. PROJECT SUMMARY

1. Name of the proposed project	:	Canned Mushroom Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	235200 Kg/annum(50,55,60,65&70% capacity utilization in 1st to 5th Year respectively)
4. Raw materials	:	Mushrooms, Brine Solution and Packing material
5. Major product outputs	:	Canned Mushroom
6. Total project cost	:	Rs. 39.14 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 28.50 Lakh
• Miscellaneous Fixed Assets	:	Rs. 1.20 Lakh
• Working capital	:	Rs. 9.44 Lakh
8. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 10.00 Lakh
• Promoter's contribution (min10%)	:	Rs. 4.30 Lakh
• Term loan	:	Rs. 16.34 Lakh
• Working Capital Requirement	:	Rs. 8.50 Lakh
9. Profit after Depreciation, Interest & Tax		
• 1st year	:	Rs. 2.20 Lakh
• 2nd year	:	Rs. 4.84 Lakh
• 3rd year	:	Rs. 7.16 Lakh
• 4th year	:	Rs. 9.99 Lakh
• 5th year	:	Rs. 12.99 Lakh
11. Average DSCR	:	Rs. 2.80
12. Term loan repayment	:	5 Years with 6 months grace period

2. ABOUT THE PRODUCT

2.1. PRODUCT INTRODUCTION:

Mushroom, a body of fungus fruit, is known as a tasty food all over the world because of its fragrance and structure of taste. It is rich in nutrients, low in calories, high in protein, minerals, vitamins and a rich source of folic acid.

For weight conscious individuals and anaemic patients, it is an alternative option. It has a protein content of 4.9 percent more than cow's milk, green vegetables such as beans etc. Mushrooms are a highly perishable product and should be sold and eaten due to their high moisture content as soon as possible after harvest (90.92 percent). However, by way of processing, its shelf-life can be extended for a longer time. Mushrooms are usually cooked, frozen, dried and canned. For commercial canning, the Agariousbisporus (White button) type of mushroom is acceptable and preferred.

Due to its flavour aroma and structure, Mushroom a fungus fruit body is considered a delicious food all over the world. It is rich in nutrients, low in calories, high in protein, minerals, vitamins and a rich source of folic acid. For weight conscious individuals and anaemic patients, it is an alternative option. Mushrooms are highly perishable goods and should be marketed and consumed as they should be marketed and consumed as soon as possible after harvest due to their high moisture content (90.92%). But, by means of processing, their shelf life may be extended for a longer duration. Mushrooms are usually cooked, frozen, dried and canned.

2.2. MARKET POTENTIAL:

In 2018, the size of the canned food industry was valued at $91.4 billion and is expected to hit $124.8 billion by 2026, with a CAGR of 3.9% from 2019 to 2026. More than one third of the overall canned food market share was accounted for by the canned meat & seafood group in 2018. It has been estimated that the export demand for canned mushrooms is around US$1000 million in world trade.In the next five years, global trade in mushrooms is projected to hit a staggering figure of US$ 15 billion. Currently, the largest producers of mushroom products are China, Taiwan and Indonesia, which also account for a large share of the world market. More than 50 percent of the world's total mushroom supply is sold in fresh form, mostly in the domestic markets of producers.The balance, i.e. dried, frozen, canned etc., is stored. In the international market, mushroom consumption is rising at a rate of approximately 10 percent. It has also been estimated that 50 percent of the mushrooms for processing are canned. Germany, the USA, Canada, Japan, Australia, etc. are the main importing countries. The current production in India is about 30000 M.T.

In comparison, companies in developing countries such as China and India put more effort into direct sales businesses.They can simultaneously function as exports, and in this industry it is a common phenomenon. Since they do not have too much foreign brand control, when compared with leading companies, their product quality is not good enough, but they have a price advantage. In developed countries and in low-end foreign markets, they like to increase their market share.During the forecast period, between 2019 and 2025, the worldwide Canned Mushroom market is projected to grow at a considerable pace.

