REVISED PROJECT PROFILES FOR PMEGP

VOLUME- I

Prepared for:

DIRECTORATE OF INDUSTRIES & COMMERCE,

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NORTH EASTERN INDUSTRIAL CONSULTANTS LTD.

A Joint venture of SIDBI, IFCI Ltd., ICICI Bank Ltd., IIBI, SBI, UBI & State IDCs,

Agartala, Aizawl, Dimapur, Imphal, Silchar

CONTENT

AGRO BASED INDUSTRIES

COIR FIBRE

Introduction: Coir Fibres and Ropes are popular products derived from wastage of coconut called coconut Husk. Fibre derived from Coconut husk is called coir fibre. Coir fibre is used to manufacture Yarn Brush & Rope. Coir Yarn is in turn woven into Mats & Carpets. Coir fibre is glossy, vivid and lusterous. Coir fibres are then spun to produce Yarn. Yarns are twisted together to form Ropes. Coir fibre, Yarn and Rope are saleable in their forms. Coir is a renewable resource available as waste product of coconut.

Market: Coir fibre is used for hand–spinning of Yarn and as filler in vehicle seat cushions. It is also used as replacement of Animal hair in brush making. The fibre is manually spun into Yarn. The Yarn can be woven into fabrics like mats and carpets in handlooms. Yarns can also be twisted into Ropes. Fibre Yarn has good market in North Easter India as a result of efforts of the Coir Board. Coir Ropes also have substantial demand in the Region. In Tripura weaving of Coir Yarn into Mats are already popularized. At present apart from one Unit operated by the SOFED all the supplies of Coir fibre and Yarn is from South India. The following demand estimates of these coir products are available:

1. Coir fibre	Rs. 0.300 Crore worth
2. Coir Mats	Rs. 0.003 Crore worth
3. Coir Brush	Rs. 0.003 Crore worth
4. Coir Ropes	Rs. 0.540 Crore worth

Besides, about 900 Tonnes of Bio-Fertilizer is being purchased by the State every year. Coir fibre manufacture involves Bio-fertilizer as a by-product. Thus not only the product but also by-product has good demand in Tripura.

Installed Capacity: Operating single shift of 8 hours per day for 300 days per annum the unit shall have an annual installed capacity to produce 150 MT of Coir fibres. It will also yield 820 MT of Bio-fertilizer as by – product of the Unit. The Unit shall utilize the fibre produced for Spinning and rope making in the future.

Process of Manufacture: The coconut husk collected is fed to the Disintegrator to soften the husk. Soften husk is then turbo-cleaned and immersed in water to remove water-solubles and to soften the husk further. The softened and disintegrated husk is then passed through the Decorticator so that fibres are separated. The Willowing machine extracts the fibre. Willowing also make fibres slender and graceful. Fibres are separated from other materials of the husk by a screener. Fibres so extracted are made into Bales in Baling Press. The remaining portion of Coconut Husk is the solid waste of fibre extraction. Ii is converted into organic fertilizer by composting.

Raw Materials: In Tripura 70,100 MT of Coconut is produced from 3,493 Hectares of area. West and South Tripura produce most of the coconuts with the initiation of a Coir Cluster the collection and sales of coconut husk has started. With increase in local consumption the price of Husk may go up. Accordingly the annual requirement of 1000 MT of coconut husk is estimated to cost Rs. 22,00,000/-. Annual cost of packing materials for coir fibre is estimated at Rs. 65,000/- at the installed capacity.

Power: The Unit will need a total connected load of 52.80 KW at 3 phase, 4 wire, 50 Hz, AC and 400/440 Volts. The power will be available from the state Grid through a transformer. The annual consumption of power is estimated at 76, 732.68 KW Hrs. costing Rs. 1,91,831.70

Water: The daily requirement of water is estimated at 2000 Ltrs, as it will recycle 3500 Ltrs. of water for soaking coconut husk. The water is available from ground water as well as public sources.

Manpower: Manpower required by the Unit including skilled workers is locally available, as the Coir Board has already created expert manpower for the Unit. The requirement at the installed capacity and annual cost of manpower is shown below:

Sl. No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	1	Rs. 1,05,600/-
2.	Clerk cum Accountant	1	Rs. 59,400/-
3.	Skilled Workers	2	Rs. 1,32,000/-
4.	Unskilled Workers	4	Rs. 1,32,000/-
	Total:	**8**	**Rs.4,29,000/-**

CAPITAL COST ESTIMATE

1. **Land & Building** with covered area of 200 Sq. Mtrs.	**On rent**
2. **Plant & Machinery**	
(a) One Disintegrator/Burster with 15 HP Motor & other accessories	Rs. 1,56,000/-
(b) One Decorticator with 30 HP Motor & other accessories	Rs. 2,76,000/-
(c) One Turbo cleaner with 15 HP Motor and other accessories	Rs. 1,62,000/-
(d) One Screener with 2 HP Motor & other accessories	Rs. 42,000/-
(e) One Baling Press with 5 HP Motor & other accessories	Rs. 1,38,000/-
(f) Two Retting Tanks: 2.5 M X 1.MX1.5M	Rs. 18,000/-
	Rs. 7,92,000/-
3. **Miscellaneous Fixed Assets**	
(a) Electrification	Rs. 1,65,000/-
(b) Water Installations	Rs. 44,000/-
© Miscellaneous others	Rs. 55,000/-
	Rs. 2,64,000/-
4. Provision for contingencies	**Rs. 49,500/-**
5. Preliminary & Pre-operative expenses	**Rs. 60,500/-**
Total fixed Costs:	**Rs. 12,00,000/-**
6. Working Capital:	
(a) One month's Raw Materials	Rs. 1,89,292/-
(b) One months Power cost	Rs. 17,585/-
© One months Wages & Salaries	Rs. 35,750/-
(d) One months other expenses	Rs. 54,450/-
Total Working Capital:	**Rs. 2,97,077/-**
TOTAL PROJECT COST:	**Rs.14,97,077/-**
	(Say Rs.14,97,000/)

Means of Finance:

		URBAN	RURAL
1. Composite Loan	:	Rs. 10,47,900/-	8,98,200/-
2. Subsidy	:	Rs. 3,74,250/-	5,23,950/-
3. Promoters' Capital	:	Rs. 74,850/-	74,850/-
4. Debt. : Equity Ratio	:	1 .86:1	1.22: 1

Profitability:

(Rs. in Thousands)

Sl. No.	Description	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capacity Utilization	60%	70%	80%	80%	80%
2.	**Annual sales Realization**					
	(a) By Sales of Coir fibre	1435	1675	1914	1914	1914
	(b) By Sales of bio-fertilizer	1353	1578	1804	1804	1804
		2788	**3253**	**3718**	**3718**	**3718**
3.	**Annual Costs in**					
	(a) Raw Materials	1363	1590	1817	1817	1817
	(b) Power	121	147	168	168	168
	(c)Wages & Salaries	328	344	362	369	376
	(d) Repair & Maintenance	52	52	52	52	52
	(e) Administrative overheads	55	58	61	64	67
	(f) Selling expenses	279	326	372	372	372
	(g) Depreciation	120	120	120	120	120
	(h) Interest	109	90	62	37	12
	Total Variable costs	**1769**	**2063**	**2357**	**2357**	**2357**
	Total Semi-Variable & Fixed Costs	**664**	**664**	**657**	**642**	**627**
	Total Costs	**2433**	**2727**	**3014**	**2999**	**2984**
4.	**Annual Operating Profit**	**355**	**526**	**704**	**719**	**734**
5.	Annual Contribution	1019	-	-	-	-
6.	**Break Even Point**	**39.09%**	-	-	-	-
7.	Return on Investment	23.71%	-	-	-	-
8.	Return on sales	12.73%	16.16%	18.93%	19.33%	19.74%
9.	**Cash Accrual**	**475**	**646**	**824**	**839**	**854**
10.	**Debt Servicing Capacity**	**584**	**736**	**886**	**876**	**866**
11.	Repayment of Loan	170	198	227	227	226
12.	**Debt Serviced**	**279**	**288**	**289**	**264**	**238**
13.	**Pay Back Period**	**1 Year 7 Months 22 Days**				
14.	**Debt Service Coverage Ratio**	**3.27:1**				

Cash Flow Statement:

(Rs. in Thousands)

Sl. No.	Description	Pre-operative period	Operating years				
			1st	2nd	3rd	4th	5th
1.	Increase in Promoters' Capital	75	-	-	-	-	-
2.	Increase in Subsidy	374	-	-	-	-	-
3.	Increase in Loan	1048	-	-	-	-	-
4.	Depreciation	-	120	120	120	120	120
5.	Profit before interest	-	464	616	766	756	746
A	**Total Sources**	**1497**	**584**	**736**	**886**	**876**	**866**
6.	Increase in Capital Investment	1200	-	-	-	-	-
7.	Increase in Current Assets	297	-	-	-	-	-
8.	Interests	-	109	90	62	37	12
9.	Repayment	-	170	198	227	227	226
B.	**Total Disposals**	**1497**	**279**	**288**	**289**	**264**	**238**
C.	**Opening balance**	**-**	**-**	**305**	**753**	**1350**	**1962**
D.	**Net Surplus**	**-**	**305**	**448**	**597**	**612**	**628**
E.	**Closing Balance**	**-**	**305**	**753**	**1350**	**1962**	**2590**

Projected Balance Sheets:

Sl. No.	Description	Amount in Rupees Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoters	75	430	956	1660	2379
2.	Surplus from operations	355	526	704	719	734
	Net Worth	**430**	**956**	**1660**	**2379**	**3113**
3.	Subsidy	374	374	374	374	374
4.	Loan Account	878	680	453	226	-
A.	**Total Liabilities**	**1682**	**2010**	**2487**	**2979**	**3487**
1.	Gross Fixed Assets	1200	1200	1200	1200	1200
	Less Depreciation	120	240	360	480	600
	Net Block	**1080**	**960**	**840**	**720**	**600**
2.	Current Assets	297	297	297	297	297
3.	Cash & Bank balance	305	753	1350	1962	2590
B.	**Total Assets**	**1682**	**2010**	**2487**	**2979**	**3487**

Suppliers of Machinery:

1. Coir Board, 691, Sahidnagar, Bhubaneswar – 7.
2. Douglas Fraser (I) Ltd., 14, N.S. Road, Kolkata- 700 001.
3. Mechano (India), 38, Bentinck Street, Kolkata- 700 069.

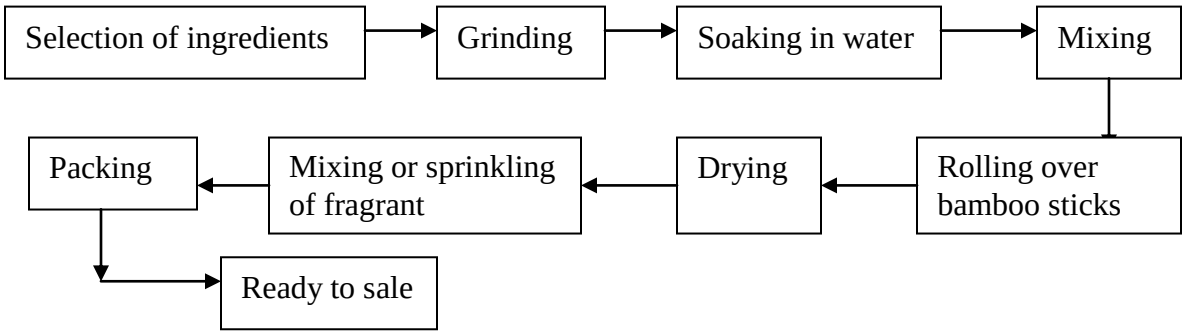
INCENSE STICK/ AGARBATTI MANUFACTURING

Introduction: The burning of incense in religious and social function has been practiced in India since early times. Dhup an aromatic powder or paste is burnt in Indian homes as a fragrant fumigant and is reputed to process insecticidal and antiseptic properties. Agarbattis are obtainable in different colours and with different perfumes. The burning time of an agarbatti varies from 15 minutes to 3 hours according to quality and size. About 75 percent of the agarbattis manufactured are of cheap quality containing only charcoal powder or low quality sandal wood powder with a mixture of 50 percent of "wood Gum" powder. Cheap perfumes are used to give them a top note. In superior varieties, essential oils, purified resins, natural fixatives like amber, musk and divet are used along with synthetic aromatics. Absolutes are used in the costlier types.

Market: Agarbatti are used by all communities in India, Ceylon, Burma and by Indians residing abroad. As on to day about 90 foreign countries are using our agarbattis. Agarbatti industry is one of the labour intensive cottage type of traditional industries in India and Karnataka State leads in this industry, the main centres of manufacture being Mysore and Bangalore. More over, it is an export oriented industry also.

Process: All the ingredients in powder form are mixed well in the proper proportion eith water to a semi solid paste. This paste is applied to bamboo sticks and rolled on wooden planks with hands uniformly. The raw sticks are then dried and packed in suitable bundles. For manufacture of perfumed agarbattis, the concentrated perfume is diluted first with shile oil or diethyl phthalate and raw agarbattis are dipped suitably in dipping trays. The perfumed battis are packed immediately in polythene bags and finally in printed cartons.

Process Flow:



Production Target: Around 3456 quintals of bamboo sticks would be produce in a year. These stick would be different size and would be sold at the rate of Rs. 1,667/- per quintal. The total sales realization would be around Rs. 57,60,000/- .

Raw Materials: All the raw materials are locally available from TRIBAC, Gandhinagar. Monthly requirement and costs of raw materials are shown below:

a) Muli Bamboo	Rs.	99,000/-
b) Quality of Bamboo	Rs.	1,08,000/-
c) Printed Paper box for for packaging of incense sticks	Rs.	35,833/-
d) Perfume ,Chemicals etc	Rs.	78,000/-
Total :	**Rs.**	**3,20,833/-**

Power: At 200/200 volts, 50 Hz, AC Single phase & 3 wire. The unit will need a total connected Load of 5 KW. The annual consumption of power is estimated at 11476 KWHrs costing Rs. 20,657/-.

Water: The unit will need 500 Liters of water cost of drawing of water is shown in power cost.

Manpower: Apart from one skilled worker the entire manpower requirement is locally available. The requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	78,000/-
2.	Sales & Administrative Staff	2	84,000/-
3.	Skilled Worker	1	60,000/-
4.	Unskilled Worker	2	60,000/-
	Total:	6	2,82,000/-

PROJECT COST

A) **FIXED CAPITAL :-**

1. a) Land & Building — Own — Existing
   b) Shed for Office Cum Godown — Rented

2. **MACHINERIES & EQUIPMENTS** :-

a) Bamboo cross cutting machine, bamboo forming machine & other equipments, drying tray — Rs. 1,05,000/-

b) Hydraulic extruder & Kneading M/c — Rs 1,30,000/-

c) Incense stick polishing machine 1 no. — Rs. 35,000/-

Sub-total = Rs. 2,70,000/-

d) Furniture & Fixtures — Rs. 75,000/-

e) Pre-operating expenses — Rs. 25,000/-

3. Provision for contingencies — Rs. **20,000/-**

4. Preliminary & pre-operative expenses — Rs. **20,000/-**

Total Fixed Capital: **4,10,000/-**

6. **Working Capital (for 3 months)**

a) Raw Materials — 3,20,833/-

b) Power — 1,721/-

c) Salary & Wages — 23,500/-

d) Miscellaneous expenses — 3,946/-

Total:: **Rs. 3,50,000/-**

Total Project Cost: Rs. 7,60,000/-

Means of Finance:	**Urban**	**Rural**
a. Composite loan under PMEGP	Rs.5,32,000/-	Rs. 4,56,000/-
b. Subsidy	Rs.1,90,000/-	Rs. 2,66,000/-
c. Promoters contribution	Rs. 38,000/-	Rs. 38,000/-
d. Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,456**	**4,032**	**4,608**	**4,608**	**4,608**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	2,310	2,695	3,080	3,080	3,080
(b)	Power	12	14	17	17	17
(c)	Wages & Salaries	282	289	296	304	311
(d)	Repair & Maintenance	16	16	16	16	16
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	518	605	691	691	691
(g)	Depreciation	40	40	40	40	40
(h)	Interest	61	49	36	22	7
	Total:	**3,314**	**3,787**	**4,259**	**4,257**	**4,253**
	Total Variable Cost	2,840	3,314	3,788	3,788	3,788
4.	**Annual profit**	**142**	**245**	**349**	**351**	**355**
5.	Return on investment	18.68%	32.24%	45.92%	46.18%	46.71%
6.	Return on sales	4.11%	6.08%	7.57%	7.62%	7.70%
7.	Cash accrual	**182**	**285**	**389**	**391**	**395**
8.	Annual Contribution	**616**	**-**	**-**	**-**	**-**
9.	Break Even Point in percent	**46.17%**	**-**	**-**	**-**	**-**
10.	**Debt servicing capacity**	243	334	425	413	402
11.	Repayment of Loan	**87**	**100**	**115**	**115**	**115**
12.	**Debt serviced**	148	149	151	137	122
13.	**Pay Back Period**	**2 years 2 months 1 day**				
14.	**D S C Ratio (DSCR)**	**2.57:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	38	-	-	-	-	-
2.	Increase in subsidy	190	-	-	-	-	-
3	Increase in loan	532	-	-	-	-	-
4.	Depreciation	-	40	40	40	40	40
5.	Profit before interests	-	203	294	385	373	362
A.	**TOTAL SOURCES**	**760**	**243**	**334**	**425**	**413**	**402**
6.	Increase in capital investment	**410**	-	-	-	-	-
7.	Increase in Current Assets	350	-	-	-	-	-
8.	Interests	-	61	49	36	22	7
9.	Repayment of loan	-	87	100	115	115	115
B.	**TOTAL DISPOSALS**	**760**	**148**	**149**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**95**	**280**	**554**	**830**
D.	**NET SURPLUS**	**-**	**95**	**185**	**274**	**276**	**280**
E.	**CLOSING BALANCE**	**-**	**95**	**280**	**554**	**830**	**1,110**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	38	180	425	774	1,125
2.	Surplus from operations	**142**	**245**	**349**	**351**	**355**
	NET WORTH:	**180**	**425**	**774**	**1,125**	**1,480**
3.	Subsidy	190	190	190	190	190
4.	Loan Account	445	345	230	115	-
A.	**TOTAL LIABILITIES**	**815**	**960**	**1,194**	**1,430**	**1,670**
1.	Gross Fixed Assets	410	410	410	410	410
	Less Depreciation	40	80	120	160	200
	NET BLOCK	**370**	**330**	**290**	**250**	**210**
2	Closing stocks	350	350	350	350	350
3.	Cash & Bank Balance	**95**	**280**	**554**	**830**	**1,110**
B.	**TOTAL ASSETS**	**815**	**960**	**1,194**	**1,430**	**1,670**

Suppliers of Machinery:

1) Mukesh Industries, Bhavnagar, 364001, Gujarat.
2) Alpha Machines, 31, Thillai Nagar, Tamilnadu.

AYURVEDIC MEDICINE

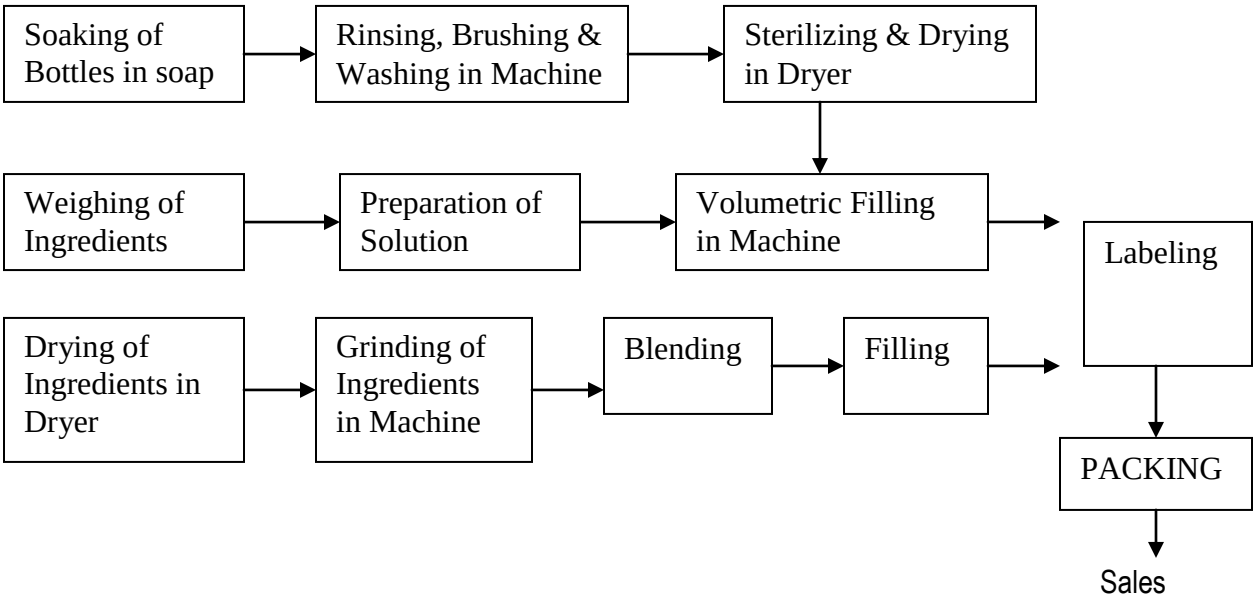
Introduction: Ayurvedic medicine is a traditional type of medicine. It is now being recognized all over the world as one of the best type of medicine. It was ingredients derived from nature in palatable condition. It has sub-types of medicines like likable (Lehya), Tablets (Bori), Liquid (Peya), Extracts (Ariata), powder (Churna), etc. here Liquid & Powder for us of Ayurvedic medicines are envisaged for production. Though the specifications of such Ayurvedic medicines are as per Ayurved, now-a-days some practices of Indian pharmacopoca and good-Manufacturing Practice of Medicine manufacturing are applied to Ayurvedic medicine as well.

Market: Ayurvedic medicines like cough syrup containing Vasaka juice, Basil Leaf juice, Honey, etc. are now prescribed even by Alopathic medical practitioners. Some liver tonics based on Ayurved has become household items all over the country. Also products like Triphala Churna, Digestive powders, etc. are very popular remedies used all over the country. Besides, parallal to Alopathic & Homeopathic systems, Ayurvedic system medical institutions are set up by Governments. In Tripura 42 Ayurvedic Health Sub-Centres are promoted by the State Government. Based on th state average these institutions may treat 2,00,000 out patients every year, which may ceate Rs. 100.00 Lakhs worth of demand for medicines. Besides, off-the-Counter products like Cough Syrup, Liver tonic, etc. may have an annual demand of Rs. 100.00 lakhs in the state. At present large Ayurvedic brands like Dabur, Himalayan, Drugs, Baidyanath, Bajranga, etc. are catering to these demands. Two tiny local units of Tripura are also selling Ayurvedic medicine in the state. With increased acceptance of Yoga and Ayurvedic system of Medicine, the demand for Ayurvedic medicines have increased in rapid strides. Besides, Ayurvedic medicines promoted by some organised producers through the use of Medical Representatives have created greater acceptance of them. Therefore marketing scope of Ayurvedic medicines have increased significantly to enable many small manufacturing units to flourish.

Installed Capacity: The unit shall work for single shift & 8 hours per day for 300 working days per annum. Considering the machine variable the annual installed capacity is accordingly estimated at 6,50,000 numbers of 60 ml Bottles of liquid medicines and 28,000 Nos. of 60 gms. Bottles of powdered medicines.