2.3. RAW MATERIAL DESCRIPTION:

Mushrooms- 95%

Canned mushrooms, like fresh mushrooms, have the same nutritional value. However, if you want to restrict how much sodium you have, the additional sodium from canning brine (saltwater) is something to remember.

- The phosphorus in canned mushrooms helps provide oxygen to red cells and can give you more energy.
- It helps to give you stronger bones and healthy teeth.While bone health is mainly linked to calcium, in order to support healthy bones, minerals such as phosphorus are also essential.
- Mushrooms contain a reasonable amount of phosphorus to enable better protection of the bone and teeth.
- Enhance your digestion. The fibre leads to a healthy digestive system in canned mushrooms. To bulk up the feces, the body requires fiber so that it can move through the digestive tract more quickly. If your stool is weak or watery, adding fiber to your diet helps as well.

The focus of Indian mushroom industry is predominantly on trade of the fresh produce rather than the real value-addition. Attractive packaging of the value-added products is yet another area which may be called the secondary value-addition. Some of the products are:

- Mushroom soup powder
- Mushroom Biscuit
- Mushroom nuggets
- Mushroom ketch-up
- Mushroom candy
- Mushroom preserve (Murabba)

- Pickle
- Mushroom chips

Brine Solutions- 5%

Brine is a highly concentrated salt solution present in water. In various ways, brine may refer to salt solutions ranging from about 3.5 percent (a normal seawater concentration, on the lower end of the food brining solutions) to about 26 percent (a typical saturated solution, depending on temperature).

S.N.	Particulars	Rate per KG
1	Mushroom	80-100
2	Brine Solution	3-5

Average raw material cost per 1 kg can: Rs. 90-105

3. PROCESS FLOW CHART

White button mushrooms (agariousbisporus) are preferable to canned mushrooms of other types. Mushrooms are canned commercially in brine; the process requires the following steps:

- PICKING-Mushrooms are gathered by gentle hand twisting at the button stage (cap. Diameter 2-2.5 cm). With the assistance of a sharp edge stainless steel knife/blade, the soil and section carrying any microbial flora is then cut off/removed. The length of the stalk should ideally be 0.5-1 cm.

- SORTING AND GRADING-Diseased, damaged/bruised, shrivelled and browned mushrooms are discarded, sorting and separating only the good white and tight buttons

into two groups, i.e. cap. Up to 2.5 cm in diameter with a compact head like A and a hat. Diameter as B grade above 2.5 cm.

- WASHING-Graded mushrooms are thoroughly washed in cold running water 3-4 times to remove dirt, soil, etc. without unnecessarily damaging or scratching them.

- BLANCHING-Blanching is required to inhibit enzymatic activity. In order to achieve a suitable and uniform kit, it also inactivates micro-organisms and extracts the air from the raw materials. For few minutes, fungi are blanched in boiling water, followed by immediate cooling in cold water.

- FILLING OF CANS-Mushrooms are packaged commercially in two sizes, i.e. A-1 tall can be preferred by retailers to A-2.5 A-1 tall cans, while hoteliers, exporters and other establishments want A-2.5 cans. In cans with declared drain weight, i.e. 440 gms in A-2.5 can, blanched mushrooms are filled.

- BRINING- After filling the cans with mushrooms, 2 percent common salt, 1 percent sugar and 0.05 percent citric acid are added to the brim of the can. Brining provides the product with flavour, decreases processing time and increases the shelf life of canned mushrooms.

- EXHAUSTING- After brining, the cans are exhausted to clear the substance from any trapped air and other accumulated gases to ensure a longer shelf life.Depending on the exhaust tunnel duration and container capacity, cans filled with brine solution are fed to the exhaust box for a specified period of time.

- The shorter the tunnel, the longer the exhaustion can also be carried out by putting the filled cans in boiling water until the middle of the tunnel temperature reaches 85-90c for 1-2 mts.