Process of Manufacture: The manufacturing process of liquid (Peya) Ayurvedic Medicines needs to be supervised by one Manufacturing Ayurvedacharya (Ayurvedic Chemist). These are complex formulary operations needing expert in Ayurvedic preparations. Based on exact proportions of ingredients they are weighed. Water used for formulations need to be purified by removal of Iron & Arsenic, if any. Then the water is De-mineralized. The material of containers used need to be either ceramic or that of stainless steel. Water solution of ingredients are made by using SS stirrers and, where necessary, by heating or by combination of both these process. These are then clarified by filtration in sparkler filter. Glass bottles are cleaned in Brushing, Rinsing and Washing Machine. These are sterilized in Bottle Dryer. The prepared and filtered liquid medicine after testing by Analytical Ayurvedic chemist are filled in clean & sterilized bottles in a volumetric filling machine. The bottles are capped by pilfer proof Aluminium Caps in a cap sealing machine. These filled up bottles are visually inspected and wiped dry. These are then sent for labeling and batch printing. These are then packed in corrugated cardboard Boxes and labeled again. Ayurvedic powdered medicines are prepared by drying ingredients. These dry ingredients are powdered by using Crusher of Grinder type. These powders in exact proportions are blended together in stainless steel cone blender. After testing these are filled in Glass/ Plastic containers. These containers are labeled and packed in corrugated Cardboard Boxes, which are also labeled. The manufacturing process needs direct supervision of manufacturing Ayurvedic Chemist.

Process Flow Chart:



Raw Materials: The unit shall use various Ayurvedic Medicines including Goose berry, Mint, Basil leaves, Vasaka, etc. depending upon the end. Product with Emulsifying wax, Light Kaotine, Computer, Amber Glass Boules, P.P. Caps, Labells and corrugated Cardboard Boxes. Besides, it will need liquid soap, 5% Hydrochloric Acid, etc. for bottle cleaning. Also Hydrochloric Acid and Caustic Soda Flakes shall be required for re-generation of De-Mineralisation plant. These are available in Kolkata and Guwahati. Some of such suppliers include the following:

1. Kunja Thakur's shop, Fancybazar, Guwahati.
2. B.A. Kumar Agency, 86/12 Rofi Ahmed Kidwai Road, Kolkata- 700013.
3. Jall's Trading Stores, 11, Ezra street, Kolkata – 700 001.

Sl.No.	Raw Material/ Packing Material	Quantity	Cost
1.	Ayurvedic medicinal herbs/ ingredients	3500 Kilograms	5,77,500/-
2.	Emulsifying wax	85 Kilograms	6,078/-
3.	Light Kaoline	85 Kilograms	935/-
4.	Used Amber Glass Bottles	6,95,000 Nos.	19,11,250/-
5.	Printed Corrugated Cardboard Boxes with partitions	6,95,000 Nos.	3,82,250/-
6.	Printed Corrugated Cardboard	4,800 sets.	79,200/-
7.	Labels for Bottles	6,95,000 Nos.	3,82,250/-
8.	Liquid soap, Hydrochloric Acid & Caustic Soda Flakes	L.S.	1,25,538/-
		Total:	34,65,,000/-

Power: The unit will need 25 KW of total connected load at 400/440 volts, 50 Ha, AC< 3 phase of 4 wire. The power shall be drawn through a Step-Down Transformer from State Power Supply Corporation Grid. The annual power consumption at the installed capacity is estimated at 33750 KW Hrs costing Rs. 1,28,250/-.

Water: The quality of water of the unit needs to be of highest quality. The daily requirement of water is estimated at 5000 Ltrs. Out of which 1000 Ltrs. Need to be de-mineralized. The water shall be available at site from Ground Water Sources.

Manpower: The unit need to appoint two Ayurvedacharya (Ayurvedic Chemists) for manufacturing and testing. These and the remaining workers may be locally available. Chemists and skilled man power need to be trained in machine operations well ahead of production. The requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	1	95,700/-
2.	Ayurvedacharyas	2	1,32 ,000/-
3.	Administrative and Sales Assistants	3	1,38,600/-
4.	Skilled workers	4	2,11,200/-
5.	Unskilled workers	4	1,32 ,000/-
	Total:	**14**	**7,09,500/-**

CAPITAL COST ESTIMATE

1. Land & Building : Covered area of 240 sq.Mtrs.	On Rent
2. Plant & Machinery	
(a) 60 kg. Capacity Double Cone Blender	Rs. 1,20,000/-
(b) Twin-head Bottle Washing Machine of Semi-automatic type with 0.5 HP Motor & G.I. Tank	Rs. 36,000/-
(c) Six Tray Bottle Dryer with 12 Aluminium Trays	Rs. 66,000/-
(d) 300 ltrs. Charge propeller type stirrer with 1 HP Motor	Rs. 30,000/-
(e) Six Plate Sparkler fitter with 0.5 HP Motor	Rs. 66,000/-
(f) Three 200 Ltr. Capacity SS Vats	Rs. 66,000/-
(g) Twin-Heed Volumatric Liquid filling machine	Rs. 72,000/-
(h) Treadle Type Cap sealing machine	Rs. 30,000/-
(i) 50 Ltrs. Per hour De-mineralizing Plant	Rs. 36,000/-
(j) Single Pan Digital chemical Analytical balance	Rs. 30,000/-
(k) Laboratory equipments including pH Meter, polarimeter, M.P.Apparatus, Distilled water Plant, Hot Plate, water bath, Balance, Glassware, etc.	Rs 1,02,000/-
(l) One LPG connection with stove and 50 Ltr. Capacity SS Vessel	Rs. 18,000/-
(m) One manual Batch Printing Machine	Rs. 12,000/-
	Rs. 6,84,000/-
3. **Miscellaneous Fixed Assets**	
(a) Electrification	Rs. 1,04,500/-
(b) Water installation	Rs. 27,500/-
(c) Computer & other misc. assets	Rs. 88,000/-
	Rs. 2,20,000/-
4. Provision for contingency	Rs. 44,000/-
5. Preliminary & Pre-operative expenses	Rs. 38,500/-
Total Project Costs:	**Rs. 9,86,500/-**

6. Working Capital (for 1 month):

(a)	Raw Materials	Rs. 2,88,750/-
(b)	Power	Rs. 11,757/-
(c)	Wages & Salaries	Rs. 59,125/-
(d)	Miscellaneous expenses	Rs. 19,868/-
		Total Rs. 3,79,500/-
	Total Project Cost	**Rs.13,66,000/-**

Means of Finance:

1.	Composite Loan under PMEGP	Rs. 9,56,200/-	Rs. 8,19,600/-
2.	Subsidy	Rs. 3,41,500/-	Rs. 4,78,100/-
3.	Promoter's contribution	Rs. 68,300/-	Rs. 68,300/-
4.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

Rs. in Thousand

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	3912	4565	5217	5217	5217
3.	**Annual Costs in Rs.**					
a)	Raw Materials	2079	2425	2772	2772	2772
b)	Power	85	99	113	113	113
c)	Wages & Salaries	657	684	727	746	763
d)	Repair & Maintenance	36	36	36	36	36
e)	Administrative expenses	110	116	121	128	134
f)	Selling expenses	596	695	850	850	850
g)	Depreciation	95	95	95	95	95
h)	Interest on Composite Loan	110	91	67	40	14
	Total:	3768	4241	4781	4780	4777
	Total variable Cost	**2760**	**3219**	**3735**	**3735**	**3735**
4.	Annual Profit	144	324	436	437	440
5.	Return on Investment	11.93%	25.55%	34.03%	34.03%	34.12%
6.	Return on sales	3.99%	7.33%	8.54%	8.54%	8.56%
7.	Annual contribution	1152	-	-	-	-
8.	Break Even Point as percent of capacity	52.50%				
9.	Cash accrual	239	419	531	532	535
10.	Debt Servicing Capacity	349	510	598	577	549
11.	Repayment of Composite Loan	155	181	207	207	206
12.	Debt Serviced	265	272	274	247	220
13.	Pay Back Period	2 years 5 months 16 days				
14.	Debt Service Coverage Ratio	2.10:1				

Cash Flow Statement

Rs. in Thousand

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	68	-	-	-	-	-
2.	Increase in Subsidy	342	-	-	-	-	-
3.	Increase in Loan	956	-	-	-	-	-
4.	Depreciation	-	95	95	95	95	95
5.	Profit before interests	-	254	415	503	477	454
A.	**TOTAL SOURCES**	**1366**	**349**	**510**	**598**	**572**	**549**
6.	Increase in capital investment	986	-	-	-	-	-
7.	Increase in working capital	380	-	-	-	-	-
8.	Interest	-	110	91	67	40	14
9.	Repayment of Term Loan	-	155	181	207	207	206
B.	**TOTAL DISPOSALS**	**1366**	**265**	**272**	**274**	**247**	**220**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**84**	**322**	**646**	**971**
D.	**NET SURPLUS**	**NIL**	**84**	**238**	**324**	**325**	**329**
E.	**CLOSING BALANCE**	**NIL**	**84**	**322**	**646**	**971**	**1300**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	68	212	536	972	1409
2.	Surplus from operation	144	324	436	437	440
	NET WORTH:	212	536	972	1409	1849
3.	**Subsidy**	**342**	**342**	**342**	**342**	**342**
4.	Loan Account	801	620	413	206	-
	TOTAL LIABILITIES	**1355**	**1498**	**1727**	**1957**	**2191**
1.	Gross Fixed Assets	986	986	986	986	986
	Less Depreciation	95	190	285	280	475
	NET BLOCK	**891**	**796**	**701**	**606**	**511**
2.	Current Assets	380	380	380	380	380
3.	Cash & Bank Balance	**84**	**322**	**646**	**971**	**1300**
	TOTAL ASSETS	**1355**	**1498**	**1727**	**1957**	**2191**

Machinery Suppliers:

1. United Engineering Company, 35A, Hazra Road, Kolkata – 700 029
2. Oriental Machinery PVT. Ltd, 25, R.N. Mukharjee Road, Kolkata – 700 01.
3. Zoolite (India) Pvt Ltd; K.C. Sen Road, Paltanbazar, Guwahati – 781008.
4. North East Chemical Corporation, Near Harisabha, Ranirbari, Panbazar, Guwahati–781001.

CITRONELLA OIL

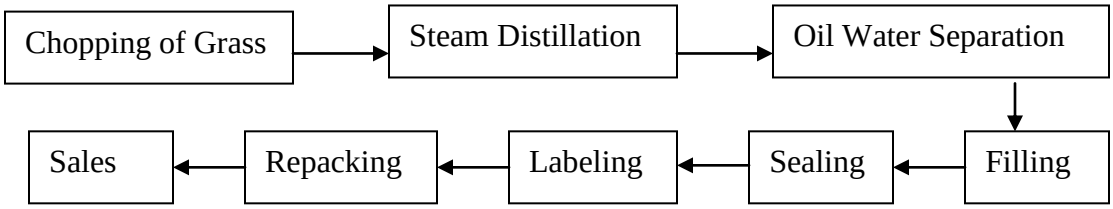
Introduction: Citronella or Elephant Grass is an essential oil bearing grass. The grass was grown in the Region in peripheries of Tea Gardens so that Elephants do not vandalize Tea bushes. The grass was later cultivated all over the Region for its oil, which act as disinfectant cum repeller of insects. From the oil citronellol is also derived. However, Citronella Oil is now a popular insect repellant used all over the Region. The plant to derive citronella oil from grass can also be used for deriving Lemon-grass oil, Mentha oil from Mint (Pudina & Japanese Mint), etc. and hence the unit has excellent flexibility with inputs and outputs.

Market: Citronella oil is used by perfumery, insect repellant, cosmetics, etc. industries. It is mixed with household disinfectants like Black/ white phenyle insect killing sprays for better odour and efficiency. The oil have a local market as insect repellant. Annually about 5,000 Liters of this oil in 30 ml Bottles are sold in the state. Otherwise Liquid Insect Repellant and Cosmetic Indutry in Guwahati in the nearest market for citronella oil. The product has excellent export potential.

Installed Capacity: By operating for single shift of 8 hours per day for 250 working days per annum the unit will have a capacity to distill 125 MT of citronella grass to produce 1560 Litres of Citronella oil as per Bureau of Indian Standard Specification IS-326-1961.

Process of Manufacture: Citronella Grass collected from cultivators are chopped to make them about 87.5 cm long. These are then fed into the Drum of the Steam Distillation Plant. When exposed to steam the grass releases its oil. The oil mixed with water is received in the oil-water separator where oil being lighter collected above water. After separation the citronella oil is tested and manually packed in Glass containers. Filled and sealed containers are wiped dry, Labelled and packed in cardboard boxes.

Process Flow:



Raw materials: The principal raw-material of the unit shall be Citronella Grass. It is being cultivated in Tripura in peripheral areas of some tea-gardens. Besides, some waste-lands near Tea gardens are also used for cultivation of Citronella grass. From these sources citronella grass may be available at very low process, packing materials for oil are also locally available. The requirement and costs of raw-materials at the installed capacity is shown below:

Sl.No.	Raw Material	Annual Requirement	Cost
1.	Citronella Grass	125000 kilograms	6,18,750/-
2.	40 ml. glass Bottles	19000 numbers	62,700/-
3.	PP Caps	19000 numbers	31,350/-
4.	Cardboard Boxes & Labels	135 sets	2,200/-
		Total:	7,15,000/-

Power: The unit will need 2 KW of power at 200/220 volts, 50 Hz, AC, single phase, 3 wire, which is available locally. The annual consumption of power is estimated at 3000 KW Hrs. costing Rs. 5,940/-.

Water: The unit will need 2500 liters of water per day, the cost of drawing of which is shown in power cost.

Fuel: The unit will need coal as fuel for the Baby-Boiler (Non 1 BR Broiler) which shall be purchased locally. The annual consumption of coal is estimated at 10,000 kilograms costing Rs. 82,500/-.

Manpower: manpower required by the unit are locally available. The annual needs and costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	85,800/-
2.	Skilled Worker	1	66,000/-
6.	Unskilled Worker	3	99,000/-
	Total:	5	2,50,800/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 56 sq. Mtrs.	**On Rent**	
2)	**Plant & Machinery**		
a)	One manually operated Chaff Cutter		Rs. 3,000/-
b)	One 1000 Ltrs. capacity steam Distillation unit		Rs. 3,00,000/-
c)	One Oil-Water Separator		Rs. 36,000/-
d)	One oil storage Tank		Rs. 3,000/-
e)	One Baby (Nn IBR) Boiler		Rs. 1,20,000/-
f)	One Multitute condenser		Rs. 90,000/-
			Rs. 5,52,000/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 22,000/-
b)	Water Installation		Rs 16,500/-
c)	Testing equipments		Rs. 16,500/-
d)	Furniture & Fixtures		Rs. 27,500/-
			Rs. 82,500/-
4.	Provision for contingencies		**Rs. 27,500/-**
5.	Preliminary & pre-operative expenses		**Rs. 27,500/-**
		Total Fixed Capital	**Rs. 6,89,500/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		Rs. 1,78,750/-
b)	Fuel		Rs. 20,625/-
c)	Power		Rs. 1,485/-
d)	Salary & Wages		Rs. 62,700/-
e)	Miscellaneous expenses		Rs. 22,440/-
		Total:	**Rs. 2,86,000/-**
		Total Project Cost:	**Rs. 9,75,500/-**

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 6,82,850/-	Rs. 5,85,300/-
b.	Subsidy	Rs. 2,43,875/-	Rs. 3,41,425/-
c.	Promoters contribution	Rs. 48,775/-	Rs. 48,775/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1251**	**1460**	**1668**	**1668**	**1668**
3.	**Annual Costs in**					
(a)	Raw Materials	429	501	572	572	572
(b)	Fuel	50	58	66	66	66
(c)	Power	6	6	6	6	6
(d)	Wages & Salaries	251	257	264	270	277
(e)	Repair & Maintenance	28	28	28	28	28
(f)	Administrative overheads	110	116	121	128	134
(g)	Selling expenses	188	219	250	250	250
(h)	Depreciation	66	66	66	66	66
(i)	Interest	75	64	47	28	9
	Total:	**120**	**1315**	**1420**	**1414**	**1408**
	Total Variable Cost	673	784	894	894	894
4.	**Annual profit**	**48**	**145**	**248**	**254**	**260**
5.	Return on investment	**5.33%**	**15.98%**	**26.98%**	**27.57%**	**28.05%**
6.	Return on sales	**3.96%**	**10.17%**	**15.04%**	**15.37%**	**15.63%**
7.	Annual Contribution	**578**	**-**	**-**	**-**	**-**
8.	**Break Even Point as percent of capacity**	**55.02%**	**-**	**-**	**-**	**-**
9.	Cash accrual	114	211	314	320	326
10.	**Debt servicing capacity**	**189**	**275**	**361**	**348**	**147**
11.	Repayment of Composite Loan	111	129	148	148	147
12.	**Debt serviced**	**186**	**193**	**195**	**176**	**156**
13.	**Pay Back Period**	**3 years 5 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.74:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	49	-	-	-	-	-
2.	Increase in subsidy	244	-	-	-	-	-
3	Increase in loan	683	-	-	-	-	-
4.	Depreciation	-	66	66	66	66	66
5.	Profit before interests	-	123	209	295	282	269
A.	**TOTAL SOURCES**	**976**	**189**	**275**	**361**	**348**	**335**
6.	Increase in capital investment	**690**	-	-	-	-	-
7.	Increase in Current Assets	286	-	-	-	-	-
8.	Interests	-	75	64	47	28	9

9.	Repayment of loan	-	111	129	148	148	147
B.	**TOTAL DISPOSALS**	**976**	**186**	**193**	**195**	**176**	**156**
C.	**OPENING BALANCE**	**-**	**-**	**13**	**85**	**251**	**423**
D.	**NET SURPLUS**	**-**	**3**	**82**	**166**	**172**	**179**
E.	**CLOSING BALANCE**	**-**	**3**	**85**	**251**	**423**	**602**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	49	97	242	490	744
2.	Surplus from operations	**48**	**145**	**248**	**254**	**260**
	NET WORTH:	**97**	**242**	**490**	**744**	**1004**
3.	Subsidy	244	244	244	244	244
4.	Loan Account	572	443	295	147	-
A.	**TOTAL LIABILITIES**	**913**	**929**	**1029**	**1135**	**1248**
1.	Gross Fixed Assets	690	690	690	690	690
	Less Depreciation	66	132	198	264	330
	NET BLOCK	**624**	**558**	**492**	**426**	**360**
2	Current Assets	286	286	286	286	286
3.	Cash & Bank Balance	**3**	**85**	**251**	**423**	**602**
B.	**TOTAL ASSETS**	**913**	**929**	**1029**	**1135**	**1248**

Suppliers of Machinery:

1. Technochem Development & Projects, 3, Fan Place, Ballygange, Kolkata-700019
2. B.B. Engineering Works, 166/22, B.T. Road, Kolkata-700053.
3. Oriental Machinery (1919) Pvt. Ltd. 25, R.N. Mukherjee, Road, Kolkata-700001.

BROOM MAKING

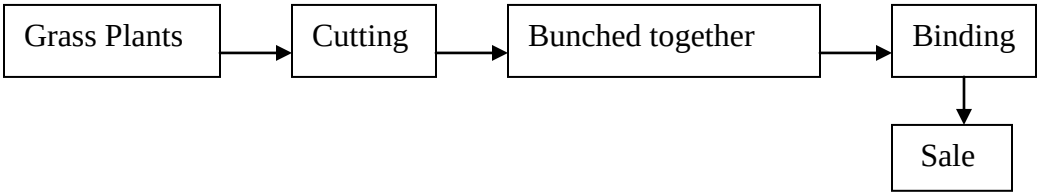
Introduction: Brooms are an essential daily household article used for sweeping and clearing of floors. The proposed unit intends to manufactures brooms of different shapes sizes by using Broom Grass..

Market: Brooms through a down market commodity have a good demand as it is an items of daily use. Most of the brooms in use are of the short handle type. Long handle brooms are also used for sweeping, especially in schools, hospitals, offices, Municipalities and other establishments. An ordinary household requires brooms at the rate of 3 to 4 nos. in year. Considering ready market for brooms, there is adequate scope for such units.

Production Target: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum. Since there are different types of brooms the overall value of production per annum is estimated at Rs. 6,62,000/-.

Process of Manufacture: Brooms grass plants are collected from jungle. These are cut at the end and bunched together. Such broom grasses are bound and a bamboo stick is hammered into the tied broom so that binding as very tight. These brooms are then bunched and made ready for sales.

Process Flow:



Raw Materials: The raw materials required for industry available in most localities in the State.
The annually requirement and cost of Raw Materials available locally are shown below:

Sl.No.	Particulars	Amount (Rs.) p.a
1.	Broom Grass	32,000/-
2.	Binding Materials	4,,000/-
3.	Bamboo L.S.	1,500/-
	Total	**37,500/-**

Power & Water: For water & electricity Rs.3,942/- is estimated to be the cost as only 1KW domestic connection of Power and 300 Ltrs. of water shall be required.

Manpower: The manpower required by the unit are locally available. The requirement and annual costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	48,000/-
2.	Skilled worker	2	84,000/-
3.	Unskilled Worker	1	30,000/-
	Total:	4	1,62,000/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 100 sq. Mtrs.		**On Rent**
2)	**Plant & Machinery**		
a)	Knives, metal cutters, scissors, hammer etc		Rs. 50,000/-
3.	**Miscellaneous Fixed Assets**		
a)	Electrification		Rs. 7,500/-
b)	Water Installation		Rs. 7,500/-
c)	Furniture & Miscellaneous others		Rs. 10,000/-
			Rs. 25,000/-
4.	Provision for contingencies		**Rs. 3,750/-**
5.	Preliminary & pre-operative expenses		**Rs. 6,250/-**
		Total Fixed Capital	**Rs. 85,000/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		Rs. 9,250/-
b)	Fuel		Rs. 22,400/-
c)	Power		Rs. 986/-
d)	Salary & Wages		Rs. 40,500/-
e)	Miscellaneous expenses		Rs. 1,864/-
		Total:	**Rs. 75,000/-**
		Total Project Cost:	**Rs. 1,60,000/-**

	Means of Finance:	**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs.1,12,000/-	Rs. 96,000/-
b.	Subsidy	Rs. 40,000/-	Rs. 56,000/-
c.	Promoters contribution	Rs. 8,000/-	Rs. 8,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	**Description**	**1st Year**	**2nd Year**	**3rd year**	**4th Year**	**5th Year**
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**397**	**463**	**530**	**530**	**530**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	22	26	30	30	30
(b)	Fuel	54	63	72	72	72
I	Power	3	4	4	4	4
(d)	Wages & Salaries	162	166	170	174	179
(e)	Repair & Maintenance	3	3	3	3	3
(f)	Administrative overheads	50	53	55	58	61
(g)	Selling expenses	60	69	80	80	80
(h)	Depreciation	8	8	8	8	8
(i)	Interest	13	118	8	5	2
	Total:	**375**	**403**	**430**	**434**	**439**
	Total Variable Cost	139	162	186	186	186
4.	**Annual profit**	**22**	**60**	**100**	**96**	**91**
5.	Return on investment	13.75%	37.50%	62.50%	60.00%	56.88%

6.	Return on sales	5.54%	12.96%	18.87%	18.11%	17.17%
7.	Annual Contribution	258	-	-	-	-
8.	Break Even Point	54.88%	-	-	-	-
9.	Cash accrual	30	68	108	104	99
10.	**Debt servicing capacity**	**43**	**79**	**116**	**109**	**101**
11.	Repayment of Loan	17	20	25	25	25
12.	**Debt serviced**	**30**	**31**	**33**	**30**	**27**
13.	**Pay Back Period**	**2 years 1 month 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.97:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-ope-rative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	8	-	-	-	-	-
2.	Increase in subsidy	40	-	-	-	-	-
3	Increase in loan	112	-	-	-	-	-
4.	Depreciation	-	8	8	8	8	8
5.	Profit before interests	-	35	71	108	101	93
A.	**TOTAL SOURCES**	**160**	**43**	**79**	**116**	**109**	**101**
6.	Increase in capital investment	**85**	-	-	-	-	-
7.	Increase in Current Assets	75	-	-	-	-	-
8.	Interests	-	13	11	8	5	2
9.	Repayment of loan	-	17	20	25	25	25
B.	**TOTAL DISPOSALS**	**160**	**30**	**31**	**33**	**30**	**27**
C.	**OPENING BALANCE**	**-**	**-**	**13**	**61**	**144**	**223**
D.	**NET SURPLUS**	**-**	**13**	**48**	**83**	**79**	**74**
E.	**CLOSING BALANCE**	**-**	**13**	**61**	**144**	**223**	**297**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	8	30	90	190	286
2.	Surplus from operations	**22**	**60**	**100**	**96**	**91**
	NET WORTH:	**30**	**90**	**190**	**286**	**377**
3.	Subsidy	40	40	40	40	40
4.	Loan Account	95	75	50	25	-
A.	**TOTAL LIABILITIES**	**165**	**205**	**280**	**351**	**417**
1.	Gross Fixed Assets	85	85	85	85	85
	Less Depreciation	8	16	24	32	40
	NET BLOCK	**77**	**69**	**61**	**53**	**45**
2	Current Assets	75	75	75	75	75
3.	Cash & Bank Balance	**13**	**61**	**144**	**223**	**297**
B.	**TOTAL ASSETS**	**165**	**205**	**280**	**351**	**417**

CANE & BAMBOO ARTISAN GOODS & FURNITURE

Introduction: Goods & Furniture made of Cane & Bamboo by artisans of Tripura is already appreciated in markets outside the state. Handloom woven Bamboo Mats and products using such mats as inputs have replaced many traditional handicraft items of the state. However, these products are produced in plenty in the state. Therefore use of traditional skill in producing Handicrafts & furniture from Cane & Bamboo is envisaged here. These products shall essentially involve manual weaving of bamboo slivers to produce utility products like Sofa-sets, chairs, Tables, Raking-Chair etc.