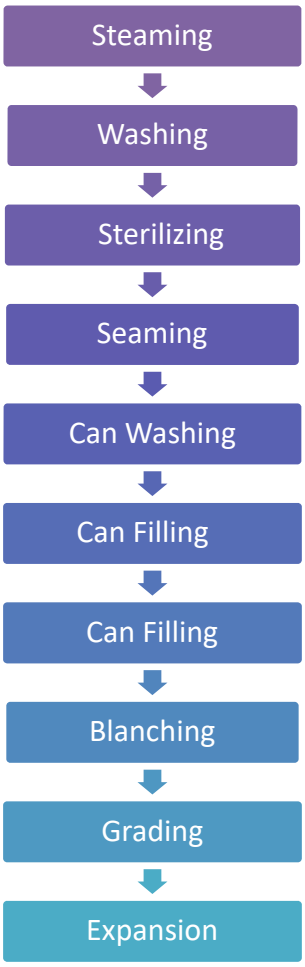
- SEAMING/CAN CLOSING- Cans are sealed immediately after exhaustion with the aid of a double seamer to acquire hermetically sealed containers. In order to sterilize the closed lids, sealed cans are then positioned in an upside down position.

- PROCESSING / STERILIZATION-Processing, also known as sterilization, is an integral procedure of the canning machine. This is achieved by processing the hermetically sealed cans for a specified period of time at a pressure of 15 lbs psi depending on can size and processing position altitude. Nevertheless, for areas like Shimla, processing time is recommended to be 45 minutes for A-2.5 size cans.

- COOLING- Cooling of cans is carried out immediately after sterilization at room temperature in cold running water to send the micro-organisms an abrupt shock to get rid of their adverse behaviours.

- LABELLINGATION AND STORAGE-To prevent rusting, the cooled cans are placed in a cool dry position and smeared with grease to remove any adhering moisture from the body of the container. Cans are held for 8-10 days at ambient temperature to inspect prior to labelling for any swelling, leakage, puffing and other disorders.

Proper labelling is done to comply with regulatory provisions of the order of fruit products, 1955 Prevention of Food Adulteration Act, 1954 and 1975 packaged goods (Regulation) Act, before the cans are exposed for sale.



4. ECONOMICS OF THE PROJECT

4.1. BASIS & PRESUMPTIONS

1. Production Capacity of Canned Mushroom is 100 kg per hr. First year, Capacity has been taken @ 50%.

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 10 days.

4. Credit period to Sundry Debtors has been given for 7 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 16KW.

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 CANNED MUSHROOM

Items to be Manufactured
Canned Mushroom

Machine capacity Per hour	100	Kg
Total working Hours	8	
Machine capacity Per Day	800	Kg
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	2%	
Raw material requirement	240000	Kg
Final Output per annum after wastage	235200	Kg
Final Product to be packed in 1 kg Can		
Number of Cans per annum	235200	1 Kg Can

Production of Canned Mushroom		
Production	**Capacity**	**KG**
1st year	50%	1,17,600
2nd year	55%	1,29,360
3rd year	60%	1,41,120
4th year	65%	1,52,880
5th year	70%	1,64,640

Raw Material Cost Year	Capacity Utilisation	Rate (per Kg)	Amount (Rs. in lacs)
1st year	50%	90.00	108.00
2nd year	55%	95.00	125.40
3rd year	60%	100.00	144.00
4th year	65%	105.00	163.80
5th year	70%	110.00	184.80

COMPUTATION OF SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year
Op Stock	-	3,920	4,312	4,704	5,096
Production	1,17,600	1,29,360	1,41,120	1,52,880	1,64,640
Less : Closing Stock	3,920	4,312	4,704	5,096	5,488
Net Sale	**1,13,680**	**1,28,968**	**1,40,728**	**1,52,488**	**1,64,248**
Sale price per can	140.00	147.00	154.00	162.00	170.00
Sales (in Lacs)	159.15	189.58	216.72	247.03	279.22

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.
Boiler	Boiler is steam generating device which simply produce stem from appropriate feed water utilizing appropriate heat generated using appropriate fuel. This steam here will be utilised in blanching & sterilization processes.	
Vegetable and Fruit Washing Machine	Its water washing class machine which utilizes water to clean the given product, they come in various arrangements and mechanism. Here it is used to clean mushrooms prior to further processing.	
Can Sterilizer	These are simply machine designed to sterilize contents of cans by utilizing appropriate temperature in order to prevent any microbial growth. Once the can are filled and seamed, they are sterilized by this machine.	

Can Seamer	These machines simply seal the cans with lids in order to produce an air tight seal, for many canned foods vacuum seamer are preferred as they reduce possibility of entrapped air and thus microbial growth. The machine is used to seal the mushroom cans after they are filled.	
Can Washing Machine	Can Washing Machine is used to wash the can in which canned food is to be stored and packed. Before packaging process takes place the cans or tins are washed in can washing machine. The machine is used to wash the cans before they are filled with mushroom.	
Can Filling Machine	As the name suggests this machine simply fills the can with the required product which is to be canned in appropriate quantity. In this process, these machines are used after blanching the mushroom.	
Blanching Machine	This machine is basically a blanching tank attached to material handling equipments,	

	heating arrangement and flow control equipments. It's essentially used for blanching process of mushroom after it is chopped.	
Mushroom Grading Machine	This machine utilizes a rotating perforated drum to sort the mushrooms based on their sizes, the perforation diameter varies along the cylinder length to accomplish effective sorting and these sorted mushrooms are collected separately. This is used at the initial stage.	
Canned Food Exhausting Machine	This machine utilizes steam to heat and expand the food items, so as to expel the air and other gases present within the food item.	

Machine	**Unit**	**Rate**	**Price**
Boiler (0-500 kg/hr)	1	3,00,000	3,00,000
Vegetable & Fruit washing machine	1	4,80,000	4,80,000
Can Sterilizer	1	2,00,000	2,00,000

Can Rinsing, Filling and Sealing Machine (130 pcs/min)	1	12,50,000	12,50,000
Blanching Machine	1	1,62,000	1,62,000
Mushroom Grading Machine	1	50,000	50,000
Canned Food Exhausting Machine	1	1,08,000	1,08,000
Other Equipments (Bins, Conveyors, and other auxiliaries)	-	3,00,000	3,00,000

Note: Approx. Total Machinery cost shall be Rs 28.50 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	28.50
Miscellaneous Assets	1.20
Working capital	9.44
Total	**39.14**

4.7. MEANS OF FINANCE

MEANS OF FINANCE	
PARTICULARS	**AMOUNT**
Own Contribution (min 10%)	4.30
Subsidy @35%(Max. Rs 10 Lac)	10.00
Term Loan @ 55%	16.34
Working Capital (Bank Finance)	8.50
Total	**39.14**

4.8. TERM LOAN: Term loan of Rs. 16.34 Lakh is required for project cost of Rs. 39.14 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	-	16.34	16.34	-	-	16.34
	2nd month	16.34	-	16.34	0.15	-	16.34
	3rd month	16.34	-	16.34	0.15	-	16.34
	4th month	16.34	-	16.34	0.15		16.34
	5th month	16.34	-	16.34	0.15		16.34
	6th month	16.34	-	16.34	0.15		16.34
	7th month	16.34	-	16.34	0.15	0.30	16.03
	8th month	16.03	-	16.03	0.15	0.30	15.73
	9th month	15.73	-	15.73	0.14	0.30	15.43
	10th month	15.43	-	15.43	0.14	0.30	15.13
	11th month	15.13	-	15.13	0.14	0.30	14.82
	12th month	14.82	-	14.82	0.14	0.30	14.52
					1.61	1.82	
2nd	Opening Balance						
	1st month	14.52	-	14.52	0.13	0.30	14.22
	2nd month	14.22	-	14.22	0.13	0.30	13.92
	3rd month	13.92	-	13.92	0.13	0.30	13.61
	4th month	13.61	-	13.61	0.12	0.30	13.31