Market: Handicrafts normally fetch lesser revenues at home and by-far more revenue in sales away from place of production. Bamboo sliver based products like Dala, Kula, sieve hand fans, etc. are utility items used locally. These are priced so low that the artisan hardly earns his daily wages. Experience of one larger unit in Natunbazar, Agartala indicate that products like Rocking-chair, when exported by sending by Air ensures very high profit. The Development Commissioner of Handicrafts and Export Promotion Organisation of Crafts and handicrafts are helping artisans to export their handicrafts abroad. Inside the country Tripura handicrafts are sold by Tripura Handloom & Handicrafts Development Corporation and North Eastern Handicrafts & Handloom Development Corporation, besides others in private sector. Products like Bamboo shiver sofa sets, Rocking chair, etc. are already being sold by the above agencies.

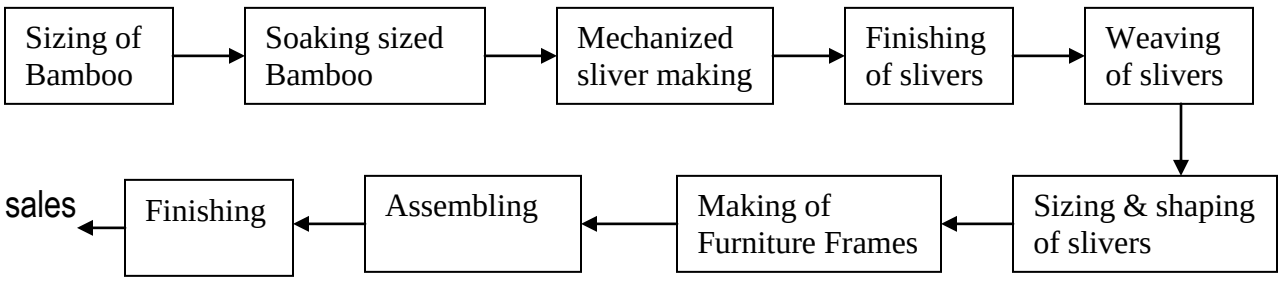
Capacity: It is assumed that the unit will operate for single shift of 8 hours per day for 300 working days per year. The Installed capacity is estimated on the basis of sliver making capacity. Accordingly the annual installed capacity is estimated as below:

1. Sofa set with two single sofa, one triple sofa, one Centre table and two side tables	48 sets worth Rs. 15,45,000/-
2. Small utility items like Seive, Dala, Hand fan etc.	3000 No.s worth Rs. 55,,000/-

Process of Manufacture: The process of manufacture of Bamboo furniture and other utility materials involve the following:

1. Manual sizing of bamboo
2. Soaking sized bamboo in water
3. Mechanized splitting and making of slivers
4. Manual finishing of slivers
5. Manual weaving of sliver nets
6. Manual making of furniture frame
7. Sizing & shaping of sliver nets
8. Assembling of nets with frames
9. finishing of products including varnishing

Process Flow:



Raw Materials: Paora (Bambusa Polymorpha), Bom (Bambura Chcharensis), Dolu (Schizostachym Dulloa), etc. Bamboo suit Bamboo furniture and handicrafts manufacture better. These are locally available. Though prices of these bamboos have gone up, the prices in Tripura are still cheaper than other major bamboo growing areas. Other raw-materials like wire nails, sandpaper, varnish, etc. are also available in local markets. The annual requirement of raw-materials at the installed capacity and costs are shown below:

Sl.No.	Raw Material	Quantity	Cost
1.	Bamboo	2000 kilograms	Rs. 26,000/-
2.	Wire Nails	50 kilograms	Rs. 7,000/-
3.	Dendrite, sandpaper, etc.	L.S.	Rs. 17,000/-
		Total:	Rs. 50,000/-

Power: The unit shall need 5 KW of total connected Load at 200/220 volts, 3 phase, AC, 50 Hz, 3 wire. The annual consumption of power is estimated at 11,250 KW Hrs. costing Rs. 10,000/-.

Water: The unit will need 280 Liters of water for soaking bamboo. Including of water is estimated at 1500 Liters. The cost of drawing water is shown with power cost.

Manpower: The unit will provide employment to 9-10 persons including staff for factory supervision, administration and sales, labour, watch & ward etc. and all man power to be arranged from local area.

Sl. No	Particulars	No	Amount	Amount
1.	Manager cum-Supervisor	1no	Self	Self
2.	Teacher	4nos	5,000/-	20,000/-
5.	Marketing Person	1 no	3,000/-	3,000/-
6.	Office boy	1 no	2,000/-	2,000/-
			Total	**Rs. 25,000/-**

Capital Cost Estimate:

1. **Land & Building: Covered area 186 Square Meters**	**on Rent**
2. **Plant & Machinery**	
a) One Bamboo splitting & sizing machine	2,39,000/-
b) One Bamboo stick making machine	2,40,000/-
c) Miscellaneous hand tools, Installation	1,50,000/-
	6,29,090/-

Miscellaneous Fixed Assets:

1.	Interior decoration	Rs.30,500/-
2.	Wiring / Electrification/ Fan etc	Rs.30,000/-
3.	Furniture/Chair/Table and working table etc.	Rs.35,625/-
	Total	**Rs.96,125/-**
Preliminary & Preoperative Exp and Contingencies		**Rs.2,500/-**
	Total Fixed Capital:	**Rs. 7,27,715/-**

Working Capital:

1.Salary & Wages :	Rs. 25,000/-
2.Utilities	Rs.10,000/-
3.Administrative exp	Rs.18,147/-
4. Raw Material	Rs.50,000/-
5. Preliminary & Preoperative Exp and Contingencies	Rs.2,500/-
Total Working Capital	**Rs. 1,05,647/-**

Total Cost of the Project: Rs.8,33,362/-

Means of Finance

			Urban		**Rural**
a.	Composite loan under PMEGP	70%	Rs.5,83,353/-	60%	Rs.5,00,017/-
b.	Subsidy	25%	Rs.2,08,340/-	35%	Rs.2,91,676/-
c.	Margin Money	5%	Rs. 41,669/-	5%	Rs. 41,669/-
		Total	Rs.8,33,362/-		Rs.8,33,362/-
d. Debt Equity Ratio			2.33:1		1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60**	**70**	**80**	**80**	**80**
2.	**Annual Sales Rs.**	**9,60,000**	**11,20,000**	**12,80,000**	**12,80,000**	**12,80,000**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	3,60,000	4,20,000	4,80,000	4,80,000	4,80,000
(b)	Utilities	72,000	84,000	96,000	96,000	96,000
(c)	Selling expenses	18,000	21,000	24,000	24,000	24,000
4	**Variable Cost**	**4,50,000**	**5,25,000**	**6,00,000**	**6,00,000**	**6,00,000**
(a)	Wages & Salaries	1,80,000	2,10,000	2,40,000	2,40,000	2,40,000
(b)	Administrative expenses	1,30,663	1,52,440	1,74,217	1,74,217	1,74,217
(c)	Depreciation	72,771	72,771	72,771	72,771	72,771
(d)	Interest on Composite Loan	67,007	54,196	39,415	23,650	7,883
5	**Fixed & Semi Variable Cost**	**4,50,441**	**4,89,407**	**5,26,403**	**5,10,638**	**4,94,871**
6	**Total Cost**	**9,00,441**	**10,14,407**	**11,26,403**	**11,10,638**	**10,94,871**
7.	**Annual profit**	**59,559**	**1,05,593**	**1,53,597**	**1,69,362**	**1,85,129**
8	Return on investment	**7.15**	**12.67**			
9.	Return on sales	**6.20**	**9.42**			
10.	Annual Contribution	**5,10,000**	**5,95,000**	**6,80,000**	**6,80,000**	**6,80,000**
11	Break Even Point as percent of capacity	**52.98**	**57.57**			
12	Cash accrual	1,32,330	1,78,364	2,26,368	2,42,133	2,57,900
13.	**Debt servicing capacity**	**1,99,337**	**2,32,561**	**2,65,783**	**2,65,783**	**2,65,783**
14	Repayment of Composite Loan	94,598	1,10,365	1,26,130	1,26,130	1,26,130
15.	**Debt serviced**	**1,61,605**	**1,64,561**	**1,65,545**	**1,49,780**	**1,34,013**
16	**Pay Back Period**	**1 year 6 month 11 days**				
17.	**Debt Service Coverage Ratio (DSCR)**	**1.53:1**				

Cash Flow Statement : (Rs. in Thousands)

Sl. No.	Description	Pre-opera-tive Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	41,669	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	5,83,353	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	2,08,340	NIL	NIL	NIL	NIL	NIL
4.	Depreciation	NIL	72,771	72,771	72,771	72,771	72,771
5.	Profit before interests	NIL	1,26,566	1,59,789	1,93,012	1,93,012	1,93,012
A.	**TOTAL SOURCES**	**8,33,362**	**1,99,337**	**2,32,560**	**2,65,783**	**2,65,783**	**2,65,783**
6.	Increase in capital investment	**7,27,715**	NIL	NIL	NIL	NIL	NIL
7.	Increase in working capital	1,05,647	NIL	NIL	NIL	NIL	NIL
8.	Interests	NIL	67,007	54,196	39,415	23,650	7,883
9.	Repayment of loan	NIL	94,598	1,10,365	1,26,130	1,26,130	1,26,130
B.	**TOTAL DISPOSALS**	**8,33,362**	**1,61,605**	**1,64,561**	**1,65,545**	**1,49,780**	**1,34,013**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**
D.	**NET SURPLUS**	**NIL**	**37,732**	**67,999**	**1,00,238**	**1,16,003**	**1,31,770**
E.	**CLOSING BALANCE**	**NIL**	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**	**4,53,742**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. in thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	41,669	1,01,228	2,06,821	3,60,418	5,29,780
2.	Surplus from operations	**59,559**	**1,05,593**	**1,53,597**	**1,69,362**	**1,85,129**
	NET WORTH:	**1,01,228**	**2,06,821**	**3,60,418**	**5,29,780**	**7,14,909**
3.	Composite loan	4,88,755	3,78,390	2,52,260	1,26,130	Nil
4.	Subsidy	2,08,340	2,08,340	2,08,340	2,08,340	2,08,340
A.	**TOTAL LIABILITIES**	**7,98,323**	**7,93,551**	**8,21,018**	**8,64,250**	**9,23,249**
1.	Gross Block	7,27,715	7,27,715	7,27,715	7,27,715	7,27,715
	Less Depreciation	72,771	145542	218313	291084	363855
2	**NET BLOCK**	**654944**	**582173**	**509402**	**436631**	**363860**
3	Current Assets	1,05,647	1,05,647	1,05,647	1,05,647	1,05,647
4.	Cash & Bank Balance	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**	**4,53,742**
B.	**TOTAL ASSETS**	**7,98,323**	**7,93,551**	**8,21,018**	**8,64,250**	**9,23,249**

Suppliers of Machinery:

1. Guru Nanak Mechanical Works (Assam) Pvt. Ltd; Makum Road, Tinsukia-786146
2. Chin-Fu industrial Corp, 143 Chiu Kay Lane, Lukang, Changhwa, Taiwan
3. Bharat Machine Tools Industries, 61, G.C. avenue, Kolkata-700013.

JATROPHA OIL

Introduction: Jatropha Curcus is a large 3 to 4 Meter high shrub, native of tropical America, occurring throughout India. It is reported to be introduced in Asia by Portuguese as an oil-yielding plant. In India it is found in semi-wild condition as a fencing shrub of farms. It kernel yields 46-58 percent by weight of oil, which is 30-40 percent of seed weight. The oil is generally called Curcus oil. On Etherification the oil becomes Bio-Diesel, which is blended with high-speed Diesel from 20 to 80 percent by volume. Transesterified Jatropha Oil blending with Diesel is now a policy adopted by Government of India. The specification and Test-Code of transesterified Jatropha oil is as per Institute of Petroleum, London. The use of transesterified Jatropha Oil blended with Diesel considerably reduce emissions of Hydro-Carbon, smoke and Carbon Monoxide. The proposed unit envisages to produce Jatropha Oil for supply to Petroleum Oil Companies for etherification and Bio-Diesel manufacturing. The specification of Oil is available from India Oil Corporation.

Market: Jatropha is already recognized as a source of Bio-Diesel and hence Government is propagating its cultivation and blending of transesterified Jatropha Oil with Diesel. One Unit is Haldia in west Bengal is producing transesterified jatropha Oil for sales as Bio-Diesel with success. Petroleum Refining Units in Public sector is given the responsibility of blending transesterified Jatropha Oil with High Speed Diesel and marketing the Bio-Diesel. Due to the efforts of Indian Railways, Public Sector Oil Companies, Central & State Governments, Jetropha is being cultivated all over the country. Forest Department of Tripura is also propagating Jatropha cultivation. The Jatropha Oil is also used for the preparation of Non/Semi-Drying Alkaloids. In China Jatropha Oil is boiled with iron oxide to get a popular varnish. As it booms without emitting smoke it is used as illuminant. It is also used as Lubricants for making soap and Candle. It is also used in medicines for skin diseases and rheumatism.

Capacity: Assuming that Jatropha fruit/seed shall be available throughout the year, the unit will operate for single shift of 8 hours per day for 300 working days per annum the annual installed capacity is estimated at 90,000 Liters of Jatropha oil.

Process of Manufacture: Jatropha Fruits are decorticated is Decortications machine. Seeds are then cleaned in a shaker to remove dust and other materials. Seeds are fed into Babi Oil Expeller. Oil is collected in containers while the oil cake is fed again to the Expeller so that maximum possible oil is collected in Drums and drums are manually sealed cakes are packed in Gunny Bags. Cakes are used as Bio-fertilizers.

Raw Materials: Normally seeds of Jatropha is the basic raw material of the unit. However, as Jatropha fruits are readily available in the local market at very cheap rates, the unit shall collect Jatropha fruits. Packing materials like used 200 Ltr. Capacity Drums and used Gunny Bags are available in local market. Seals of Drums shall however be obtained from PP Cap manufacturers/dealers in Ezra Street, Kolkata. The requirement and annual costs of raw-materials at the installed capacity are shown below:

Sl.No.	Raw/ Packing Material	Quantity	Cost
1.	Jatropha fruit	5,50,000 kilograms	12,71,500/-
2.	Used 200 Ltr. Drums	650 Numbers	85,500/-
3.	Used Funny Bags	5,000 Numbers	75,000/-
4.	Printed seals for Drums	500 Numbers	18,000/-
		Total:	14,50,000/-

Power: The unit will need a connected load of 5 KW at 400/440 volts, 50 Hz, AC, 3 phase & wire. The annual consumption of power is estimated at 9600 KWHrs costing Rs. 17,280/-.

Water: The unit will need to use very clean water for the process as it is producing food items. It will need 200 Liters of water per day. The cost of water is included in the power cost.

Manpower: The unit will need the following manpower, all of whom are locally available:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	60,000/-
2.	Administrative & Sales Staff	2	84,000/-
3.	Skilled Worker	3	1,62,000/-
4.	Unskilled Worker	3	90,000/-
	Total:	9	3,96,000/-

Capital Cost Estimate

1. Land & Building : Covered area 279 Square Meters	on Rent
2. Plant & Machinery	
(a) Super Baby oil Expetter of 125 kg/hr crushing capacity	Rs. 1,10,000/-
(b) 10 HP Motor with starter & accessories	Rs. 55,000/-
(c) 18'x18'x18' plates Filter, press with pump	Rs. 35,000/-
(d) Three oil-storage tanks	Rs. 24,000/-
(e) 100 kg Capacity Baby boiler	Rs. 71,000/-
(f) 100 kg. Capacity platform weighing scale	Rs. 20,000/-
(g) V-Betts, pulley & miscellaneous hand tools	Rs. 20,000/-
	Rs. 3,35,000/-
3) **Miscellaneous Fixed Asset**	
a) Electrification	Rs. 30,000/-
b) Water Installation	Rs. 20,000/-
c) Furniture & Miscellaneous others	Rs. 50,000/-
	Rs.1,00,000/-
4. Provision for contingencies	**Rs. 20,000/-**
5. Preliminary & pre-operative expenses	**Rs. 30,000/-**
Total Fixed Investment	**Rs. 4,85,000/-**
6. **Working Capital (for 3 months)**	
a) Raw Materials	Rs. 3,62,500/-
b) Power	Rs. 4,320/-
c) Salary & Wages	Rs. 99,000/-
d) Miscellaneous expenses	Rs. 14,180/-
Total:	**Rs. 4,80,000/-**
Total Project Cost:	**Rs. 9,65,000/-**

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 6,76,000/-	Rs. 5,79,000/-
b.	Subsidy	Rs. 2,41,000/-	Rs. 3,37,750/-
c.	Promoters contribution	Rs. 48,000/-	Rs. 48,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

(Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,800**	**2,100**	**2,400**	**2,400**	**2,400**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	870	1,015	1,160	1,160	1,160
(b)	Power	10	12	14	14	14
(c)	Wages & Salaries	360	377	393	403	413
(d)	Repair & Maintenance	19	19	19	19	19
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	270	315	360	360	360
(g)	Depreciation	45	45	45	45	45
(h)	Interest	76	64	47	28	9
	Total:	1,727	1,926	2,121	2,116	2,111
	Total Variable Cost	**1,150**	**1,342**	**1,534**	**1,534**	**1,534**
4.	**Annual profit**	**73**	**174**	**279**	**284**	**289**
5.	Return on investment	7.56%	18.03%	28.91%	29.43%	29.95%
6.	Return on sales	4.06%	8.29%	11.63%	11.83%	12.04%
7.	Annual Contribution	650	-	-	-	-
8.	Break Even Point as percent of capacity	53.26%	-	-	-	-
9.	Cash accrual	118	219	324	329	334
10.	**Debt servicing capacity**	**196**	**283**	**371**	**357**	**343**
11.	Repayment of Composite Loan	101	125	150	150	150
12.	**Debt serviced**	**179**	**189**	**197**	**178**	**159**
13.	**Pay Back Period**	**3 years 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.72:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	48	-	-	-	-	-
2.	Increase in subsidy	241	-	-	-	-	-
3	Increase in loan	676	-	-	-	-	-
4.	Depreciation	-	45	45	45	45	45
5.	Profit before interests	-	151	238	326	312	298
A.	**TOTAL SOURCES**	**965**	**196**	**283**	**371**	**357**	**343**
6.	Increase in capital investment	**485**	-	-	-	-	-
7.	Increase in Current Assets	480	-	-	-	-	-
8.	Interests	-	78	64	47	28	9
9.	Repayment of loan	-	101	125	150	150	150
B.	**TOTAL DISPOSALS**	**965**	**179**	**189**	**197**	**178**	**159**
C.	**OPENING BALANCE**	-	-	**17**	**111**	**285**	**464**
D.	**NET SURPLUS**	-	**17**	**94**	**174**	**179**	**184**
E.	**CLOSING BALANCE**	-	**17**	**111**	**285**	**464**	**648**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	48	121	295	574	858
2.	Surplus from operations	**73**	**174**	**279**	**284**	**289**
	NET WORTH:	**121**	**295**	**574**	**858**	**1,147**
3.	Subsidy	241	241	241	241	241
4.	Loan Account	575	450	300	150	-
A.	**TOTAL LIABILITIES**	**937**	**986**	**1,115**	**1,249**	**1,388**
1.	Gross Fixed Assets	485	485	485	485	485
	Less Depreciation	45	90	135	180	225
	NET BLOCK	**440**	**395**	**350**	**305**	**260**
2	Closing stocks	480	480	480	480	480
3.	Cash & Bank Balance	**17**	**111**	**285**	**464**	**648**
B.	**TOTAL ASSETS**	**937**	**986**	**1,115**	**1,249**	**1,388**

Suppliers of Machinery:

1. S.P. Engineering Co, 79/9, Latouche Road, P.B. No. 218, Kanpur.
2. Punjab Engineering Works, 32, Ramkrishna Samadhi Road, Kolkata-700 054
3. Delhi Iron & Steel Co. (P) Ltd; G.T. Road, Ghaziabad.

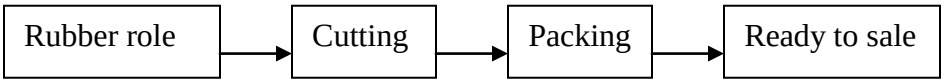
RUBBER BASED INDUSTRIES

RUBBER BANDS

Introduction & Market: Although, a very common and known use of rubber bands are in women's hair dressing, none the less they are also used in sweet marts, banks, offices, general stores, departmental stores etc. for fastening purposes. These rubber bands are available in different sizes and colours. This unit can be established at home. Moreover, there is a good demand for the product hence, there are reasonably high chances of success for this unit.

Production Process: The production process of rubber band is quite an easyone. There are readymade roles used in machines available in markets to make rubber bands. These machines work automatically and the rubber bands of a definite size are cut. Cheaper kinds of rubber bands are made out of worn-out tubes of cycles/scooters after their quality check have been done finally, these are packed in 10-25-50 and 100 gms of packets.

Process Flow:-



Production Target: About 10,000 kg of rubber band production has been proposed in this unit and selling each kg @ Rs. 150/-, the estimated income from this is Rs. 15,00,000/-.