	5th month	13.31	-	13.31	0.12	0.30	13.01
	6th month	13.01	-	13.01	0.12	0.30	12.71
	7th month	12.71	-	12.71	0.12	0.30	12.40
	8th month	12.40	-	12.40	0.11	0.30	12.10
	9th month	12.10	-	12.10	0.11	0.30	11.80
	10th month	11.80	-	11.80	0.11	0.30	11.50
	11th month	11.50	-	11.50	0.11	0.30	11.19
	12th month	11.19	-	11.19	0.10	0.30	10.89
					1.41	**3.63**	
3rd	Opening Balance						
	1st month	10.89	-	10.89	0.10	0.30	10.59
	2nd month	10.59	-	10.59	0.10	0.30	10.29
	3rd month	10.29	-	10.29	0.09	0.30	9.98
	4th month	9.98	-	9.98	0.09	0.30	9.68
	5th month	9.68	-	9.68	0.09	0.30	9.38
	6th month	9.38	-	9.38	0.09	0.30	9.08
	7th month	9.08	-	9.08	0.08	0.30	8.77
	8th month	8.77	-	8.77	0.08	0.30	8.47
	9th month	8.47	-	8.47	0.08	0.30	8.17
	10th month	8.17	-	8.17	0.07	0.30	7.87
	11th month	7.87	-	7.87	0.07	0.30	7.56
	12th month	7.56	-	7.56	0.07	0.30	7.26
					1.01	**3.63**	
4th	Opening Balance						
	1st month	7.26	-		0.07	0.30	6.96

				7.26			
	2nd month	6.96	-	6.96	0.06	0.30	6.66
	3rd month	6.66	-	6.66	0.06	0.30	6.35
	4th month	6.35	-	6.35	0.06	0.30	6.05
	5th month	6.05	-	6.05	0.06	0.30	5.75
	6th month	5.75	-	5.75	0.05	0.30	5.44
	7th month	5.44	-	5.44	0.05	0.30	5.14
	8th month	5.14	-	5.14	0.05	0.30	4.84
	9th month	4.84	-	4.84	0.04	0.30	4.54
	10th month	4.54	-	4.54	0.04	0.30	4.23
	11th month	4.23	-	4.23	0.04	0.30	3.93
	12th month	3.93	-	3.93	0.04	0.30	3.63
					0.62	**3.63**	
5th	Opening Balance						
	1st month	3.63	-	3.63	0.03	0.30	3.33
	2nd month	3.33	-	3.33	0.03	0.30	3.02
	3rd month	3.02	-	3.02	0.03	0.30	2.72
	4th month	2.72	-	2.72	0.02	0.30	2.42
	5th month	2.42	-	2.42	0.02	0.30	2.12
	6th month	2.12	-	2.12	0.02	0.30	1.81
	7th month	1.81	-	1.81	0.02	0.30	1.51
	8th month	1.51	-	1.51	0.01	0.30	1.21
	9th month	1.21	-	1.21	0.01	0.30	0.91
	10th month	0.91	-	0.91	0.01	0.30	0.60
	11th month	0.60	-		0.01	0.30	0.30

			0.60			
12th month	0.30	-	0.30	0.00	0.30	-
				0.22	**3.63**	

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					
	4.85	5.57	6.29	7.10	7.95
Raw Material					
	3.60	4.18	4.80	5.46	6.16
Closing Stock	**8.45**	**9.75**	**11.09**	**12.56**	**14.11**

COMPUTATION OF WORKING CAPITAL REQUIREMENT					
TRADITIONAL METHOD					(in Lacs)
Particulars	**Amount**	**Own Margin**		**Bank Finance**	
Finished Goods & Raw Material	8.45				
Less : Creditors	2.52				
Paid stock	**5.93**	**10%**	**0.59**	**90%**	**5.33**
Sundry Debtors	**3.71**	**10%**	**0.37**	**90%**	**3.34**
	9.64		**0.96**		**8.68**
MPBF					**8.68**
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	4	24,000
Manager	20,000	1	20,000
Accountant	15,000	1	15,000
Total salary per month			**59,000**
Total annual Staff charges	**(in lacs)**		**7.08**