Raw Material: Main raw material for this project is Rubber band roll which can be obtained easily from local market. Rubber band roll,1,550 kg. and Polythene packets and other :Rs.72,000/-

Utility: Major utility would be of electricity, cost over which would be Rs. 1,000/- and **Fuel:** Total amount required for fuel is estimated Rs. 5,000/-.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled worker	2	8,000/-
	Total	2	8,000/-

Financial aspects of the Unit:

A.	**Fixed Capital**			
1)	Land & Building	400 sq.ft.		Rented
2)	**Plant & Machinery**			
i)	Fully automatic band cutting machine	1		55,000/-
ii)	Sealing polythene packets, a leg operated machine	1		1,000/-
3)	**Miscellaneous Fixed Asset**			
a)	Electrification		Rs.	15,000/-
b)	Water Installation		Rs.	7,500/-
c)	Furniture & Miscellaneous others		Rs.	15,000/-
		Total:	Rs.	37,500/-
4.	**Provision for contingencies**		Rs.	5,000/-
5.	**Preliminary & pre-operative expenses**		Rs.	12,000/-
		Total Fixed Investment:		**Rs. 1,10,500/-**

6. **Working Capital**

a)	Raw Material	Rs.	72,000/-
b)	Utilities	Rs.	9,000/-
c)	Salary & Wages	Rs.	8,000/-
d)	Other expenses	Rs.	17,000/-
	Total Working Capital:	**Rs.**	**1,06,000/-**
	Working Capital for 3 months	**Rs.**	**3,18,000/-**
	Total Project Cost:	**Rs.**	**4,28,500/-**

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	2, 99, 950/-	2, 57,100/-
2.	Promoter's contribution	21, 425/-	21, 425/-
3.	Subsidy	1,07, 125/-	1, 49, 975/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: **(Rs. in Thousands)**

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	9,00,000	10,50,000	12,00,000	12,00,000	12,00,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	5,18,400	6,04,800	6,91,200	6,91,200	6,91,200
b)	Utilities	64,800	75,600	86,400	86,400	86,400
c)	Selling expenses	10,800	12,600	14,400	14,400	14,400
	Variable Cost	**5,94,000**	**6,93,000**	**7,92,000**	**7,92,000**	**7,92,000**
d)	Wages & Salaries	57,600	67,200	76,800	76,800	76,800
e)	Administrative expenses	1,22,400	1,42,800	1,63,200	1,63,200	1,63,200
f)	Depreciation	5,600	5,600	5,600	5,600	5,600
g)	Interest on Composite Loan	34,454	27,867	20,267	12,160	4,053
	Fixed & Semi Variable Cost	2,20,054	2,43,467	2,65,867	2,57,760	2,49,653
4.	**Total Cost**	**8,14,054**	**9,36,467**	**10,57,867**	**10,49,760**	**10,41,653**
5.	Annual Profit	85,946	1,13,533	1,42,133	1,50,240	1,58,347
6.	Return on Investment	20.05%	26.49%	33.16%	35.06%	36.95%
7.	Return on sales	9.54%	10.81%	11.84%	12.52%	13.20%
8.	Annual contribution	3,06,000	--	---	---	---
9.	Break Even Point as percent of capacity	43.15%				
10.	Cash accrual	91,546	1,19,133	1,47,733	1,55,840	1,63,947
11.	Debt Servicing Capacity	1,26,000	1,47,000	1,68,000	1,68,000	1,68,000
12.	Repayment of Composite Loan	48,641	56,747	64,854	64,854	64,854
13.	Debt Serviced	83,095	84,614	85,121	77,014	68,907
14.	Pay Back Period	1 year 6 months 3 days				
15.	Debt Service Coverage Ratio	1. 52 : 1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-oper-ative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	21,425	-	-	-	-	-
2.	Increase in Term loan	2,99,950	3,18,000	-	-	-	-
3.	Subsidy	1,07,125	-	-	-	-	-
4.	Depreciation	-	5,600				
5.	Profit before interests	-	1,20,40	1,41,40	1,62,400	1,62,400	1,62,400
A.	**TOTAL SOURCES**	**4,28,500**	**4,44,000**	**1,47,000**	**1,68,000**	**1,68,000**	**1,68,000**
6.	Increase in capital investment	4,28,500	-	-	-	-	-
7.	Increase in working capital	-	3,18,000	-	-	-	-
8.	Interest	-	34,454	27,867	20,267	12,160	4,053
9.	Repayment of Term Loan	-	48,641	56,747	64,854	64,854	64,854
B.	**TOTAL DISPOSALS**	**4,28,500**	**4,01,095**	**84,614**	**85,121**	**77,014**	**68,907**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**42,905**	**1,05,291**	**1,88,170**	**2,79,156**
D.	**NET SURPLUS**	**NIL**	**42,905**	**62,386**	**82,879**	**90,986**	**99,093**
E.	**CLOSING BALANCE**	**NIL**	**42,905**	**1,05,291**	**1,88,170**	**2,79,156**	**3,78,249**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	21,425	1,07,371	2,20,904	3,63,037	5,13,277
2.	Surplus from operation	85,946	1,13,533	1,42,133	1,50,240	1,58,347
	NET WORTH:	1,07,371	2,20,904	3,63,037	5,13,277	6,71,624
3.	**Subsidy**	**1,07,125**	**1,07,125**	**1,07,125**	**1,07,125**	**1,07,125**
4.	Term loan outstanding	2,51,309	1,94,562	1,29,708	64,854	-
	TOTAL LIABILITIES	**4,65,805**	**5,22,591**	**5,99,870**	**6,85,256**	**7,78,749**
1.	Gross Block	1,10,500	1,10,500	1,10,500	1,10,500	1,10,500
	Less Depreciation	5,600	11,200	16,800	22,400	28,000
	NET BLOCK	**1,04,900**	**99,300**	**93,700**	**83,100**	**82,500**
2.	Working capital	3,18,000	3,18,000	3,18,000	3,18,000	3,18,000
3.	Cash & Bank Balance	**42,905**	**1,05,291**	**1,88,170**	**2,79,156**	**3,78,249**
	TOTAL ASSETS	**4,65,805**	**5,22,591**	**5,99,870**	**6,85,256**	**7,78,749**

Suppliers of Machinery

1) Gupta Rubber Udyog, 23/1, G.B.T. Road, Kolkata – 2
2) Avishek Enterprise, 19, Strand Road, 1st Floor, Kolkata – 1.

RUBBER GLOVES

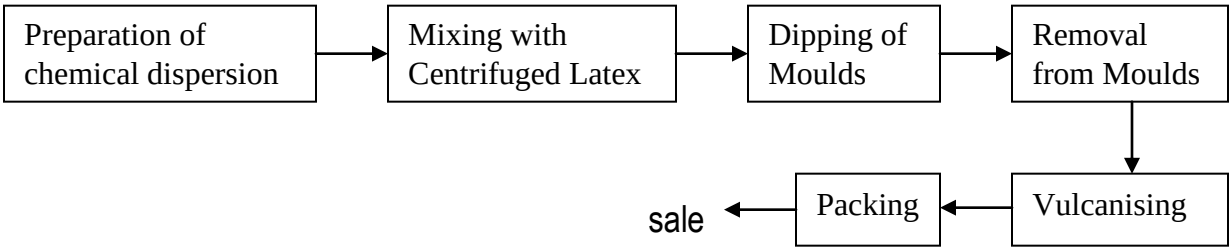
Introduction: As the second largest Natural Rubber producing State, Tripura shows excellent potential to produce Latex based products. Gloves fir industrial Surgical use are described as Dipped Latex products. Gloves are normally produced as per consumer needs, though Bureau of Indian Standards and Indian Pharmacopoca have specifications for speciality Gloves. Dipped Latex goods manufacturing units can also produce Transfusion tubes, Ringer stalk, cathatar, etc. and hence it has excellent scope to diversity.

Market: In Tripura use of Rubber Gloves are found in Surgery, cleaning works, Pharmaceutical, Food Processing etc. industries, veterinary, operations and even domestic uses. These Gloves are now brought from outside the North Eastern Region and hence cost high. Considering the rapid increase in medical and veterinary facilities there may be demand for more than 7,00,000 gloves in the state per annum. Thus there is good scope for a Rubber Gloves manufacturing unit.

Installed Capacity: Operating single shift of 8 hours per day for 300 working days per annum the unit shall have an installed capacity to produce 1,80,000 packets of 100 balloons each per annum.

Process of Manufacture: 60% DRC Latex is mixed with various rubber chemicals, Sulpher, Zinc oxide, etc. in Pot Mill. In a mixer centrifuged latex and chemical dispersion so made are mixed. In the final mix Wooden/Porcelain Moulds are dipped so that the mix coagulate on moulds to the desired thickness. The product is vulcanized in Hot-Air Oven. After cooling Gloves are packed in Polythene Bags.

Process Flow:



Raw Materials: 60% DRC Latex is the principal raw material of the unit, which is locally available. Vulcastab LS, Zinc oxide, Sulphur, Arcelerator, Antioccident (Nonox), Dispersal LN, Cassain, Caustic Soda, Calcium Nitrate, Acctic Acid, Distilled water, etc are the other chemicals required by the unit which may be procured from ICI (I) Ltd; 34, Chowringhee lane, Kolkata-700001 besides others. The requirement at the installed capacity and cost of raw materials are shown below:

Sl.No.	Raw Materials	Quantity	Cost
1.	60% DRC Natural Rubber latex	60,000 Liters	36,00,000/-
2.	Calcium Nitrate	600 kilograms	1,35,000/-
3.	Zinc Oxide	300 kilograms	12,000/-
4.	Other chemicals	300 kilograms	10,500/-
5.	Packing Materials	150 kilograms	4,500/-
6.	Sulpher	150 kilograms	37,500/-
7.	Potasium hydroxide	150 kilograms	18,750/-
8.	Pigments	100 kilograms	18,000/-
9.	Polythene bags & cartoons	L.S.	13,750/-
		Total:	38,50,000/-

Power: At 200/200 volts, 50 Hz, AC Single phase & 3 wire. The unit will need a total connected Load of 5 KW. The annual consumption of power is estimated at 11476 KWHrs costing Rs. 20,657/-.

Water: The unit will need 500 Liters of water cost of drawing of water is shown in power cost.

Manpower: Apart from one skilled worker the entire manpower requirement is locally available. The requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	78,000/-
2.	Sales & Administrative Staff	2	84,000/-
3.	Skilled Worker	1	60,000/-
4.	Unskilled Worker	2	60,000/-
	Total:	6	2,82,000/-

Capital Cost Estimate:

1.	Land & Building : Covered area 93 sq.Mtrs.	On Rent
2.	**Plant & Machinery**	
a)	100 Liter capacity Deamonising vessel with stirrer & 0.5 HP Motor	35,000/-
b)	6 container Pot Mill with 3 HP Motor	50,000/-
c)	5 liter capacity High speed Mixer with 0.5 HP Motor	20,500/-
d)	3′ x 3′ x 2′ Thermostatically controlled Hot Air Oven	60,000/-
e)	Four Coagulation Tanks	7,000/-
f)	Two 100 Liters capacity Wooden Dipping Vats	2,500/-
g)	Moulds	20,000/-
h)	Testing equipments	75,000/-
		2,70,000/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 20,000/-
b)	Water Installation	Rs. 10,000/-
c)	Furniture & Miscellaneous others	Rs. 70,000/-
		Rs.1,00,000/-
4.	Provision for contingencies	Rs. **20,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 20,000/-**
	Total Fixed Capital:	**Rs. 4,10,000/-**

6.	**Working Capital (for 3 months)**	
a)	Raw Materials	3,20,833/-
b)	Power	1,721/-
c)	Salary & Wages	23,500/-
d)	Miscellaneous expenses	3,946/-
	Total::	**Rs. 3,50,000/-**
	Total Project Cost:	**Rs. 7,60,000/-**

Means of Finance:		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs.5,32,000/-	Rs. 4,56,000/-
b.	Subsidy	Rs.1,90,000/-	Rs. 2,66,000/-
c.	Promoters contribution	Rs. 38,000/-	Rs. 38,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,456**	**4,032**	**4,608**	**4,608**	**4,608**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	2,310	2,695	3,080	3,080	3,080
(b)	Power	12	14	17	17	17
(c)	Wages & Salaries	282	289	296	304	311
(d)	Repair & Maintenance	16	16	16	16	16
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	518	605	691	691	691
(g)	Depreciation	40	40	40	40	40
(h)	Interest	61	49	36	22	7
	Total:	**3,314**	**3,787**	**4,259**	**4,257**	**4,253**
	Total Variable Cost	2,840	3,314	3,788	3,788	3,788
4.	**Annual profit**	**142**	**245**	**349**	**351**	**355**
5.	Return on investment	18.68%	32.24%	45.92%	46.18%	46.71%
6.	Return on sales	4.11%	6.08%	7.57%	7.62%	7.70%
7.	Cash accrual	**182**	**285**	**389**	**391**	**395**
8.	Annual Contribution	**616**	**-**	**-**	**-**	**-**
9.	Break Even Point in percent	**46.17%**	**-**	**-**	**-**	**-**
10.	**Debt servicing capacity**	243	334	425	413	402
11.	Repayment of Loan	**87**	**100**	**115**	**115**	**115**
12.	**Debt serviced**	148	149	151	137	122
13.	**Pay Back Period**	**2 years 2 months 1 day**				
14.	**D S C Ratio (DSCR)**	**2.57:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	38	-	-	-	-	-
2.	Increase in subsidy	190	-	-	-	-	-
3	Increase in loan	532	-	-	-	-	-
4.	Depreciation	-	40	40	40	40	40
5.	Profit before interests	-	203	294	385	373	362
A.	**TOTAL SOURCES**	**760**	**243**	**334**	**425**	**413**	**402**
6.	Increase in capital investment	**410**	-	-	-	-	-
7.	Increase in Current Assets	350	-	-	-	-	-
8.	Interests	-	61	49	36	22	7
9.	Repayment of loan	-	87	100	115	115	115
B.	**TOTAL DISPOSALS**	**760**	**148**	**149**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**95**	**280**	**554**	**830**
D.	**NET SURPLUS**	**-**	**95**	**185**	**274**	**276**	**280**
E.	**CLOSING BALANCE**	**-**	**95**	**280**	**554**	**830**	**1,110**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	38	180	425	774	1,125
2.	Surplus from operations	**142**	**245**	**349**	**351**	**355**
	NET WORTH:	**180**	**425**	**774**	**1,125**	**1,480**
3.	Subsidy	190	190	190	190	190
4.	Loan Account	445	345	230	115	-
A.	**TOTAL LIABILITIES**	**815**	**960**	**1,194**	**1,430**	**1,670**
1.	Gross Fixed Assets	410	410	410	410	410
	Less Depreciation	40	80	120	160	200
	NET BLOCK	**370**	**330**	**290**	**250**	**210**
2	Closing stocks	350	350	350	350	350
3.	Cash & Bank Balance	**95**	**280**	**554**	**830**	**1,110**
B.	**TOTAL ASSETS**	**815**	**960**	**1,194**	**1,430**	**1,670**

Machinery Suppliers:

1. Sohal Engineering Corporation, 61, G.C. Avenue, Kolkata-700 013.
2. Bharat Machine Tools Industries, 61, G.C. Avenue, Kolkata-700 013

RUBBER LATEX FOAM

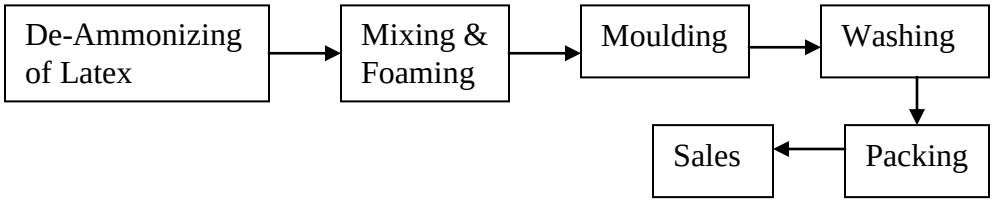
Introduction: Rubber Latex Foam as per IS:1741-1960 finds use in the field of Transport and Tourism industry. It is used in making mattresses, seats of vehicles, seats & Backrests of Sofa & other furniture, etc. As the second largest Natural Rubber producing State, Tripura may deem this as a Resource-based industry.

Market: Rubber latex Foam based products like Automobile seals & backrest, sofa and other furniture and Mattresses have substantial market in the country. Latex foam Mattress & Pillows are experiencing very large expansion of Market. In Tripura Latex Foam and Coir mattress are very popular and such mattresses are exported in very large quantities to Bangladesh via Tripura. Thus these products have excellent marketing potential.

Installed Capacity: Assuming that the unit will operate for single shift of 8 hours per day for 300 days per annum the annual installed capacity of the unit is estimated at 54000 kilograms.

Process of Manufacture: Latex is demonized and mixed with stabilizer foaming agent and sensitizer. The mix is foamed by boating air into it in a planetary mixer. Formation of foam is also assisted by blowing air below the surface of latex. After 4 to 6 times the original liquid volume is attained a dispersion of remaining ingredients are added so that more uniform structure is obtained by eliminating larger bubbles. The foam is poured/ injected into moulds and vulcanized by steam at 100°C for 35 to 45 minutes. The vulcanizing time depends on thickness of foam. After vulcanization mould is cooled and the foam, released from mould, is squeezed between rollers and thoroughly washed. These are then tested and packed for sales.

Flow sheet:



Raw Materials: 60 NR Latex is the principal raw-material of the unit which is locally available from Rubber Board. It constitute about 75 percent of all raw materials required by the unit. Chemicals like potassium Oleate soap solution, Sulphur, Vulcafor ZDC/ MBT, nonox B/SP, China Clay. Zinc oxide, etc are available from Rubber Board, ICI (India) Pvt. Ltd, Cresent House Ballard Estate, Mumbai and Bayer (India) Ltd., Nagin Mahal, Veer Nariman Road, Mumbai. The annual cost of raw materials are estimated at Rs. 58,57,500/-.

Fuel: The unit will need 60 MT of Coal per annum for its Boiler. The cost of fuel may be Rs. 4,62,000/-. Per annum.

Power: The unit will need 25 KW of connected load at 400/440 volts, 50 Hz, AC, 3 phase and 4 wire. The annual consumption of power is estimated at 22500 KWHrs costing Rs. 44,550/-.

Water: The unit will need 4000 Liters of water per day the cost of which is shown with power cost.

Manpower: The unit will have to obtain a Chemist cum production Supervisor for outside the state. All other manpower shall be locally available. The requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Chemist cum Production Supervisor	1	1,05,600/-
2.	Administrative & Sales Staff	2	92,400/-
3.	Skilled Worker	3	1,98,000/-
4.	Unskilled Worker	3	99,000/-
	Total:	9	4,95,000/-

Capital Cost Estimate:

1.	Land & Building : Covered area 278 sq.M.	On Rent
2.	Plant & Machinery	
a)	Deamoniation tank of 400 Ltrs. capacity with disc and 2 HP Motor	48,000/-
b)	One 300 Ltr. Capacity and one 100 Ltr. Capacity planetary Mixers with 10 HP Motor	4,20,000/-
c)	One 12 Jar pot Mill with 3 HP Motor	54,000/-
d)	5 Liter capacity High speed Mixer with 1 HP Motor	24,000/-
e)	300 1bs/hr, 100 psi Boiler with 3 HP Motor	2,16,000/-
f)	Steam vulcanizer	1,80,000/-
g)	Foam squeezing machine with 2 HP Motor	72,000/-
h)	Steam heated Drying chamber with 14 nos. of 6′ x 6′ x 8′ Trays	1,56,000/-
i)	Moulds and Testing equipments	5,40,000/-
		Rs..17,10,000/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 1,10,000/-
b)	Water Installation	Rs. 27,500/-
c)	Furniture & Miscellaneous others	Rs. 55,000/-
		Rs. 1,92,500/-
4.	Provision for contingencies	**Rs. 88,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 99,000/-**
	Total Fixed Capital	**Rs. 20,89,500/-**
6.	**Working Capital**	
a)	Raw Materials	Rs. 1,62,708/-
b)	Fuel	Rs. 12,834/-
c)	Power	Rs 1,238/-
d)	Salary & Wages	Rs. 13,750/-
e)	Miscellaneous expenses	Rs. 3,804/-
	Total:	**Rs. 1,94,334/-**
	Total Project Cost:	**Rs.22,83,834/-**
		Say: Rs.22,84,000/-

Means of Finance:		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 15,98,800/-	13,70,400/-
b.	Subsidy	Rs. 5,71,000/-	7,99,400/-
c.	Promoters contribution	Rs. 1,14,200/-	1,14,200/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**6059**	**7069**	**8078**	**8078**	**8078**
3.	**Annual Costs in**					
(a)	Raw Materials	3515	4100	4686	4686	4686
(b)	Fuel	277	323	370	370	370
(c)	Power	26	31	35	35	35
(d)	Wages & Salaries	455	475	495	507	520
(e)	Repair & Maintenance	82	82	82	82	82
(f)	Administrative overheads	165	174	182	191	200
(g)	Selling expenses	908	1060	1212	1212	1212
(h)	Depreciation	200	200	200	200	200
(i)	Interest	212	172	125	76	25
	Total:	**5840**	**6617**	**7387**	**7359**	**7330**
	Total Variable Cost	4726	5514	6303	6303	6303
4.	**Annual profit**	**219**	**452**	**691**	**719**	**748**
5.	Return on investment	9.43%	18.57%	28.04%	29.04%	30.09%
6.	Return on sales	3.94%	18.57%	28.04%	29.04%	30.09%
7.	Annual Contribution	1333	-	-	-	-
8.	Break Even Point as percent of capacity	**50.14%**	**-**	**-**	**-**	**-**
9.	Cash accrual	419	652	891	919	948
10.	**Debt servicing capacity**	**631**	**824**	**1016**	**995**	**973**
11.	Repayment ofLoan	259	303	346	346	345
12.	**Debt serviced**	**471**	**475**	**471**	**422**	**370**
13.	**Pay Back Period**	**2 years 9 months 6 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.88:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-opera-tive Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	114	-	-	-	-	-
2.	Increase in subsidy	571	-	-	-	-	-
3	Increase in loan	1599	-	-	-	-	-
4.	Depreciation	-	200	200	200	200	200
5.	Profit before interests	-	431	624	816	795	773
A.	**TOTAL SOURCES**	**2284**					
6.	Increase in capital investment	**2090**	-	-	-	-	-
7.	Increase in Current Assets	194	-	-	-	-	-
8.	Interests	-	212	172	125	76	25
9.	Repayment of loan	-	259	303	346	346	345
B.	**TOTAL DISPOSALS**	**2284**	**471**	**475**	**471**	**422**	**370**
C.	**OPENING BALANCE**	**-**	**-**	**160**	**509**	**1054**	**1622**
D.	**NET SURPLUS**	**-**	**160**	**349**	**545**	**573**	**603**
E.	**CLOSING BALANCE**	**-**	**160**	**509**	**1054**	**1627**	**2230**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	114	333	785	1479	2195
2.	Surplus from operations	219	452	691	719	748
	NET WORTH:	**333**	**785**	**1476**	**2195**	**2943**
3.	Subsidy	571	571	571	571	571
4.	Loan Account	1340	1037	691	345	-
A.	**TOTAL LIABILITIES**	**2244**	**2393**	**2738**	**3111**	**3514**
1.	Gross Fixed Assets	2090	2090	2090	2090	2090
	Less Depreciation	200	400	600	800	1000
	NET BLOCK	**1890**	**1690**	**1490**	**1298**	**1090**
2	Closing stocks	194	194	194	194	194
3.	Cash & Bank Balance	160	509	1054	1627	2230
B.	**TOTAL ASSETS**	**2244**	**2393**	**2738**	**3111**	**3514**

Machinery Suppliers:

1. Macneil and Berry Ltd., Connaught House, New Delhi
2. Sohal Engineering Works, L.B. Shastri Marg, Mumbai-400069
3. Modern Engineering Works, 310 Jogani Industrial Estate, 541 Senapati Bapat Marg, Dalalar, Mumbai-400 028.
4. Ganson (P) Ltd, G-77, Himalaya House, Curzon Road, New Delhi.

RUBBER BALLOONS

Introduction: Rubber balloons are thin gauge rubber products produced from suitable latex compound. It is considered as cheapest of all toys and hence it is extremely popular in all segments of population. Toy balloons have no formal specification. Toy Rubber Balloons are perhaps the most popular toy of children. As it is made primarily with Natural Rubber latex it is a resource-based industry of Tripura.