4.12 POWER REQUIREMENT

Utility Charges (per month)		
Particulars	**value**	**Description**
Power connection required	16	KWH
consumption per day	128	units
Consumption per month	3,200	units
Rate per Unit	10	Rs.
power Bill per month	32,000	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	28.50	1.20	29.70
Total	28.50	1.20	29.70
Less : Depreciation	4.28	0.12	4.40
WDV at end of Year	**24.23**	**1.08**	**25.31**
Additions During The Year	-	-	-
Total	24.23	1.08	25.31
Less : Depreciation	3.63	0.11	3.74
WDV at end of Year	**20.59**	**0.97**	**21.56**
Additions During The Year	-	-	-
Total	20.59	0.97	21.56
Less : Depreciation	3.09	0.10	3.19
WDV at end of Year	**17.50**	**0.87**	**18.38**
Additions During The Year	-	-	-
Total	17.50	0.87	18.38
Less : Depreciation	2.63	0.09	2.71
WDV at end of Year	**14.88**	**0.79**	**15.66**
Additions During The Year	-	-	-
Total	14.88	0.79	15.66
Less : Depreciation	2.23	0.08	2.31
WDV at end of Year	**12.65**	**0.71**	**13.35**

4.14. REPAIR & MAINTENANCE: Repair & Maintenance is 2.0% 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 %	**50%**	**55%**	**60%**	**65%**	**70%**
SALES					
Gross Sale					
Canned Mushroom	159.15	189.58	216.72	247.03	279.22
Total	**159.15**	**189.58**	**216.72**	**247.03**	**279.22**
COST OF SALES					
Raw Material Consumed	108.00	125.40	144.00	163.80	184.80
Electricity Expenses	3.84	4.42	5.08	5.84	6.42
Depreciation	4.40	3.74	3.19	2.71	2.31
Wages & labour	14.04	15.44	16.99	18.35	19.82
Repair & maintenance	3.18	3.79	4.33	4.94	5.58
Packaging	11.94	14.22	15.17	17.29	19.55
Cost of Production	145.39	167.01	188.76	212.93	238.48
Add: Opening Stock /WIP	-	4.85	5.57	6.29	7.10
Less: Closing Stock /WIP	4.85	5.57	6.29	7.10	7.95
Cost of Sales	140.55	166.29	188.03	212.13	237.63
GROSS PROFIT	**18.60**	**23.29**	**28.69**	**34.90**	**41.59**
	11.69%	**12.29%**	**13.24%**	**14.13%**	**14.90%**
Salary to Staff	7.08	8.35	10.19	12.03	13.71
Interest on Term Loan	1.61	1.41	1.01	0.62	0.22
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	3.18	3.79	4.33	4.94	5.58
TOTAL	**16.40**	**18.46**	**20.83**	**23.31**	**25.72**
NET PROFIT	2.20	4.84	7.86	11.59	15.88
	1.38%	**2.55%**	**3.62%**	**4.69%**	**5.69%**
Taxation	-	-	0.70	1.60	2.89
PROFIT (After Tax)	2.20	4.84	7.16	9.99	12.99

4.16. BREAK EVEN POINT ANALYSIS

BREAK EVEN POINT ANALYSIS					
Year	**I**	**II**	**III**	**IV**	**V**
Net Sales & Other Income	159.15	189.58	216.72	247.03	279.22
Less : Op. WIP Goods	-	4.85	5.57	6.29	7.10
Add : Cl. WIP Goods	4.85	5.57	6.29	7.10	7.95
Total Sales	**164.00**	**190.30**	**217.45**	**247.84**	**280.07**
Variable & Semi Variable Exp.					
Raw Material Consumed	108.00	125.40	144.00	163.80	184.80
Electricity Exp/Coal Consumption at 85%	3.26	3.75	4.32	4.96	5.46
Wages & Salary at 60%	12.67	14.28	16.31	18.22	20.12
Selling & adminstrative Expenses 80%	2.55	3.03	3.47	3.95	4.47
Interest on working Capital	0.935	0.935	0.935	0.935	0.935
Repair & maintenance	3.18	3.79	4.33	4.94	5.58
Packaging	11.94	14.22	15.17	17.29	19.55
Total Variable & Semi Variable Exp	**142.54**	**165.41**	**188.53**	**214.11**	**240.91**
Contribution	**21.46**	**24.89**	**28.91**	**33.73**	**39.16**
Fixed & Semi Fixed Expenses					
Electricity Exp/Coal Consumption at 15%	0.58	0.66	0.76	0.88	0.96
Wages & Salary at 40%	8.45	9.52	10.87	12.15	13.41
Interest on Term Loan	1.61	1.41	1.01	0.62	0.22
Depreciation	4.40	3.74	3.19	2.71	2.31
Selling & adminstrative Expenses 20%	0.64	0.76	0.87	0.99	1.12
Rent	3.60	3.96	4.36	4.79	5.27
Total Fixed Expenses	**19.26**	**20.06**	**21.06**	**22.13**	**23.29**
Capacity Utilization	**50%**	**55%**	**60%**	**65%**	**70%**
OPERATING PROFIT	**2.20**	**4.84**	**7.86**	**11.59**	**15.88**
BREAK EVEN POINT	**45%**	**44%**	**44%**	**43%**	**42%**
BREAK EVEN SALES	**147.18**	**153.33**	**158.37**	**162.65**	**166.54**