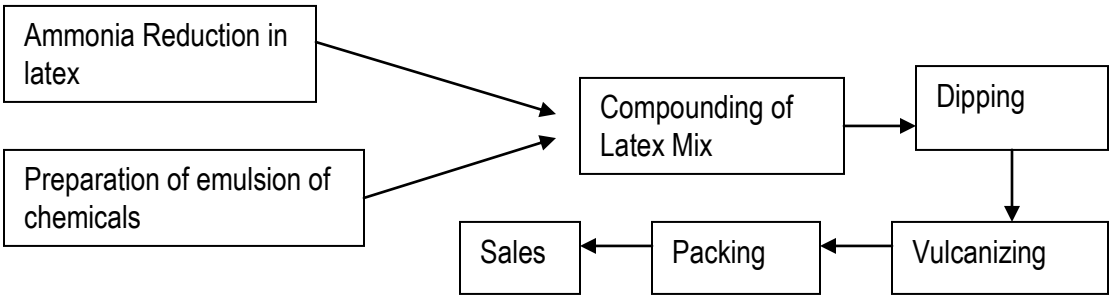
Market: Toy Rubber balloons are not only the most popular toy of children, it is also used in Birth-day celebrations, decoration of shops & restaurants. It is also used for target –practice and decorations to show festivities. The demand for Toy Rubber Balloons in Tripura is of the order of 30 Crore balloons per annum. Thus from demand aspect also Toy Rubber Balloons have good scope.

Installed Capacity: Operating single shift of 8 hours per day for 300 working days per annum the unit shall have an installed capacity to produce 1,80,000 packets of 100 balloons each per annum.

Suggested Capacity: The minimum economic capacity of a unit manufacturing balloons is 1 million pcs. Per annum based on a 30 days working schedule in a year.

Process of Manufacture: By blowing air and reacting the latex with formaldehyde the Ammonia content of Latex is reduced to about 0.1 percent. In this latex casein, Polassium hydroxide, Vulkanox SP, Sulphur, Vulkacit LDA, Zinc Oxide, Colour pigments, etc. are added. Moulds or formers are dipped in this latex compound. Formed balloons are vulcanized is a hot-air-oven. Balloons are then slupped off formers. Balloons are then packed in polythene bags manually for sales.

Process Flow:



Manpower: Three skilled person and one sales man will need for the unit, all of whom are locally available. The annual cost of manpower is estimated Rs. 1,92,000/-.

Sl.No.	Type of Manpower	No. of Persons	Annual Costs
1.	Manager	1	Self
2.	Skilled worker	3	1,44,000/-
3.	Sales man	1	48,000/-
	Total:	**5**	**1,92,000/-**

Raw Materials: 97.32 percent of Rubber balloon comprise of Ammonia reduced Latex. Casein, Potasium hydroxide, Sulphur, Zinc oxide, colour pigments and chemicals like vulcanax SP, Vulkacit LDA forms the remaining 2.68 percent of raw materials. Rubber- chemicals are available from ICI (India) Pvt. Ltd. Gesent House, Bollard Estate, Mumbai-1 and Munsanto chemicals of Indian (P)Ltd; Vakefield House, Sprott Road, Mumbai Latex is available locally. The annual requirement at the installed capacity and costs are shown below:

Sl.No.	Raw Materials	Cost :Rs
1.	60% DRC Natural Rubber latex	36,00,000/-
2.	Vulkanex SP	1,35,000/-
3.	Casein	2,00,000/-
4.	Potasium hydroxide	1,55,000/-
5.	Sulphur	1,74,000/-
6.	Vulkacit LDA	95,000/-
7.	Zinc Oxide	1.75,000/-
8.	Pigments	1,75,000/-
9.	Polythene bags & cartoons	91,000/-
	Total	48,00,000/-

Utility: The unit may require a total amount of electricity and water annually Rs. 18,000/-. Its annual requirement of water is estimated at about 1,000 kl.

Water: The unit will need 500 Liters of water cost of drawing of water is shown in power cost.

Capital Cost Estimate:

1.	Land & Building : Covered area 65 sq.M.	On Rent
2.	Plant & Machinery	
a)	100 liter capacity De-ammonizing vessel with stirrer & 0.5 HP Motor	70,000/-
b)	4 Jar Pot Mill with 1 HP Motor	45,000/-
c)	3 liter capacity Paddle mixer with 0.5 HP Motor	35,000/-
d)	Two Nos. of 100 Liter Capacity Dipping vats with covers	30,000/-
e)	5′x3′x4′ Electric Hot Air Oven	1,20,000/-
f)	Formers, Testing equipments, weighing balance & tools	1,00,000/-
		Total Rs. 4,00,000/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	12,000/-
b)	Water Installation	10,000/-
c)	Furniture & Miscellaneous others	50,000/-
		72,000/-
	Total Fixed Capital :Rs.4,72,000/-	
B.	Working Capital	
1)	Raw Material	Rs. 4,00,000/-
2)	Salary & Wages	Rs. 16,000/-
3)	Utilities	Rs. 1,500/-
4)	Misc. expenditure	Rs. 20,000/-
	Total Working Capital	**Rs. 4,37,500/-**
	Total Project Cost	**Rs. 9,09,500/-**

Means of Finance		**Urban**	**Rural**
1.	Composite Loan @ 70%	6,36,650/-	5,45,700/-
2.	Promoter's contribution @ 5%	45,475/-	45,475/-
3.	Subsidy @ 25%	2,27,375/-	3,18,325/-
4.	Debt equity ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	Annual Sales Realization in Rs.	34,50,000	40,25,000	46,00,000	46,00,000	46,00,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	28,80,000	33,60,000	38,40,000	38,40,000	38,40,000
b)	Utilities	10,800	12,600	14,400	14,400	14,400
c)	Selling expenses	14,400	16,800	19,200	19,200	19,200
	Variable Cost	**29,05,200**	**33,89,400**	**38,73,600**	**38,73,600**	**38,73,600**
d)	Wages & Salaries	1,15,200	1,34,400	1,53,600	1,53,600	1,53,600
e)	Administrative expenses	1,29,600	1,51,200	1,72,800	1,72,800	1,72,800
f)	Depreciation	47,200	47,200	47,200	47,200	47,200
g)	Interest on Composite Loan	73,129	59,148	40,866	23,659	6,453
	Fixed & Semi Variable Cost	3,65,129	3,91,948	4,14,466	3,97,259	3,80,053
4.	**Total Cost**	**32,70,329**	**37,81,348**	**42,88,066**	**42,70,859**	**42,53,653**
5.	Annual Profit	1,79,671	2,43,652	3,11,934	3,29,141	3,46,347
6.	Return on Investment	11.85%	18.75%	27.43%	28.95%	3046%
7.	Return on sales	5.20%	6.05%	6.78%	7.15%	7.52%
8.	Annual contribution	5,44,800	6,35,600	7,26,400	7,26,400	7,26,400
9.	Break Even Point as percent of capacity	40.21%				
10.	Cash accrual	2,26.871	3,02,800	3,52,800	3,76,341	3,93,547
11.	Debt Servicing Capacity	3,00,000	3,61,948	3,93,666	4,00,000	4,00,000
12.	Repayment of Composite Loan	1,03,241	1,20,447	1,37,654	1,37,654	1,37,654
13.	Debt Serviced	1,76,370	1,79,595	1,78,520	1,61,313	1,44,107
14.	Pay Back Period	1 year 8 months 12 days				
15.	Debt Service Coverage Ratio	1.70:1				

Cash Flow Statement

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	45,475	-	-	-	-	-
2.	Increase in Term loan	6,36,650	4,37,500	-	-	-	-
3.	Subsidy	2,27,375	-	-	-	-	-
4.	Depreciation	-	47,200	47,200	47,200	47,200	47,200
5.	Profit before interests	-	2,52,800	3,02,800	3,52,800	3,52,800	3,52,800
A.	**TOTAL SOURCES**	**9,09,500**	**7,37,500**	**3,50,000**	**4,00,000**	**4,00,000**	**4,00,000**
6.	Increase in capital investment	**9,09,500**	-	-	-	-	-
7.	Increase in working capital	-	4,37,500	-	-	-	-
8.	Interest	-	73.129	59,148	40,866	23,659	6,453
9.	Repayment of Term Loan	-	1,03,241	1,20,447	1,37,654	1,37,654	1,37,654
B.	**TOTAL DISPOSALS**	**9,09,500**	6,13,870	1,79,595	1,78,520	1,61,313	1,44,107
C.	**OPENING BALANCE**	**NIL**	**NIL**	**1,23,630**	**2,94,035**	**5,15,515**	**7,54,202**
D.	**NET SURPLUS**	**NIL**	**1,23,630**	**1,70,405**	**2,21,480**	**2,38,687**	**2,55,893**
E.	**CLOSING BALANCE**	**NIL**	**1,23,630**	**2,94,035**	**5,15,515**	**7,54,202**	**10,10,095**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. in Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	45,475	2,25,146	4,68,798	7,80,732	11,09,873
2.	Surplus from operation	1,79,671	2,43,652	3,11,934	3,29,141	3,46,347
	NET WORTH:	2,25,146	4,68,798	7,80,732	11,09,873	14,56,220
3.	**Subsidy**	**2,27,375**	**2,27,375**	**2,27,375**	**2,27,375**	**2,27,375**
4.	Term loan outstanding	5,33,409	4,12,962	2,75,308	1,37,654	-
	TOTAL LIABILITIES	**9,85,930**	**11,09,135**	**12,83,415**	**14,74,902**	**16,83,595**
1.	Gross Block	4,72,000	4,72,000	4,72,000	4,72,000	4,72,000
	Less Depreciation	47,200	94,400	1,41,600	1,88,800	2,36,000
	NET BLOCK	**4,24,800**	**3,77,600**	**3,30,400**	**2,83,200**	**2,36,000**
2.	Working capital	4,37,500	4,37,500	4,37,500	4,37,500	4,37,500
3.	Cash & Bank Balance	**1,23,630**	**2,94,035**	**5,15,515**	**7,54,202**	**10,10,095**
	TOTAL ASSETS	**9,85,930**	**11,09,135**	**12,83,415**	**14,74,902**	**16,83,595**

Machinery Suppliers:

1. National Engineering & Moulding Co, 34, Sanitala Road, Kolkata-700001.
2. Brave & Company, 108, Batwarbagan Lane, Kolkata-700 019.

ADHESIVE FROM NATURAL RUBBER

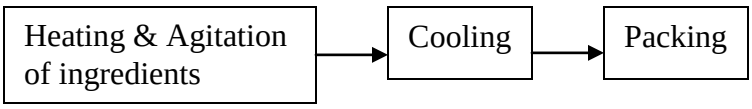
Introduction: Tripura is rich in natural rubber. However, as most of the Rubber-based industries need comparatively smaller proportion of natural rubber, very few Rubber-based industries, have come up in the state. Due to quick setting and better bandages Rubber based adhesives are used in manufactured of emulsion paints, sealants footwear and tyre repair works. The Bureau of Indian Standard Specifications IS:3434-1984 specify terms for adhesives.

Market: The market Rubber-based adhesives are in paint, Automobile, etc. industries. The local market for such adhesives are in the pre-cured Tyre Retreading industry. Traditional type Retreading units also use such adhesives. With increasing number of Automobiles and increased demand for pre-cured Tyre Retreading, the demand for such adhesives have gone up.

Installed Capacity: Operating single shift of 8 hours per day for 300 working days per annum the unit shall have an annual installed capacity to produce 150 MT of Rubber-based adhesives.

Process of Manufacture: Pre-determind quantities of Natural Rubber and Antioxidants are charged into the Reactor. Zinc Oxide and Magnesium oxide are added to these. Later Phenolic Resin and Solvents are added. These are agitated and heated Polymerisation reaction takes place by cooling the Reactor. The product is received in tank and packed in Drums after Testing.

Process Flow:



Raw Materials: Natural Rubber, Petroleum based solvents, Anti Oxidants, phenolic Resins, Zinc oxide and Magnesium Oxide are the raw materials and Drums with seals are the packing materials of the unit out of which Natural Rubber shall be available locally, solvents shall be purchased from the Indian Oil Corporation, Assam oil Division. Other raw packing materials are to be purchased from Kolkata. Some of the Suppliers include (a) Chirag Chemical Corporation, 5/1, Clive Row, 2nd Floor, Room No.36, Kolkata-700 001., (b) Shyam Sundar Taparia Chemical broker, 32, Ezra street, (South Block), Room No. 908, Kolkata-700 01. (c) S.B. Scientific Works, 14, Rani Sankari Lane, Kolkata – 700026. the annual requirement at the installed capacity and costs of Raw Materials are shown below:

Sl.No.	Raw/ Packing Material	Requirement	Cost
1.	Natural Rubber	50,000 Kilograms	44,00,000/-
2.	Solvant	77,500 Liters	51,15,000/-
3.	Anti oxidant	15,000 Kilograms	4,12,500/-
4.	Phenolic Resin	10,000 Kilograms	1,65 ,000/-
5.	Zinc Oxide	2,000 Kilograms	22,550/-
6.	Magnesium oxide	2,000 Kilograms	24,750/-
7.	Drums with seal	3,000 numbers	6,60,000/-
		Total:	**101,44,750/-**

Power: The unit will need 10 KW of connected load at 400/440 volts, 50 Ha, AC, 3 phase & 4 wires. The annual consumption of power is estimated at 22500 KW Hrs. costing Rs. 44,550/-.

Water: The unit will need 2000 liters of water per day, the cost of drawing of which is shown in power cost.

Manpower: The chemist for the unit shall need to be recruited from outside the state. Other manpower are locally available. The requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	1,38,600/-
2.	Chemist	1	1,32,000/-
3.	Sales & Administrative staff	2	92,400/-
4.	Skilled Worker	2	1,32,000/-
5.	Unskilled worker	6	1,98,000/-
	Total:	12	6,93,000/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 190 sq. Mtrs.	**On Rent**
2)	**Plant & Machinery**	
a)	One Jacketted Reaction Vessel with Thermic Fluid heating & water cooling, arrangement, Agitator, condenser, vacuum pump, etc.	Rs.10,50,000/-
b)	Analytical instruments, weighing/ measuring equipments etc.	Rs. 1,50,000/-
		Rs.12,00,000/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 1,37,500/-
b)	Water Installation	Rs 55,000/-
c)	Furniture, Fixtures, etc.	Rs. 55,000/-
		Rs. 2,47,500/-
4.	Provision for contingencies	**Rs. 66,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 71,500/-**
	Total Fixed Capital	**Rs. 15,85,000/-**
6.	**Working Capital (for 1 month)**	
a)	Raw Materials	Rs. 7,68,542/-
b)	Power	Rs. 3,375/-
c)	Salary & Wages	Rs. 52,500/-
d)	Miscellaneous expenses	Rs. 15,583/-
	Total:	**Rs. 8,40,,000/-**
	Total Project Cost:	**Rs. 24,25,000/-**

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 16,97,500/-	Rs.14,55,000/-
b.	Subsidy	Rs. 6,06,250/-	Rs. 8,48,750/-
c.	Promoters contribution	Rs. 1,21,250/-	Rs. 1,21,250/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**8526**	**9947**	**11367**	**11367**	**11367**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	5,534	6,456	7,378	7,378	7,378
(b)	Power	24	28	32	32	32
(c)	Wages & Salaries	558	587	617	632	648
(d)	Repair & Maintenance	61	61	61	61	61
(e)	Administrative overheads	110	115	121	128	134
(f)	Selling expenses	1340	1563	1786	1786	1786
(g)	Depreciation	150	150	150	150	150
(h)	Interest	194	157	116	69	23
	Total:	**7971**	**9117**	**10261**	**10236**	**10212**
	Total Variable Cost	6898	8047	9196	9196	9196
4.	**Annual profit**	**555**	**830**	**1106**	**1131**	**1155**
5.	Return on investment	**22.88**	**34.25**	**45.60**	**46.63**	**47.62**
6.	Return on sales	**6.50**	**8.34**	**9.72**	**9.94**	**10.16**
7.	Annual Contribution	1628	**-**	**-**	**-**	**-**
8.	Break Even Point	**45.49%**	**-**	**-**	**-**	**-**
9.	Cash accrual	705	980	1256	1281	1305
10.	**Debt servicing capacity**	**899**	**1137**	**1372**	**1350**	**1328**
11.	Repayment of Composite Loan	275	321	367	367	368
12.	**Debt serviced**	**469**	**478**	**483**	**436**	**391**
13.	**Pay Back Period**	**2 years 5 months 8 days**				
14.	**Debt Service Coverage Ratio**	**2.16:1**				

Cash Flow Statement:

(Rs. in Thousand)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	121	-	-	-	-	-
2.	Increase in subsidy	606	-	-	-	-	-
3	Increase in loan	1698	-	-	-	-	-
4.	Depreciation	-	150	150	150	150	150
5.	Profit before interests	-	501	691	880	859	837
A.	**TOTAL SOURCES**	**2425**	**899**	**1137**	**1372**	**1350**	**1328**
6.	Increase in capital investment	**1585**	-	-	-	-	-
7.	Increase in Current Assets	840	-	-	-	-	-
8.	Interests	-	194	157	116	69	23
9.	Repayment of loan	-	275	321	367	367	368
B.	**TOTAL DISPOSALS**	**2425**	**469**	**478**	**483**	**436**	**391**
C.	**OPENING BALANCE**	**-**	**-**	**430**	**1089**	**1978**	**2892**
D.	**NET SURPLUS**	**-**	**430**	**659**	**889**	**914**	**937**
E.	**CLOSING BALANCE**	**-**	**430**	**1089**	**1978**	**2892**	**3829**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	121	676	1506	2612	3743
2.	Surplus from operations	**555**	**830**	**1106**	**1131**	**1155**
	NET WORTH:	**676**	**1506**	**2612**	**3743**	**4898**
3.	Subsidy	606	606	606	606	606
4.	Loan Account	1423	1102	735	368	-
A.	**TOTAL LIABILITIES**	**2705**	**3214**	**3953**	**4717**	**5504**
1.	Gross Fixed Assets	1585	1585	1585	1585	1585
	Less Depreciation	150	300	450	600	750
	NET BLOCK	**1435**	**1285**	**1135**	**985**	**835**
2	Current Assets	840	840	840	840	840
3.	Cash & Bank Balance	**430**	**1089**	**1978**	**2892**	**3829**
B.	**TOTAL ASSETS**	**2705**	**3214**	**3953**	**4717**	**5504**

Machine Suppliers:

1. Buildsworth Pvt. Ltd. G.S. Road, Christianbasti, Guwahati-781005.
2. Deekay Scientific Corporation, SC Goswami Road, Panbazar, Guwahati-781001.
3. P.K. Enterprises, 109/A, B.T. Road, Kolkata – 700108.
4. Plant Engineers (India), 1778, B.L. Saha Road, Kolkata-700 053.

HAWAI CHAPPAL

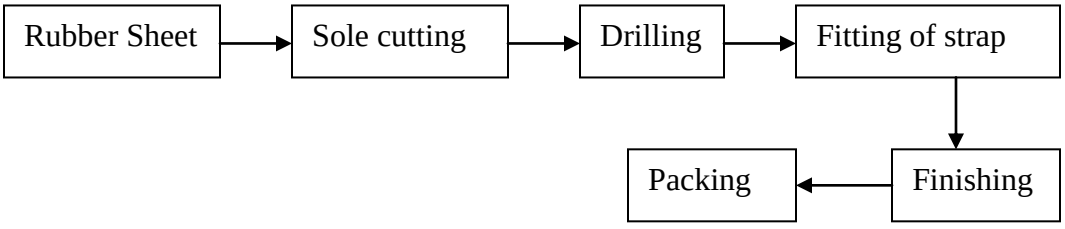
Introduction & Market: Hawai Chappals are made up of very light rubber which is used by many people around the country. Initially its basic purpose was to protect the feet from thorns, pebbles, insects, etc but now besides being a necessity, it has become an important fashion accessory available in different designs. It is used by both rural and urban population. These days different manufacturing processes are adopted suiting the needs of different people wearing hawai chappal. Usually small units manufacture hawai chappal that uses only rubber sheets and few machines and the market can be considerably increased by using different colours, designs, etc. and it is a good export item as well, these chappals are very comfortable, washable and affordable but the manufacturer has to make certain unavoidable investments like that of rubber sheets and few machines that do not cost below 20 lakhs. There is a lot of competition in the footwear industry and there has to be difference of quality from the traditional footwear makers and cobblers. Therefore it would be better that this business is stated with use of Hawai Sheets (Micro-Cellular) as it needs less investment.

Target: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum.

1.	Quantity	60,000 pairs
2.	Cost	6,90,000

Process: Micro cellular sheet obtained from other units are given the desired shape with the help of cutting machine/mould. Straps would also be obtained from other unites thereafter, these straps are fixed to the chappals with the help of foot operated machine. To give finishing touches to it, the straps are put in finishing machine. After the quality check of these chappals they are packed in a polythene bag and then sold in markets.

Process Flow:



Raw Material: The unit need Rubber Sheet, Strap and packing materials Rs 30,000/-, and the materials are also available in local markets, However the Raw materials to collect from Alwali Chemicals Corporation of India Ltd, Chaurnagi, Kolkata., Chilla Ltd. Mehta Chambir, 13 Mathews Road, Mumbai – 4.

Power: The unit shall need 5 KW of total connected Load at 200/220 volts, 3 phase, AC, 50 Hz, 3 wire. The annual consumption of power is estimated at 11,250 KW Hrs. costing Rs. 34,875/-.

Water: The unit will need 280 Liters of water for soaking bamboo. Including of water is estimated at 1500 Liters. The cost of drawing water is shown with power cost.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Costs
1.	Manager	1	84,000/-
2.	Sales & Administrative staff	5	3,10,000/-
3.	Skilled Worker	4	2,16,000/-
4.	Unskilled worker	10	3,00,000/-
	Total:	20	8,10,000/-

Capital Cost Estimate

1. **Land & Building: Covered area 186 Square Meters** **on Rent**
2. **Plant & Machinery:**

Sl.No.	Details	No.	Cost
1.	Hand operated sole cutting machine	1	1,25,000/-
2.	Hole making machine	1	85,500/-
3.	Finishing Machine	1	45,600/-
4.	Dies of different colours and designs	25	40,000/-
5.	Hand operated tools & equipments		27,500/-
6.	Misc. tools.		21,400
		Total:	3,45,000/-

3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 40,000/-
b)	Water Installation		Rs. 15,000/-
c)	Furniture & Miscellaneous others		Rs. 45,000/-
			Rs 1,00,000/-
4.	Provision for contingencies		**Rs. 25,000/-**
5.	Preliminary & pre-operative expenses		**Rs. 35,000/-**
		Total Fixed Investment	**Rs. 5,05,000/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		Rs. 7,500/-
b)	Power		Rs. 8,719/-
c)	Salary & Wages		Rs. 2,02,500/-
d)	Miscellaneous expenses		Rs. 16,281/-
			Rs. 2,35,000/-
		Total Project Cost:	**Rs. 7,40,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 5,18,000/-	Rs. 4,44,000/-
b.	Subsidy	Rs. 1,85,000/-	Rs. 2,59,000/-
c.	Promoters contribution	Rs. 37,000/-	Rs. 37,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1179**	**1376**	**1572**	**1572**	**1572**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	18	21	24	24	24
(b)	Power	21	24	28	28	28
(c)	Wages & Salaries	690	733	776	795	815
(d)	Repair & Maintenance	19	19	19	19	19
(e)	Administrative overheads	100	109	110	116	122
(f)	Selling expenses	177	206	236	236	236
(g)	Depreciation	47	47	47	47	47
(h)	Interest	60	49	36	22	7
	Total:	1132	1204	1279	1287	1298
	Total Variable Cost	**396**	**461**	**528**	**528**	**528**
4.	**Annual profit**	**47**	**172**	**293**	**285**	**274**
5.	Return on investment	6.35%	23.24%	39.59%	38.51%	37.03%
6.	Return on sales	3.99%	12.50%	18.64%	18.13%	17.43%
7.	Annual Contribution	783	-	-	-	-
8.	Break Even Point					56.40%
9.	Cash accrual	94	219	340	332	321
10.	**Debt servicing capacity**	**154**	**268**	**376**	**354**	**328**
11.	Repayment of Loan	78	95	115	115	115
12.	**Debt serviced**	**138**	**144**	**151**	**137**	**122**
13.	**Pay Back Period**	**2 years 7 months 6 days**				
14.	**Debt Service Coverage Ratio**	**2.14:1**				

Cash Flow Statement:

(Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	37	-	-	-	-	-
2.	Increase in subsidy	185	-	-	-	-	-
3	Increase in loan	518	-	-	-	-	-
4.	Depreciation	-	47	47	47	47	47
5.	Profit before interests	-	107	221	329	307	281
A.	**TOTAL SOURCES**	**740**	**154**	**268**	**376**	**354**	**328**
6.	Increase in Fixed investment	**505**	-	-	-	-	-
7.	Increase in working capital	235	-	-	-	-	-
8.	Interests	-	60	49	36	22	7
9.	Repayment of loan	-	78	95	115	115	115
B.	**TOTAL DISPOSALS**	**710**	**138**	**144**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**16**	**140**	**365**	**582**
D.	**NET SURPLUS**	**-**	**16**	**124**	**225**	**217**	**206**
E.	**CLOSING BALANCE**	**-**	**16**	**140**	**365**	**582**	**788**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	37	84	256	549	834
2.	Surplus from operations	47	172	293	285	274
	NET WORTH:	**84**	**256**	**549**	**834**	**1108**
3.	Subsidy	185	185	185	185	185
4.	Loan Account	440	786	964	1134	1293
A.	**TOTAL LIABILITIES**	**709**	**786**	**964**	**1134**	**1293**
1.	Gross Fixed Assets	505	505	505	505	505
	Less Depreciation	47	94	141	188	235
	NET BLOCK	**458**	**411**	**364**	**317**	**270**
2	Closing Stocks	235	235	235	235	235
3.	Cash & Bank Balance	16	140	365	582	788
B.	**TOTAL ASSETS**	**709**	**786**	**964**	**1134**	**1293**

Machinery Suppliers:

1) Jagson & Co., Gandhi Gate, Amritsar – 1.
2) Subh Machinery, S 15, Bank Street, Mumbai – 1.