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		14.50	16.34	18.50	21.49
Add:- Own Capital	4.30				
Add:- Retained Profit	2.20	4.84	7.16	9.99	12.99
Less:- Drawings	2.00	3.00	5.00	7.00	9.00
Subsidy/grant	10.00				
Closing Balance	14.50	16.34	18.50	21.49	25.47
Term Loan	14.52	10.89	7.26	3.63	-
Working Capital Limit	8.50	8.50	8.50	8.50	8.50
Sundry Creditors	2.52	2.93	3.36	3.82	4.31
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
TOTAL :	**40.44**	**39.15**	**38.22**	**38.16**	**39.15**
Assets					
Fixed Assets (Gross)	29.70	29.70	29.70	29.70	29.70
Gross Dep.	4.40	8.14	11.32	14.04	16.35
Net Fixed Assets	**25.31**	**21.56**	**18.38**	**15.66**	**13.35**
Current Assets					
Sundry Debtors	3.71	4.42	5.06	5.76	6.52
Stock in Hand	8.45	9.75	11.09	12.56	14.11
Cash and Bank	2.97	3.42	3.69	4.17	5.17
TOTAL :	**40.44**	**39.15**	**38.22**	**38.16**	**39.15**

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	4.30				
Net Profit	2.20	4.84	7.86	11.59	15.88
Depriciation & Exp. W/off	4.40	3.74	3.19	2.71	2.31
Increase in Cash Credit	8.50	-	-	-	-
Increase In Term Loan	16.34	-	-	-	-
Increase in Creditors	2.52	0.41	0.43	0.46	0.49
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	10.00				
TOTAL :	**48.65**	**9.08**	**11.58**	**14.89**	**18.82**
APPLICATION OF FUND					
Increase in Fixed Assets	29.70				
Increase in Stock	8.45	1.30	1.34	1.47	1.55
Increase in Debtors	3.71	0.71	0.63	0.71	0.75
Repayment of Term Loan	1.82	3.63	3.63	3.63	3.63
Drawings	2.00	3.00	5.00	7.00	9.00
Taxation	-	-	0.70	1.60	2.89
TOTAL :	**45.68**	**8.64**	**11.30**	**14.41**	**17.82**
Opening Cash & Bank Balance	-	2.97	3.42	3.69	4.17
Add : Surplus	2.97	0.44	0.27	0.48	1.00
Closing Cash & Bank Balance	**2.97**	**3.42**	**3.69**	**4.17**	**5.17**

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	6.60	8.58	10.35	12.70	15.30
Interest on Term Loan	1.61	1.41	1.01	0.62	0.22
Total	8.20	9.99	11.36	13.32	15.51
REPAYMENT					
Instalment of Term Loan	1.82	3.63	3.63	3.63	3.63
Interest on Term Loan	1.61	1.41	1.01	0.62	0.22
Total	3.42	5.04	4.64	4.25	3.85
DEBT SERVICE COVERAGE RATIO	**2.40**	**1.98**	**2.45**	**3.14**	**4.03**
AVERAGE D.S.C.R.					**2.80**