RUBBER- WOOD FURNITURE

Introduction: Carpentry units manufacture wooden articles of everyday use including furniture. With the scarcity of wood as a basic material optimum use of wood has become important. A good carpentry unit reduces waste of wood while enhancing value addition on wood for manufacturing wooden articles. Normally consumer preference ensures quality of wooden articles. With second largest production of Rubber, Rubber- wood has become a resource substituting Timber resources in Tripura. As two Treatment and Seasoning plants for making Rubber-wood ready for use in Carpentry Tripura shows good potential for a Rubber-Wood Carpentry.

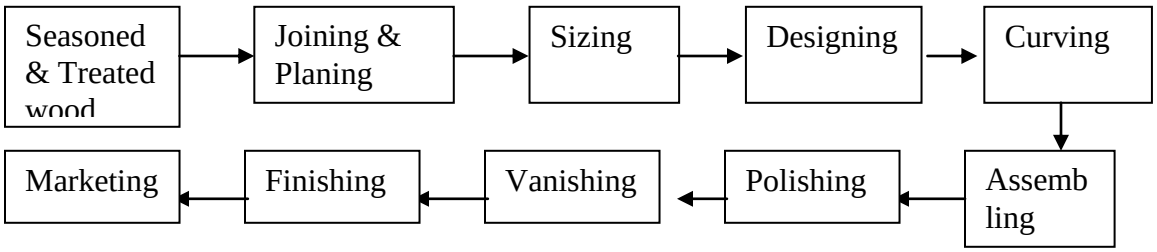
Market: Knife handles, Hangers, Furniture, Ladles, etc. wooden articles are used by mankind since time immemorial. Carpentry units manufacture these articles as per consumer specifications. Use of wooden frames and panels for Doors, Windows, Ventilator, etc. as building material are also very popular. However, wooden furniture such as sofa sets, Dining sets, Cots, etc. are more popular carpentry products. Tripura with 6,62,023 households as per 2001 census have demand for more than Rs. 100.00 Crore worth of wooden furniture. Besides, various offices and establishments have demand for carpentry articles such as tables, chairs, almirah, etc.

Capacity: The proposed unit shall work for single shift of 8 hours per day for 300 working days per annum. Though some of the operations are to be mechanized the overall productivity will depend on product mix and skills of operators. Accordingly the annual installed capacity is estimates as below.

1.	Cots	-	36 No.s
2.	Almirah	-	18 No.s
3.	Recks	-	18 No.s
4.	Sofa sets	-	30 sets
5.	Dining sets	-	30 sets
6.	Others	-	60 No.s

Process: The process of manufacture suggested is the one universally used all over India. The sawn timbers are sized, planned and given shape manually. These are then assembled together and varnished. After finishing operations these are made ready for sales.

Process Flow:



Raw Materials: Raw materials are to be sourced mainly from the two local Rubber-wood Treatment and Seasoning Plants. The annual requirements and costs of raw materials (Fitting and other consumables, like polish, gum, wax, sand paper, plywood, nails, pulley, bolts, handles, screws, locks etc) will be Rs.5,94,000/- p.a.

Fuel: For Calcinations of Gypsum to plaster of Paris by remaining half molecule of water the unit will use 48,000 kilograms of coal per annum. Coal may cost Rs. 1,20,000/-.

Power: The unit will need 7 KW of total connected Load at 400/440 volts, 50 Hz, AC, 3 phase & 4 wire. The annual consumption of power is estimated at 7,135 KW Hrs costing Rs. 15,000/-.

Water: The unit will need 1500 Liters of water per day the cost of which is shown with power cost.

Manpower: The unit will provide employment to 4 persons including staff and engineers for factory administration and sales, labour etc. and all man power to be arrange from local area. The annual needs and costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled Worker	4	2,16,000/-
3.	Unskilled Worker	4	1,20,000/-
	Administrative & Sales Staff	3	1,26,000/-
	Total	12	5,34,000/-

CAPITAL COST ESTIMATE:

1)	Land & Building : Covered area 950 Sq. Mtrs	**Rented**
2)	**Plant & Machinery**: Three nos. of Automatic wood-working machine with surface & thickness planners, circular saw, drill and grinding attachment and 2 HP Motor	Rs.2,25,000/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 30,000/-
b)	Water Installation	Rs. 10,000/-
c)	Furniture & Miscellaneous others	Rs. 35,000/-
		Rs. 75,000/-
4.	Provision for contingencies	**Rs. 15,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 20,000/-**
	Total Fixed Investment	**Rs.3,35,000/-**
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 1,48,500/-
b)	Fuel	Rs. 30,000/-
c)	Power	Rs. 3,750/-
d)	Salary & Wages	Rs. 1,33,500/-
e)	Miscellaneous expenses	Rs. 4,250/-
	Total:	**Rs. 3,20,000/-**
	Total Project Cost:	**Rs. 6,55,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 4,58,000/-	Rs. 3,93,000/-
b.	Subsidy	Rs. 1,64,000/-	Rs. 2,29,250/-
c.	Promoters contribution	Rs. 33,000/-	Rs. 32,750/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

(Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,395**	**1,628**	**1,860**	**1,860**	**1,860**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	356	416	475	475	475
(b)	Fuel	72	84	96	96	96
(c)	Power	9	11	12	12	12
(d)	Wages & Salaries	486	508	531	544	558
(e)	Repair & Maintenance	13	13	13	13	13
(f)	Administrative overheads	100	105	110	116	122
(g)	Selling expenses	209	244	279	279	279
(h)	Depreciation	35	35	35	35	35
(i)	Interest	53	43	31	19	6
	Total:	1,333	1,459	1,582	1,589	1,596
	Total Variable Cost	**646**	**755**	**862**	**862**	**862**
4.	**Annual profit**	**62**	**169**	**278**	**271**	**264**
5.	Return on investment	9.47%	25.80%	42.44%	41.37%	40.31%
6.	Return on sales	4.44%	10.38%	14.95%	14.57%	14.19%
7.	Annual Contribution	749	-	-	-	-
8.	Break Even Point as percent of capacity	55.03%	-	-	-	-
9.	Cash accrual	97	204	313	306	299
10.	**Debt servicing capacity**	**150**	**247**	**344**	**325**	**305**
11.	Repayment of Loan	73	85	100	100	100
12.	**Debt serviced**	**126**	**128**	**131**	**119**	**106**
13.	**Pay Back Period**	**2 years 6 months 3 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.24:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	33	-	-	-	-	-
2.	Increase in subsidy	164	-	-	-	-	-
3	Increase in loan	458	-	-	-	-	-
4.	Depreciation	-	35	35	35	35	35
5.	Profit before interests	-	115	212	309	290	270
A.	**TOTAL SOURCES**	**655**	**150**	**247**	**344**	**325**	**305**
6.	Increase in capital investment	**335**	-	-	-	-	-
7.	Increase in Current Assets	320	-	-	-	-	-
8.	Interests	-	53	43	31	19	6
9.	Repayment of loan	-	73	85	100	100	100
B.	**TOTAL DISPOSALS**	**655**	**126**	**128**	**131**	**119**	**106**
C.	**OPENING BALANCE**	**-**	**-**	**24**	**143**	**356**	**562**
D.	**NET SURPLUS**	**-**	**24**	**119**	**213**	**206**	**199**
E.	**CLOSING BALANCE**	**-**	**24**	**143**	**356**	**562**	**761**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	33	95	264	542	813
2.	Surplus from operations	62	169	278	271	264
	NET WORTH:	**95**	**264**	**542**	**813**	**1,077**
3.	Subsidy	164	164	164	164	164
4.	Loan Account	385	300	200	100	-
A.	**TOTAL LIABILITIES**	**644**	**728**	**906**	**1,077**	**1,241**
1.	Gross Fixed Assets	335	335	335	335	335
	Less Depreciation	35	70	105	140	175
	NET BLOCK	**300**	**265**	**230**	**195**	**160**
2	Closing Stocks	320	320	320	320	320
3.	Cash & Bank Balance	24	143	356	562	761
B.	**TOTAL ASSETS**	**644**	**728**	**906**	**1,077**	**1,241**

Suppliers of Machinery

1. Maneklal and Sons, 115/116, Narayan Dhuru Street, Bombay 400 03,
2. Jayems Engg, Co, M.G. Road, Ernakulam, Cochin 682019, Kerala.
3. Batliboi & Co (P) Ltd, M.G Road, Ernakulam, Cochin 682019, Kerala

AGRI-ALLIED INDUSTRIES

FISH PICKLES/ FISH PRODUCTS

Introduction: Fish pickles when carefully prepared under most hygienic conditions with addition of required quantity of salt, preservatives and species will have generally an average shelf life of one year. Most of the sea fishes like prawn, funa, pomfret, Mackrel etc. are ideally suitable for making fish pickles.

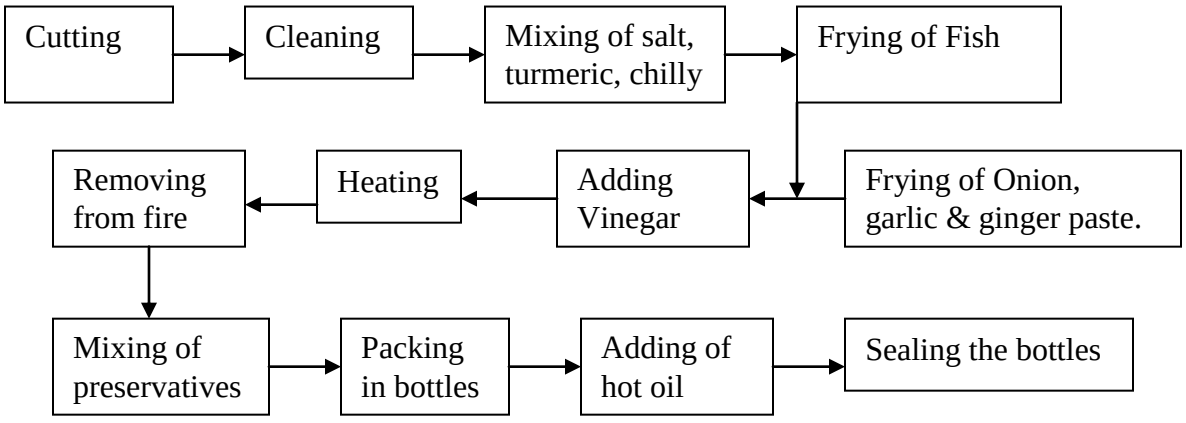
Market: Like vegetable pickles, fish pickle also has gained popularity during the recent past. The demand for these types of ready-to-serve fishery products is increasing day by day among the non-vegetarian population in our country. The Defence Purchased Department of Govt. of India also requires a sizeable quantity of processed fish products for supplying to the various departmental canteens and Officers Mess establishments. There is a good demand for fish/ prawns pickle in foreign countries.

Target: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum.

Quantity per annum	60 Tonnes
Value	Rs. 01,02,300/-

Process: Fish is cut into pieces and cleaned with potable water. The cleaned pieces are mixed with small quantity of salt, chilly powder, turmeric and kept for 2 hours. The pieces are fried in oil till these are brown in colour. Onion, garlic and ginger is ground well into a paste and fried till it is light brown in colour. Add vinegar and make the mixture soft. Add blanched quantity of salt, chilly powder and turmeric powder to the mixture and heat it till the whole vinegar is absorbed in the fish. After removing from the fire, add ground spices, cool and add required quantity of preservatives. They are then packed in bottles. More hot oil can be added to cover the pieces. The bottles are then sealed air tight.

Process Flow:



Raw Material:		**Amount(Rs.)**
1) Cleaned fish	6 tonnes	5,28,000/-
2) Refines oil	1 ton	71,500/-
3) Spices and condiments		22,000/-
4) Salt, vinegar		8,800/-
5) Bottles, 88 caps and labels etc.	1400 nos.	84,700/-
		TOTAL: 7,15,000/-

Power: The power is available from the state Electric supply corporation Grid. The annual consumption of power is estimated Rs. 9,900/-.

Water: The unit will need 2500 liters of clean and soft water. It is available from both ground water sources and public supply.

Fuel: Total amount required for fuel is estimated Rs. 3,850/-.

Manpower: manpower required by the unit are locally available. The annual needs and costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of persons	Annual Costs
1	Manager	1	Self
2	Skilled worker	2	Rs, 1,05,600/-
3.	Unskilled worker	2	Rs. 92,400/-
	Total:	5	Rs. 1,98,000/-

Financial Aspect:

1)	**Land & Building**	-	250 sq. mtrs.
2)	**Plant & Machinery**		
i)	Bottle washing machine		Rs. 16,800/-
ii)	Pilfer Proof Caping machine		Rs. 7,200/-
iii)	Frying equipments with gas stove		Rs. 14,400/-
iv)	Wet grinder/ pulverizing machine		Rs. 13,200/-
v)	Waste basins, storage vessels, ladles, knives etc.		Rs. 15,000/-
vi)	Working table with aluminium top, 2 no.		Rs. 6,000/-
vii)	Weighing machine		Rs. 6,000/-
viii)	Table balance 3 No.		Rs. 3,600/-
			Total: Rs. 82,200/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 8,250/-
b)	Water Installation		Rs. 11,000/-
c)	Furniture & Miscellaneous others		Rs. 22,000/-
4.	Provision for contingencies		Rs. 5,830/-
5.	Preliminary & pre-operative expenses		Rs. 15,400/-
			Total: Rs.1,44,680/-
6.	**Working Capital (P.M.)**		
a)	Raw Material		Rs.7,15,000/-
b)	Utilities		Rs. 5,060/-
c)	Salary & Wages		Rs. 16,500/-
d)	Other expenses		Rs. 18,700/-
			Total: **Rs. 7,55,260/-**
			Total Project Cost: Rs. 8,99,940/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	6,29,958/-	5,39,964/-
2.	Promoter's contribution	44,997/-	44,997/-
3.	Subsidy	2,24,985/-	3,14,979/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	6138	7161	8184	8184	8184
3.	**Annual Costs in Rs.**					
a)	Raw Materials	5148	6006	6864	6864	6864
b)	Utilities	36	43	49	49	49
c)	Selling expenses	497	580	663	663	663
	Variable Cost	**5681**	**6629**	**7576**	**7576**	**7576**
d)	Wages & Salaries	119	139	158	158	158
e)	Administrative expenses	135	157	180	180	180
f)	Depreciation	14	14	14	14	14
g)	Interest on Composite Loan	75	61	44	26	9
	Fixed & Semi Variable Cost	343	371	396	378	361
4.	**Total Cost**	**6024**	**7000**	**7972**	**7954**	**7937**
5.	Annual Profit	114	161	212	230	247
6.	Return on Investment	12.66	17.88	23.56	25.56	27.44
7.	Return on sales	1.85	2.25	2.59	2.81	3.02
8.	Annual contribution	457	-	-	-	-
9.	Break Even Point	45.03%				
10.	Cash accrual	128	175	226	244	261
11.	Debt Servicing Capacity	203	236	270	270	270
12.	Repayment of Composite Loan	102	119	137	136	136
13.	Debt Serviced	177	180	181	162	145
14.	Pay Back Period	1 year 2 months 1 days				
15.	Debt Service Coverage Ratio	1.17:1				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	45	-	-	-	-	-
2.	Increase in Term loan	130		-	-	-	-
3.	Subsidy	225	-	-	-	-	-
4.	Depreciation	-	14	14	14	14	14
5.	Profit before interests	-	189	222	256	256	256
A.	**TOTAL SOURCES**	900	**-**	**-**	**-**	**-**	**-**
6.	Increase in capital investment	145	-	-	-	-	-
7.	Increase in working capital	755	-	-	-	-	-
8.	Interest	-	75	61	44	26	9
9.	Repayment of Term Loan	-	102	119	137	136	136
B.	**TOTAL DISPOSALS**	**900**	**177**	**180**	**181**	**162**	**145**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**26**	**82**	**171**	**279**
D.	**NET SURPLUS**	**NIL**	**26**	**56**	**89**	**108**	**125**
E.	**CLOSING BALANCE**	**NIL**	**26**	**82**	**171**	**279**	**404**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	45	159	320	532	762
2.	Surplus from operation	114	161	212	230	247
	NET WORTH:	159	320	532	762	1009
3.	**Subsidy**	**225**	**225**	**225**	**225**	**225**
4.	Term loan outstanding	528	409	272	136	-
	TOTAL LIABILITIES	**912**	**954**	**1029**	**1123**	**1234**
1.	Gross Block	145	145	145	145	145
	Less Depreciation	14	28	42	56	70
	NET BLOCK	**131**	**117**	**103**	**89**	**75**
2.	Working capital	755	755	755	755	755
3.	Cash & Bank Balance	26	82	171	279	404
4.	**TOTAL ASSETS**	**912**	**954**	**1029**	**1123**	**1234**

Machinery Suppliers:

1) Gardens Corporation, 6 Doctors Lane, P.B. No. 299, New Delhi – 110001.
2) Raylons Metal Works, Kandivli Lane, Of, Andheri Kurla Road, Mumbai – 59.

ICE FACTORY

Introduction: Water when made into a solid mass by the application of cooling is known as ice. It is one of the essential medium for short-term preservation of highly perishable commodities such as marine foods, fresh meat and poultry products, dairy products and fruit and vegetables. These goods can be stored for about 2 to 3 days with ice. This fact facilitate the transportation of these foods to the consumer market. Ice is also used in the chemical, pharmaceutical, canning and freezing industries. Besides, it is being used for children and serving synthetic or fruit beverages, Jellies, etc.

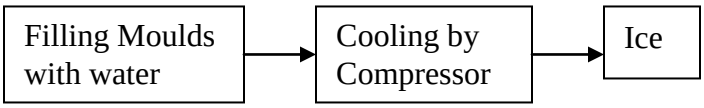
Market: Except for upper middle class and rich house-holds, who own refrigerators, there is hardly any household who may not be using ice during summer season in one form or the other in this country. It is also used by the tea-stalls, hoteliers, restaurants, clubs and industrial houses for storage and hilling purposes. In short, it is being used extensively in all urban areas, small towns or even villages especially during the summer season. Thus there is a good scope for at least one ice plant in a town having a population of 20 thousand which will also cater to the needs of the nearby areas.

Target: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum the annual installed capacity is estimated at

Quantity	-	200 M.T.
Value	-	Rs.15,84,000/-

Process: The ammonia or feron gas coming from the cooling coil at low temperature and pressure is compressed into liquid and is passed through the cooling coil fixed in the freezing tank. Due to the low boiling point of ammonia it changes its shape from liquid to vapour and is condensed in side the condenser. The tank contains brine of 30% salt, the cold brine is circulated by agitation to maintain uniform temperature through out the tank. The brine temperature is considerably reduced to as low as 15°F, this will take about 24 hours. After the brine reaches the operating temperature the ice cans are filled with water and are immersed inside the brine tank in such a way that the level of the brine should be below the level of the top of the ice can. Due to the high freezing point of water comparing to brine, the water in the can is solidified at 30°F to from ice. To get clear solidised a small quantity of air is passed into the cans. It takes about 18 hours to freeze a 50 kg. ice can. 24 hours to freeze 70 kg can and 48 hours to freeze 140 kg can.

Process Flow:



Raw Material (Annual): Water required for ice making is 10.5 kilo litres and for make up purposes another 4 kilo litres per day in full swing. After initial change of gas and salt, additional charge is necessary to compensate for losses.

(i) 2800 kilo litre water	-	Rs. 16,500.00
(ii) 4 Cylinders Ammonia gas of 60 kg.	-	Rs. 11,000.00
(iii) Salt 6 M.T.	-	Rs. 7,260.00
		Rs. 34,760.00

Power: The power is available from the state Electric supply corporation Grid. The consumption of power is estimated 85500 unit. Annual estimated cost Rs. 2,91,555/-.

Water: The unit will need 15 kilo liter water per day. Cost of drawing of water is shown in power cost

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled Worker	2	1,32,000/-
3.	Unskilled worker	2	92,400/-
	Total:	5	2,24,400/-

Financial Aspect :

1)	Land & Building :- 90 sq.ft.	-	2,41,000/-
(i)	Construction of tube well & overhead storage tank	-	1,20,000/-
2)	Plant & Machinery		
1.	6′x6′ Heavy Daty, double cylinder Reciprocating ammonia compressor	1	1,32,000/-
2.	40 Hp slipring induction meter suitable for Hperation on 400/440 3 phase, 50 Hiz, complete with starter and capacitor	1	1,26,000/-
3.	Ammonia oil separator 300 mm dia x 900 mm length complete With flanges, oil drain value	1	3,960/-
4.	2 sets of atmosphere type ammonia condensers each having 2 rows of 12 pipes, 6 m long and made of 50 m pipe, complete	2 sets	1,20,000/-
5.	Ammonia receiver	1	32,400/-
6.	Freezing tank	1	2,40,000/-
7.	refrigeration coil made of 32 mm black heavy pipe	1	78,000/-
8.	Brine agitator complete with 3 Hp induction meter	1	9,360/-
9.	Low pressure rotary air blower	1	12,000/-
10.	Condenser water circulating pump	1	9,240/-
11.	240 nos. seam welded ice cans 20cm x 40 cm x 80cm deep		1,92,000/-
12.	250 nos. air fittings consisting of tubes brackets, elbows, hoses And supply headers		15,000/-
13.	150 mm thick thermo foam insulation false ceiling		1,17,600/-
14.	Hand Hoist with crane ends, beam rail and can dump for Single can		18,000/-
15.	First charge of refrigerant & salt		12,000/-
16.	Hydrometer thermometer, tool kit etc.		3,600/-
		Total:	11,21,160/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification	Rs.	71,500/-
b)	Furniture & Miscellaneous others	Rs.	22,000/-
4.	Provision for contingencies	**Rs.**	55,770/-
5.	Preliminary & pre-operative expenses	**Rs.**	**1,49,270/-**

Total Fixed Cost Rs.12,70,430/-

6. **Working Capital (P.M.)**

a)	Raw Material	Rs. 8,690/-
b)	Utilities	Rs. 72,710/-
c)	Salary & Wages	Rs. 56,100/-
d)	Other expenses	Rs. 55,000/-

Total working capital: **Rs. 1,92,500/-**

Total Project Cost: Rs. 14,62,930/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	10,23,400/-	8,77,800/-
2.	Promoter's contribution	73,150/-	73,150/-
3.	Subsidy	3,65,750 /-	5,12,050/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	950	1109	1267	1267	1267
3.	**Annual Costs in Rs.**					
a)	Raw Materials	21	24	28	28	28
b)	Utilities	175	204	233	233	233
c)	Selling expenses	64	75	85	85	85
	Variable Cost	**260**	**303**	**346**	**346**	**346**
d)	Wages & Salaries	135	157	180	180	180
e)	Administrative expenses	132	154	176	176	176
f)	Depreciation	127	127	127	127	127
g)	Interest on Composite Loan	127	103	75	45	15
	Fixed & Semi Variable Cost	521	541	558	528	498
4.	**Total Cost**	**781**	**844**	**904**	**874**	**844**
5.	Annual Profit	169	265	363	393	423
6.	Return on Investment	11.55%	18.11%	24.81%	26.86%	28.91%
7.	Return on sales	17.78%	23.89%	28.65%	31.01%	33.38%
8.	Annual contribution	690	-	-	-	-
9.	Break Even Point	45.30%				
10.	Cash accrual	296	392	420	520	550
11.	Debt Servicing Capacity	423	495	565	565	565
12.	Repayment of Composite Loan	166	194	227	221	221
13.	Debt Serviced	293	297	297	266	236
14.	Pay Back Period	1 year 5 months 8 days				
15.	Debt Service Coverage Ratio	1.44:1				

Cash Flow Statement (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	73	-	-	-	-	-
2.	Increase in Term loan	1024	-	-	-	-	-
3.	Subsidy	366	-	-	-	-	-
4.	Depreciation	-	127	127	127	127	127
5.	Profit before interests	-	296	368	438	438	438
A.	**TOTAL SOURCES**	**1463**	**423**	**495**	**565**	**565**	**565**
6.	Increase in capital investment	**1270**	-	-	-	-	-
7.	Increase in working capital	193	-	-	-	-	-
8.	Interest	-	127	103	75	45	15
9.	Repayment of Term Loan	-	166	194	222	221	221
B.	**TOTAL DISPOSALS**	**1463**	**293**	**297**	**297**	**266**	**236**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**130**	**328**	**596**	**895**
D.	**NET SURPLUS**	**NIL**	**130**	**198**	**268**	**299**	**329**
E.	**CLOSING BALANCE**	**NIL**	**130**	**328**	**596**	**895**	**1224**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousnad as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	73	242	507	870	1263
2.	Surplus from operation	169	265	363	393	423
	NET WORTH:	242	507	870	1263	1686
3.	**Subsidy**	**366**	**366**	**366**	**366**	**366**
4.	Term loan outstanding	858	664	442	221	-
	TOTAL LIABILITIES	**1466**	**1537**	**1678**	**1850**	**2052**
1.	Gross Block	1270	1270	1270	1270	1270
	Less Depreciation	127	254	381	556	683
	NET BLOCK	**1143**	**1016**	**889**	**762**	**635**
2.	Working capital	193	193	193	193	193
3.	Cash & Bank Balance	**130**	**328**	**596**	**895**	**1224**
4.	**TOTAL ASSETS**	**1466**	**1537**	**1678**	**1850**	**2052**

Machinery Suppliers:

1) HAV 'N' ICE, 19 Ballygunge Circular Road, Kolkata-19
2) ICE CASTLE, Lansdowne Court, 5 B, Sarat Bose Road, Kolkata-20.

CATTLE & POULTRY FEED

Introduction : With the advent of Dairy Development Board, there has been a substantial growth of cattle farms , poultry ,piggery farms all over the country. By sustained efforts of agricultural and veterinary departments to boost the production of milk, a large number of firms for breeding milch cattle have been developed of scientific lines in the country. To augment the development of dairy, poultry farming industry, a need has also arisen to provide nutritious and balanced feed for this industry by encouraging establishment of cattle poultry feed plants in the area where the industry is concentrated in a developed way. Poultry feed pulses constitute a major source of protein in India diet. The present per capita availability of pulses hardly meets the protein requirement of the population. The alternative protein sources such as meat, fish, poultry are to be developed in a big way to overcome the protein deficiency. So a well balanced poultry feed must be made available to the birds to raise their egg laying potential.

Market Potential: Under operation flood programme, the milk production in the country is expected to increase 103.7 million liters by 1985 and will raise the per capita daily availability of milk to 144 gram in 1985 and 180 gram in 1988. In view of the intensive cattle development programmes which have already been taken on hand by many state governments, the success of these development projects depends largely on the availability of the well balanced cattle feed, which envisages the future scope for development of this industry on decentralized basis in the country.

Production Targets / Suggested Capacity (P.a): The economic capacity per annum by working one shift for 300 working days per annum and the unit to be production capacity 2500 M.T and value will be Rs.35,64,000/-

Process of Manufacture: The process of manufacture of cattle feed and poultry feed is relatively simple and consists of reduction of size and blending of the various ingredients as per the formula. The selected ingredients are passed through a disintegrator or pulverize to reduce the size of the particles to the required mesh size. The different powdered raw materials are taken by weight as per the formula into a ribbon blender for uniform mixing. The vitamins minerals mixes and molasses are added at this stage. When uniformly mixed, it is extruded to get in pallet form or the finished product thus obtained is taken out as such and is packed in gunny bags. The formulation of cattle poultry feed as under :

Cattle feed: The formulation of cattle feed largely depends upon the various of cattle, milk yield, dairy ration etc. It is also important that the availability of the basis raw materials and their prevailing prices must be kept in mind while formulating the cattle feed. Taking the above factors into careful consideration the following formulation has been suggested for the cattle feed manufacture.

Sl.No	Ingredients	Percentage
1	Wheat bran	10
2	Ground nut extraction (or cake)	30
3	Rice bran extraction (or cotton seed bran)	25
4	Maize	10
5	Damaged Wheat	10
6	Cotton seed	2
7	Molasses	10
8	Salt	1
9	Calcium carbonate	0.5
10	Mineral mixture & Vitamin mix	1.5

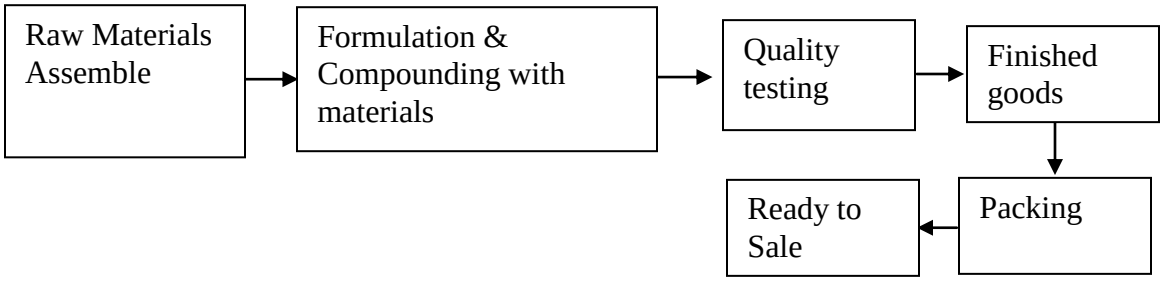
Poultry Feed : In general the following five types of mashes are available in the market .

1.Layer mash 2.Grower mash 3 Chick mash, 4 Boiler starter mash 5 Boiler finisher mash. The different types of mashes vary in their nutrient content and are selected and used taking into consideration the age of the bird and the purpose for which the bird is meant. It is, therefore, necessary that the composition on the type of bird. Taking into consideration the nutritional requirements of the birds, and the availability of the basis raw materials the following formula have been suggested.

Slno	Ingredients	Percentage		
		Ghick Mash	Grower mash	Layer mash
1	Maize	32	30	30
2	Rice polish	11	10	10
3	Rice germ	000	11	10
4	Damaged wheat	15	20	15
5	Molosses	5	5	5
6	Ground nut	17	11	14
7	Alfalfa meal	12	2	00
8	Fish Metal	10	5	6
9	Shell grit	00	00	4
10	Sunflower cake	5	3	3
11	Mineral mixture	3	3	3
12	Vitamin mix	QS	QS	QS

The vitamin usually consists of vitamin A, B, b and K and is added 10g of the mix per quintal of the feed.

Process Flow Chart :



Raw Materials: The main raw materials required for manufacture of cattle & poultry feed are Groundnut Cake, Wheat bran, Rice Polish, Maize, Damaged Wheat, cottin seed, Molasses, Salt, Mineral mix, calcium carbonate, Vitamin mix, Gunny bags, Alfalfa meal, fish meal, sunflower cake etc, The above Raw materials are to be sourced mainly from the open market at present availability and supply of the raw materials is not problem. The requirement and costs of raw materials will be **Rs.2,20,000/-** (Inclusive of all taxes and freights)

Utilities : The unit will require a total connected load of 300 KWH and Water requirement is about 500KL per annum.

Water: Requirement of water mainly for manufacturing of products etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will need to provide employment to the following 7 persons and all man power is available from local area.

1.	Manager cum Supervisor	Self	Self
2.	Skilled	4nos	Rs.22,000/-
3.	Office Boy/Peon	1 no	Rs. 2,200/-
4.	Sales Man	1no	Rs. 3,300/-
		Total	**Rs.27,500/-**

CAPITAL COST ESTIMATE:

Land & Building: 160 Sq. Mtrs. **On Rent.**

Plant & Machinery :

1.	Disintegrator with motor, starter, pulley, V belt, stand etc 1M.Ton capacity		1,87,200**/-**
2.	Ribbon blender 1 MT capacity with motor, starter, reduction gear, gear box		
3.	Gratory sifter with motor starter extra sieve etc		
4.	Platform weighting machine		
5.	Gunny bag sealing machine		
6.	Miscellaneous equipment		
		Total	**Rs.1,87,200/-**

Miscellaneous Fixed Assets:

1.	Chair & Working Table		Rs. 22,500/-
2.	Fan & Lighting and wearing		Rs. 21,500/-
3.	Interior decoration		Rs.38,500/-
		Total	**Rs.82,500/-**

Preliminary & Preoperative Exp.: Rs. 4,950/-

Total Fixed Capital : Rs.2,74,650/-

Working Capital (P.m)

1.	Salary & Wages	Rs. 27,500/-
2.	Administrative expenses	Rs. 13,666/-
3.	Selling expenses	Rs. 3,300/-
4.	Raw Materials	Rs.2,20,000/-
5.	Utilities	Rs. 3,850/-
	Total	**Rs.2,68,316/-**

Total Cost of the Project : Rs.5,42,966/-

Means of Finance :

			Urban		Rural
a.	**Composite loan under PMEGP**	**70%**	**Rs.3,80,076/-**	**60%**	**Rs.3,25,780/-**
b.	**Subsidy**	**25%**	**Rs.1,35,742/-**	**35%**	**Rs.1,90,038/-**
c.	**Margin Money**	**5%**	**Rs. 27,148/-**	**5%**	**Rs. 27,148/-**
		Total	**Rs.5,42,966/-**		**Rs.5,42,966/-**
d. Debt Equity Ratio			**2.33:1**		**1.5:1**

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60**	**70**	**80**	**80**	**80**
2.	**Annual Sales Rs.**	**2,138**	**2,495**	**2,851**	**2,851**	**2,851**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	1,58	1,848	2,112	2,112	2,112
(b)	Utilities	27	32	37	37	37
(c)	Selling expenses	24	28	31	31	31
4	**Variable Cost**	**1,635**	**1,908**	**2,180**	**2,180**	**2,180**
(a)	Wages & Salaries	198	231	264	264	264
(b)	Administrative expenses	98	115	131	131	131
(c)	Depreciation	27	27	27	27	27
(d)	Interest on Composite Loan	44	36	26	16	5
5	**Fixed & Semi Variable Cost**	**367**	**409**	**448**	**438**	**427**
	Total Cost	**2002**	**2317**	**2628**	**2618**	**2607**
7.	**Annual profit**	**136**	**178**	**223**	**233**	**244**
8	Return on investment	**25.04**	**32.78**	**41.06**	**42.90**	**44.93**
9.	Return on sales	**6.36**	**7.13**	**7.82**	**8.17**	**8.55**
10.	Annual Contribution	**503**				
11	Break Even Point as percent of capacity	**43.77**				
12	Cash accrual	163	205	250	260	271
13.	**Debt servicing capacity**	**207**	**241**	**276**	**276**	**276**
14	Repayment of Composite Loan	62	72	82	82	82
15.	**Debt serviced**	**106**	**108**	**108**	**98**	**87**
16	**Pay Back Period**	**1 years 6 month 10 days**				
17.	**Debt Service Coverage Ratio (DSCR)**	**1.53:1**				

Cash Flow Statement (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			60%	70%	80%	80%	80%
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	27	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	380	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	136	NIL	NIL	NIL	NIL	NIL
4.	Depreciation		27	27	27	27	27
5.	Profit before interests		180	214	249	249	249
A.	**TOTAL SOURCES**	543	**207**	**241**	**276**	**276**	**276**
6.	Increase in capital investment	**275**	NIL	NIL	NIL	NIL	NIL

7.	Increase in working capital	268	NIL	NIL	NIL	NIL	NIL
8.	Interests	NIL	44	36	26	16	5
9.	Repayment of loan	NIL	62	72	82	82	82
B.	**TOTAL DISPOSALS**	**543**	**106**	**108**	**108**	**98**	**87**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**101**	**234**	**402**	**580**
D.	**NET SURPLUS**	**NIL**	**101**	**133**	**168**	**178**	**189**
E.	**CLOSING BALANCE**	**NIL**	**101**	**234**	**402**	**580**	**769**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	27	163	341	564	797
2.	Surplus from operations	**136**	**178**	**223**	**233**	**244**
	NET WORTH:	**163**	**341**	**564**	**797**	**1041**
3.	Composite loan	318	246	164	82	nil
4.	Subsidy	136	136	136	136	136
A.	**TOTAL LIABILITIES**	**617**	**723**	**864**	**1015**	**1177**
1.	Gross Block	275	275	275	275	275
	Less Depreciation	27	54	81	108	135
2	**NET BLOCK**	**248**	**221**	**194**	**167**	**140**
3	Current Assets	268	268	268	268	268
4.	Cash & Bank Balance	**101**	**234**	**402**	**580**	**769**
B.	**TOTAL ASSETS**	**617**	**723**	**864**	**1015**	**1177**

Suppliers of Machinery and Equipments:

1. Bhubaneswari & Co, Old Trunk Road, Madras, 600043.
2. Pioneer Engineering Works, 57, Apollo St. Bombay 400001.

BUILDING/ CONCRETE ITEMS INDUSTRIES

GYPSUM PLASTER BOARD

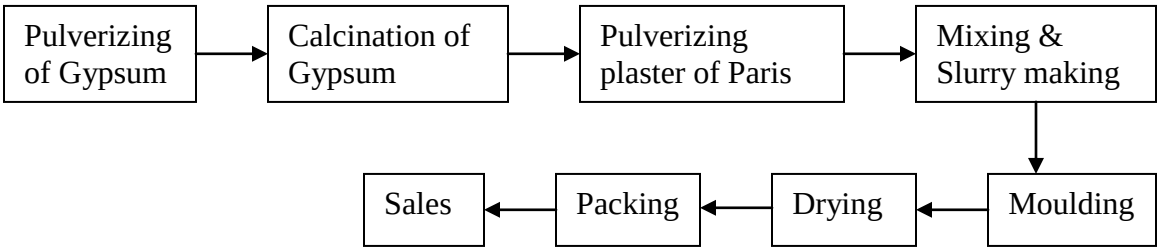
Introduction: Gypsum Plaster Board as per Bureau of Indian Standard Specification Number IS: 2095-1964 are used in False Ceilings, Light partition walls etc for better appearance & thermal insulation properties. Such Boards use gypsum with paddy husk, Jute sticks & Fibre, coir etc. Gypsum Boards are preferred in indoor uses as wood & plywood have become costlier and as timber destruction can be reduced by using them. thus it is an environment friendly product.

Market: With rapid increase in real Estate business and Hassing activities the demand for Gypsum Boards have increased. It is still considered as low cost substitute for plywood, hardboard and wooden panel Boards, all of which cause depletion of forest resources. Gypsum Boards also use paddy Husk, straw, jute stick, etc. waste materials. Gypsum Boards are also preferred interior decoration item for commercial establishments. With high priority attached to housing and increased flow of finance towards low-cost houses demand for Gypsum Plaster Boards have increased.

Installed Capacity: The proposed unit shall operate for single shift of 8 hours per day for 30 working days per year. It will have an annual installed capacity to produce 300000 kilograms of Gypsum plaster Boards of assorted sizes.

Process of Manufacture: Gypsum is Disc Pulverized after drying. These are calcined in Rotary Drum Calciner at 140°C to 170°C for about two hours. After cooling the plaster of paris is pulverized again to a mesh of 150. the fine plaster is mixed with colouring material and then made into a slurry by adding water. The slurry is poured into moulds where reinforcement materials are placed. The upper surface is smoothened by wooden reaper or straight wooden planks and excess material is recycled by mixing in slurry. Properly set boards are removed from moulds and placed on wooden racks for drying in shade for 3 to 4 days. After drying Boards are packed in Corrugated Cardboard sheets and Boxes for sales.

Process Flow:



Raw Materials: Gypsum is the principal raw-material of the unit. It is available cheaper from Bhutan, Calcutta Mineral Supply Agency Pvt. Ltd; 31, Jackson Lane, Kolkata-700001 is also supplying Gypsum. Jute fibre/ sticks, staw, etc. reinforcement materials are locally available. Corrugated sheets and Boxes are available from paper packaging Industries, 7/1, raj Krishna Lane, Kolkata-6 besides others. The requirement at the installed capacity and annual costs of raw materials are shown below:

Sl.No.	Raw Materials	Annual Cost
1.	Gypsum	12,00,000/-
2.	Reinforcement	3,50,000/-
3.	Packing Materials	18,00,000/-
4.	Consumables for mould Lubricating	5,00,000/-
		38,50,000/-

Power: At 200/200 volts, 50 Hz, AC Single phase & 3 wire. The unit will need a total connected Load of 5 KW. The annual consumption of power is estimated at 11476 KWHrs costing Rs. 20,657/-.

Water: The unit will need 500 Liters of water cost of drawing of water is shown in power cost.

Manpower: Manpower requirement and costs shown below are locally available:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	78,000/-
2.	Administrative & Sales Staff	3	84,000/-
3.	Skilled Worker	4	60,000/-
4.	Unskilled Worker	4	60,000/-
	Total:	12	2,82,000/-

CAPITAL COST ESTIMATE:

1.	Land & Building : Covered Area 186 sq. Mtrs:		On rent
2.	**Plant & Machinery**:		
a)	45 Cm size Altrition type Disc Pulveriser with 7 H.P. Motor		Rs. 95,000/-
b)	2.5 M long 2M Dia Cylindrical Potary Drum Calciner with coal fired roasting oven		Rs. 1,00,000/-
c)	Platform type weighing balance of 100 kg capacity		Rs. 17,500/-
d)	6 Nos. of 4′ x 6′ wooden Tables with polished Marble Top		Rs. 30,000/-
e)	Moulds Hand Tools, slurry making Tank, etc.		Rs. 15,000/-
f)	Testing equipments		Rs. 12,500/-
		Total	Rs.2,70,000/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 50,000/-
b)	Water Installation		Rs. 10,000/-
c)	Furniture & Miscellaneous others		Rs. 40,000/-
			Rs. **1,00,000/-**
4.	Provision for contingencies		Rs. **20,000/-**
5.	Preliminary & pre-operative expenses		**Rs. 20,000/-**
		Total Fixed Capital:	**Rs. 4,10,000/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		3,20,833/-
b)	Power		1,721/-
c)	Salary & Wages		23,500/-
d)	Miscellaneous expenses		3,946/-
		Total::	**Rs. 3,50,000/-**
		Total Project Cost:	**Rs. 7,60,000/-**

Means of Finance:		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs.5,32,000/-	Rs. 4,56,000/-
b.	Subsidy	Rs.1,90,000/-	Rs. 2,66,000/-
c.	Promoters contribution	Rs. 38,000/-	Rs. 38,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,456**	**4,032**	**4,608**	**4,608**	**4,608**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	2,310	2,695	3,080	3,080	3,080
(b)	Power	12	14	17	17	17
(c)	Wages & Salaries	282	289	296	304	311
(d)	Repair & Maintenance	16	16	16	16	16
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	518	605	691	691	691
(g)	Depreciation	40	40	40	40	40
(h)	Interest	61	49	36	22	7
	Total:	**3,314**	**3,787**	**4,259**	**4,257**	**4,253**
	Total Variable Cost	2,840	3,314	3,788	3,788	3,788
4.	**Annual profit**	**142**	**245**	**349**	**351**	**355**
5.	Return on investment	18.68%	32.24%	45.92%	46.18%	46.71%
6.	Return on sales	4.11%	6.08%	7.57%	7.62%	7.70%
7.	Cash accrual	**182**	**285**	**389**	**391**	**395**
8.	Annual Contribution	**616**	**-**	**-**	**-**	**-**
9.	Break Even Point in percent	**46.17%**	**-**	**-**	**-**	**-**
10.	**Debt servicing capacity**	243	334	425	413	402
11.	Repayment of Loan	**87**	**100**	**115**	**115**	**115**
12.	**Debt serviced**	148	149	151	137	122
13.	**Pay Back Period**	**2 years 2 months 1 day**				
14.	**D S C Ratio (DSCR)**	**2.57:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	38	-	-	-	-	-
2.	Increase in subsidy	190	-	-	-	-	-
3	Increase in loan	532	-	-	-	-	-
4.	Depreciation	-	40	40	40	40	40
5.	Profit before interests	-	203	294	385	373	362
A.	**TOTAL SOURCES**	**760**	**243**	**334**	**425**	**413**	**402**
6.	Increase in capital investment	**410**	-	-	-	-	-
7.	Increase in Current Assets	350	-	-	-	-	-
8.	Interests	-	61	49	36	22	7
9.	Repayment of loan	-	87	100	115	115	115
B.	**TOTAL DISPOSALS**	**760**	**148**	**149**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**95**	**280**	**554**	**830**
D.	**NET SURPLUS**	**-**	**95**	**185**	**274**	**276**	**280**
E.	**CLOSING BALANCE**	**-**	**95**	**280**	**554**	**830**	**1,110**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	38	180	425	774	1,125
2.	Surplus from operations	**142**	**245**	**349**	**351**	**355**
	NET WORTH:	**180**	**425**	**774**	**1,125**	**1,480**
3.	Subsidy	190	190	190	190	190
4.	Loan Account	445	345	230	115	-
A.	**TOTAL LIABILITIES**	**815**	**960**	**1,194**	**1,430**	**1,670**
1.	Gross Fixed Assets	410	410	410	410	410
	Less Depreciation	40	80	120	160	200
	NET BLOCK	**370**	**330**	**290**	**250**	**210**
2	Closing stocks	350	350	350	350	350
3.	Cash & Bank Balance	**95**	**280**	**554**	**830**	**1,110**
B.	**TOTAL ASSETS**	**815**	**960**	**1,194**	**1,430**	**1,670**

Suppliers of Maachinery:

1. Amic Industries Pvt. Ltd; 10, B.T. Road, Belgharia, Kolkata-700056.
2. Chemical Plant & Equipment Ltd, 7, Lower Chitpur Road, Kolkata.
3. Kusum Engineering Co, 25, Swallp Lane, Kolkata.

JALLI, GRILLS & ALLIED PRODUCTS

Introduction: Cement Jallis are mainly used for ventilators of buildings and also for decoration of house. Cemented water filter is now being used in a large scale for preserving drinking water. With the growing urban & rural population these products have good demand in the local market of Tripura.

Market/Demand: The demand of grill, jallis, carbon and water filter will grow as the change in living status with economic prosperity as taking place on modern age and more building are being constructed. In Tripura cement-jallis and grill has a known for their ,… for art and a good taste for artistically designed objects. In case of cemented water filter modern people are more conscious about their health & hygiene.

Now-a-days almost every house should have a water filter for drinking of bacteria free pure drinking water. Considering the cost of steel or aluminum water filter it is not possible to have the same for a lower middle class family. But at the same time it is not difficult to purchase a cemented water filter which costs quite reasonably. Thus if we asses the requirement these items then we find huge demand of these products in the local market of Tripura.

Manufacturing Process: Generally Iron or wooden moulds are used for the manufacture of pre-cost products, depending upon their sizes and specifications. The moulds are lubricated before putting mild steel reinforcement to allow easy removed of the products. The products are allowed from the moulds and immerges in carryings thanks for at lease seven days. The products are then taken act and kept in water for at least another fourteen days before they are marketed.

Land & Building: A built up area/working shed approx. 1000 sq. mtr. on rented Basis @ Rs. 5000/- per month.

Raw Materials: The raw materials required for the unit are mainly cement, sand, rode, M.S reinforcement stone etc. Raw materials are to be sourced mainly from the open market . The cost of the raw materials required per month is as under :

Slno	Descriptions	Amount (Rs.)
1.	Cement	Rs. 35,000/-
2.	Sand course & fine	Rs. 35,000/-
3.	M.S Reinforcement	Rs. 15,000/-
4.	Misc. (Stone, Oil, etc)	Rs. 25,000/-
5.	Bricks Chips	Rs. 25,000/-
	Total	Rs.1,35,000/-

Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department and approximately it will be cost Rs.14,400/- per annum.

Water: Requirement of water mainly for manufacturing of products etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will provide employment to 6 persons including staff for factory, administration and sales, etc. and all man power to be arranged from local area. Requirement and monthly costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled Worker	2	96,000/-
3.	Unskilled Worker	1	36,000/-
	Total	4	1,32,000/-

CAPITAL COST ESTIMATE:

A. Land & Building with a covered area of 60Sq. Mtrs. **On rent**

B. Plant & Machinery

Wooden Moulds for ventilators		40,000/-
(Various size) , Sieves & Cores etc	LS	25,000/-
Mould plates, Shovels, curing tank etc	LS	15,000/-
		Total : 80,000/-

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 10,000/-
b)	Furniture & Miscellaneous others	Rs. 10,500/-
4.	Provision for contingencies	Rs. 4,000/-
5.	Preliminary & pre-operative expenses	Rs. 4,500/-
	Total Fixed Investment	**Rs. 1,09,000/-**

6.	**Working Capital (P.M.)**	
a)	Raw Material	Rs. 1,35,000/-
b)	Utilities	Rs. 1,200/-
c)	Salary & Wages	Rs. 11,000/-
d)	Other expenses	Rs. 15,000/-
	Total:	**Rs. 1,62,200/-**
	Total working capital for 3 months :	**Rs. 4,86,600/-**
	Total Project Cost :	**Rs. 5,95,600/-**

Means of Finance:		**Urban**	**Rural**
1.	Composite loan under PMEGP	4,16,920/-	3,57,360/-
2.	Promoter's contribution	29,780/-	29,780/-
3.	Subsidy	1,48,900/-	2,08,460/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized in percent	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	9,72,000	11,34,000	12,96,000	12,96,000	12,96,000
b)	Utilities	8,640	10,080	11,520	11,520	11,520
c)	Selling expenses	1,10,397	1,28,796	1,47,195	1,47,195	1,47,195
	Variable Cost	**1,09,037**	**12,72,876**	**14,54,715**	**14,54,715**	**14,54,715**
d)	Wages & Salaries	79,200	92,400	1,05,600	1,05,600	1,05,600
e)	Administrative expenses	1,08,000	1,26,000	1,44,000	1,44,000	1,44,000
f)	Depreciation	10,900	10,900	10,900	10,900	10,900
g)	Interest on Composite Loan	47,889	38,734	26,762	15,494	4,225
	Fixed & Semi Variable Cost	2,45,989	2,68,034	2,87,262	2,75,994	2,64,725
4.	**Total Cost**	**13,37,026**	**15,40,910**	**17,41,977**	**17,30,709**	**17,19,440**
5.	Annual Profit	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
6.	Return on Investment	17.28%	23.35%	29.88%	31.78%	33.67%
7.	Return on sales	4.29%	5.79%	7.41%	7.88%	8.35%
8.	Annual contribution	3,48,963				
9.	Break Even Point	42.29%				
10.	Cash accrual	1,13,874	1,49,990	1,88,923	2,00,191	2,11,460
11.	Debt Servicing Capacity	1,61,763	1,88,724	2,15,685	2,15,685	2,15,685
12.	Repayment of Composite Loan	67,609	78,877	90,145	90,145	90,144
13.	Debt Serviced	1,15,498	1,17,611	1,16,907	1,05,639	94,369
14.	Pay Back Period	1 year 4 months 24 days				
15.	Debt Service Coverage Ratio	1.40:1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-ope-rative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	29,780	-	-	-	-	-
2.	Increase in Term loan	4,16,920	4,86,600	-	-	-	-
3.	Subsidy	1,48,900	-	-	-	-	-
4.	Depreciation	-	10,900				
5.	Profit before interests	-	1,50,863	1,77,824	2,04,785	2,04,785	2,04,785
A.	**TOTAL SOURCES**	**5,95,600**	**6,48,363**	**1,88,724**	**2,15,685**	**2,15,685**	**2,15,685**
6.	Increase in capital investment	**5,95,600**	-	-	-	-	-
7.	Increase in working capital	-	4,86,600	-	-	-	-
8.	Interest	-	47,889	38,734	26,762	15,494	4,225
9.	Repayment of Term Loan	-	67,609	78,877	90,145	90,145	90,144
B.	**TOTAL DISPOSALS**	**5,95,600**	**6,02,098**	**1,17,611**	**1,16,907**	**1,05,639**	**94,369**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**
D.	**NET SURPLUS**	**NIL**	**46,265**	**71,113**	**98,778**	**1,10,046**	**1,21,316**
E.	**CLOSING BALANCE**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**

Projected Balance sheet: (Rs. in Thousands)

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	29,780	1,32,754	2,71,844	4,49,867	6,39,158
2.	Surplus from operation	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
	NET WORTH:	1,32,754	2,71,844	4,49,867	6,39,158	8,39,718
3.	**Subsidy**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**
4.	Term loan outstanding	3,49,311	2,70,434	1,80,289	90,144	-
	TOTAL LIABILITIES	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**
1.	Gross Block	1,09,000	1,09,000	1,09,000	1,09,000	1,09,000
	Less Depreciation	10,900	21,800	32,700	43,600	54,500
	NET BLOCK	**98,100**	**87,200**	**76,300**	**65,400**	**54,500**
2.	Working capital	4,86,600	4,86,600	4,86,600	4,86,600	4,86,600
3.	Cash & Bank Balance	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**
	TOTAL ASSETS	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**

Supplies of Machinery & Equipments :

1. M/S V.K Enterprises, Balaji Nagar, Manewada Road,, Nagpur-440027,
2. M/s Huma Traders, Opp Shajenabad Police Station, Bhopal

CEMENT FILTER, CARBON

Introduction: Cemented water filter is now being used in a large scale for preserving drinking water. With the growing urban & rural population these products have good demand in the local market of Tripura. Carbon block is the workhorse of filtration technologies, performing a wider range of filtration tasks than other products. Its sintered porous structure made of powdered carbon, thermoplastic binders and other additives, allows for the removal and retention of both sediment and organic chemicals in just one filter. Carbon block offers the opportunity for very fine sediment filtration and absolute control and filtration of very fine particles to less than 1 micron in size. At the same time, carbon block can be formulated to remove any number of chemical contaminants that may be present in the water. Specifically, carbon block can reduce

- Chlorine,
- Bad taste and odor,
- Chloramines,
- Fine sediment,
- *Giardia* and *Cryptosporidium* cysts,
- Organic chemicals such as pesticides and solvents, and
- Heavy metals such as lead and mercury.

Water is forced through the porous structure of the densely compacted carbon block, and filtration is accomplished by mechanical separation of sediment and adsorption of chemical contaminants by the activated carbon or other additives.

Market: Carbon block works in a wide variety of applications including point-of-use (POU) and whole-house residential water filtration, commercial water treatment, pre- and post-filter reverse osmosis (RO) and industrial processes. In many applications, carbon block offers an additional advantage in that few, if any, fines are released because they are bound in the composite structure. Carbon block works well in almost any situation where activated carbon products are utilized. Now-a-days almost every house should have a water filter for drinking of bacteria free pure drinking water. Considering the cost of steel or aluminum water filter it is not possible to have the same for a lower middle class family. But at the same time it is not difficult to purchase a cemented water filter which costs quite reasonably. Thus if we asses the requirement these items then we find huge demand of these products in the local market of Tripura.

Manufacturing Process of Carbon Block: The carbon block manufacturing process starts with the approval of incoming materials. A good manufacturing process should include extractable testing for approval of all materials for use in drinking water applications and testing for each material's critical performance characteristics prior to producing the carbon block.

Next, materials are blended prior to molding or extrusion. Thorough blending is important to make sure a homogeneous mixture is introduced into the molding or extrusion process. In a typical molding process, the material is introduced into fixed molds, compressed and heated to form the sintered block. After cooling, the carbon block is removed from the mold, trimmed to size if required, and packaged or assembled into filter cartridges.

Essentially, extrusion utilizes the same mixtures as molding but relies on a continuous forming process in which the material is conveyed by a screw-type auger and either heated in transit within the screw or heated in an external die. Several patented processes currently are in use to manufacture extruded products. After heating and forming, the material is cooled in a die and exits the process as one continuous cylinder of material. The extruded product then is cut to length and packaged or assembled into filter cartridges.

Both the molding and extrusion process produce carbon block of similar characteristics and the basic processes are similar in nature with heating, compression to a specific density and cooling involved to produce the finished product. Typical limitations involved in the manufacturing of carbon block are related to the production equipment available to produce a given size of block. Molds and extrusion die sizes are fixed, so utilizing existing molds and dies when possible helps reduce capital expenditure and lead time to obtain the finished product. Block typically is available in sizes from 1 to 4.25 inches in diameter and 2.5 to 40 inches in length.

In summary, carbon block is an effective and versatile filtration method for a wide range of applications. Additionally, a host of products are available from carbon block manufacturers, and blocks can be custom molded or extruded to provide the sediment and chemical removal needs of the application.

Raw Materials : The raw materials required for the unit are mainly cement, sand, rode, M.S reinforcement stone etc. The cost of the raw materials required per month is as under :

Slno	**Descriptions**	**Amount (Rs.)**
1.	Cement	Rs. 35,000/-
2.	Sand course & fine	Rs. 35,000/-
3.	M.S Reinforcement, carbon block filter	Rs. 20,000/-
4.	Misc. (Water purifier cartridge, Stone, Oil, etc)	Rs. 20,000/-
5.	Bricks Chieps	Rs. 25,000/-
	Total	Rs.1,35,000/-

Raw materials are to be sourced mainly from the open market .At present availability and supply of the raw materials is not problem e.g Rod, Cement etc. be sourced from open local markets.

Power : Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department and approximately it will be cost Rs.13,800/- per annum.

Water : Requirement of water mainly for manufacturing of products etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	**Category of Manpower**	**No. of Persons**	**Annual Cost**
1.	Manager	1	Self
2.	Skilled Worker	2	96,000/-
3.	Unskilled Worker	1	36,000/-
	Total	4	1,32,000/-

Financial Aspect of the unit:

1) Land & Building **Rented**

2) Plant & Machinery:

Sl.No.	Details	No.	Cost
1.	Hand operated sole cutting machine	1	12,000/-
2.	Hole making machine	1	12,000/-
3.	Finishing Machine	1	13,500/-
4.	Dies of different colours and designs	25	20,000/-
5.	Hand operated tools & equipments		7,500/-
		Total:	65,000/-

3) **Miscellaneous Fixed Asset**

a) Electrification Rs. 5,000/-

b) Furniture & Miscellaneous others Rs. 24,500/-

4. Provision for contingencies **Rs. 4,000/-**

5. Preliminary & pre-operative expenses **Rs. 10,500/-**

Total Fixed Investment Rs. 1,09,000/-

6. **Working Capital (P.M.)**

a) Raw Material Rs. 1,35,000/-

b) Utilities Rs. 1,200/-

c) Salary & Wages Rs. 11,000/-

d) Other expenses Rs. 15,000/-

Total: **Rs. 1,62,200/-**

Total working capital for 3 months: Rs. 4,86,600/-

Total Project Cost: Rs. 5,95,600/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	4,16,920/-	3,57,360/-
2.	Promoter's contribution	29,780/-	29,780/-
3.	Subsidy	1,48,900/-	2,08,460/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	9,72,000	11,34,000	12,96,000	12,96,000	12,96,000
b)	Utilities	8,640	10,080	11,520	11,520	11,520
c)	Selling expenses	1,10,397	1,28,796	1,47,195	1,47,195	1,47,195
	Variable Cost	**1,09,037**	**12,72,876**	**14,54,715**	**14,54,715**	**14,54,715**
d)	Wages & Salaries	79,200	92,400	1,05,600	1,05,600	1,05,600
e)	Administrative expenses	1,08,000	1,26,000	1,44,000	1,44,000	1,44,000

f)	Depreciation	10,900	10,900	10,900	10,900	10,900
g)	Interest on Composite Loan	47,889	38,734	26,762	15,494	4,225
	Fixed & Semi Variable Cost	2,45,989	2,68,034	2,87,262	2,75,994	2,64,725
4.	**Total Cost**	**13,37,026**	**15,40,910**	**17,41,977**	**17,30,709**	**17,19,440**
5.	Annual Profit	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
6.	Return on Investment	17.28%	23.35%	29.88%	31.78%	33.67%
7.	Return on sales	4.29%	5.79%	7.41%	7.88%	8.35%
8.	Annual contribution	3,48,963	-	-	-	-
9.	Break Even Point	42.29%				
10.	Cash accrual	1,13,874	1,49,990	1,88,923	2,00,191	2,11,460
11.	Debt Servicing Capacity	1,61,763	1,88,724	2,15,685	2,15,685	2,15,685
12.	Repayment of Composite Loan	67,609	78,877	90,145	90,145	90,144
13.	Debt Serviced	1,15,498	1,17,611	1,16,907	1,05,639	94,369
14.	Pay Back Period	1 year 4 months 24 days				
15.	Debt Service Coverage Ratio	1.40:1				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	**Description**	**Pre-operative Period**	**Operating Years**				
			First	**Second**	**Third**	**Fourth**	**Fifth**
1.	Increase in Promoter's contribution	29,780	-	-	-	-	-
2.	Increase in Term loan	4,16,920	4,86,600	-	-	-	-
3.	Subsidy	1,48,900	-	-	-	-	-
4.	Depreciation	-	10,900				
5.	Profit before interests	-	1,50,863	1,77,824	2,04,785	2,04,785	2,04,785
A.	**TOTAL SOURCES**	**5,95,600**	**6,48,363**	**1,88,724**	**2,15,685**	**2,15,685**	**2,15,685**
6.	Increase in capital investment	**5,95,600**	-	-	-	-	-
7.	Increase in working capital	-	4,86,600	-	-	-	-
8.	Interest	-	47,889	38,734	26,762	15,494	4,225
9.	Repayment of Term Loan	-	67,609	78,877	90,145	90,145	90,144
B.	**TOTAL DISPOSALS**	**5,95,600**	**6,02,098**	**1,17,611**	**1,16,907**	**1,05,639**	**94,369**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**
D.	**NET SURPLUS**	**NIL**	**46,265**	**71,113**	**98,778**	**1,10,046**	**1,21,316**
E.	**CLOSING BALANCE**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**

Projected Balance sheet: (Rs. in Thousands)

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	29,780	1,32,754	2,71,844	4,49,867	6,39,158
2.	Surplus from operation	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
	NET WORTH:	1,32,754	2,71,844	4,49,867	6,39,158	8,39,718
3.	**Subsidy**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**
4.	Term loan outstanding	3,49,311	2,70,434	1,80,289	90,144	-
	TOTAL LIABILITIES	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**
1.	Gross Block	1,09,000	1,09,000	1,09,000	1,09,000	1,09,000
	Less Depreciation	10,900	21,800	32,700	43,600	54,500
	NET BLOCK	**98,100**	**87,200**	**76,300**	**65,400**	**54,500**
2.	Working capital	4,86,600	4,86,600	4,86,600	4,86,600	4,86,600
3.	Cash & Bank Balance	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**
	TOTAL ASSETS	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**

Supplies of Machinery & Equipments :

1 M/S V.K Enterprises, 40, Balaji Nagar, Manewada Road,, Nagpur-440027,
2 M/s Huma Traders, Opp Shajenabad Police Station, Bhopal
3. **SETHI BROTHERS:** 3404,HAKIM BAQA STREET, HAUZ QAZI
City :DELHI **Country :**INDIA **24,00,000**

FLOORING TILES

Introduction : Clay flooring tiles which are in other words called Damp proof flooring are used as floor and terrace coverings. These tiles generally are made by roofing tiles units and are burnt in continuous kilns. In some cases reviving presses are also used for pressing these tiles and this requires a large investment. it is quite possible to set up a small unit with hand presses and one or two intermittent kilns with a limited financial resources and investment.

Market: There is a good demand for these burnt clay tiles at present. In certain cases where cement flooring is considered as high investment, clay flooring tiles are ideally suited. The market for these tiles is spread all over the country.

Production details : A judicial combination of lean and plastic clay is employed . The clay should be properly seasoned and put to weathering. The weathered clay is manually mixed with the required quantity of water and then fed toa pug mill. The clay coloumn coming out of the pug mill is cut into slabs on the cutting table and these slabs are allowed to dry till leather hard condition and pressed into tiles on a hard press. The pressed tiles are allowed to dry in the drying shed. In certain cases a further hand polishing is given to get a glossy surface. The dried tiles are brunt in a kiln and sorted out disposed as per customer's requirements.

Suggested Capacity: The minimum economic capacity for flooring tiles is 4,80,000 nos. per annum. On one shift basis on a 300 days working schedule in year and value will be Rs.24,00,000/-

Raw Materials; The main raw materials required for manufacture of flooring tiles are clay, firewood/ coal, lubricating oils and cost will be Rs.1,35,000/-. The materials are to be sourced mainly from the open market other way it can be collected from Alapat Industries, Marar Road, Trichur,

Utilities : The unit will require a total connected load of 200 KVA and a maximum demand of 190 KVA. Water requirement is about 500KL per annum.

Manpower: The unit will provide employment to the following 4 persons and all of whom are locally available.

1	Manager cum Supervisor	**Self**	**Self**
2.	Skilled Engineer	2nos	Rs. 6,000/-
3.	Office Boy	1 no	Rs. 2,000/-
4.	Sales Man	1no	Rs. 3,000/-
		Total	**Rs.11,000/-**

Manufacturing Process: UPS consists of components like transformer switches power devices and PCBs. The electronic control is in PCB, which consists of components like KS, transistors, resistors etc. The process of assembly of UPS involved the following steps.

1. Assembly
2. Fixing of various components.
3. Wiring
4. Battery assembly
5. Functional testing

CAPITAL COST ESTIMATE:

Land and Building: 1000Sq. ft. **On Rent**

Plant & Machinery :

1.Pugmill 13" barrel size with double rollers of 13"x15" size with 35 HP motor	Rs. 1,00,000/-
2.Cutting Table	Rs. 7,000/-
3.Hand operated screw press	Rs. 12,000/-
4.Flooring tiles dies	Rs. 5,333/-
5. Down draft rectangular type kiln of size 12'x12' kiln with column.	Rs. 9,000/-

Financial Aspect of the unit:

1) Land & Building 1,000sqft. **Rented**

2) Plant & Machinery:

Details	Cost (Rs.)
Pugmill 13" barrel size with double rollers of 13"x15" size with 35 HP motor ,Hand operated screw press, Cutting Table, Hand operated screw press, Flooring tiles dies, Down draft rectangular type kiln of size 12'x12' kiln with column.	65,000/-

3) **Miscellaneous Fixed Asset**

a)	Electrification	Rs. 5,000/-
b)	Furniture & Miscellaneous others	Rs. 24,500/-
4.	Provision for contingencies	**Rs. 4,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 10,500/-**

Total Fixed Investment Rs. 1,09,000/-

6. **Working Capital (P.M.)**

a)	Raw Material	Rs. 1,35,000/-
b)	Utilities	Rs. 1,200/-
c)	Salary & Wages	Rs. 11,000/-
d)	Other expenses	Rs. 15,000/-
	Total:	**Rs. 1,62,200/-**

Total working capital for 3 months: Rs. 4,86,600/-

Total Project Cost: Rs. 5,95,600/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	4,16,920/-	3,57,360/-
2.	Promoter's contribution	29,780/-	29,780/-
3.	Subsidy	1,48,900/-	2,08,460/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	9,72,000	11,34,000	12,96,000	12,96,000	12,96,000
b)	Utilities	8,640	10,080	11,520	11,520	11,520
c)	Selling expenses	1,10,397	1,28,796	1,47,195	1,47,195	1,47,195
	Variable Cost	**1,09,037**	**12,72,876**	**14,54,715**	**14,54,715**	**14,54,715**
d)	Wages & Salaries	79,200	92,400	1,05,600	1,05,600	1,05,600
e)	Administrative expenses	1,08,000	1,26,000	1,44,000	1,44,000	1,44,000
f)	Depreciation	10,900	10,900	10,900	10,900	10,900
g)	Interest on Composite Loan	47,889	38,734	26,762	15,494	4,225
	Fixed & Semi Variable Cost	2,45,989	2,68,034	2,87,262	2,75,994	2,64,725
4.	**Total Cost**	**13,37,026**	**15,40,910**	**17,41,977**	**17,30,709**	**17,19,440**
5.	Annual Profit	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
6.	Return on Investment	17.28%	23.35%	29.88%	31.78%	33.67%
7.	Return on sales	4.29%	5.79%	7.41%	7.88%	8.35%
8.	Annual contribution	3,48,963	-	-	-	-
9.	Break Even Point	42.29%				
10.	Cash accrual	1,13,874	1,49,990	1,88,923	2,00,191	2,11,460
11.	Debt Servicing Capacity	1,61,763	1,88,724	2,15,685	2,15,685	2,15,685
12.	Repayment of Composite Loan	67,609	78,877	90,145	90,145	90,144
13.	Debt Serviced	1,15,498	1,17,611	1,16,907	1,05,639	94,369
14.	Pay Back Period	1 year 4 months 24 days				
15.	Debt Service Coverage Ratio	1.40:1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	29,780	-	-	-	-	-
2.	Increase in Term loan	4,16,920	4,86,600	-	-	-	-
3.	Subsidy	1,48,900	-	-	-	-	-
4.	Depreciation	-	10,900				
5.	Profit before interests	-	1,50,863	1,77,824	2,04,785	2,04,785	2,04,785
A.	**TOTAL SOURCES**	**5,95,600**	**6,48,363**	**1,88,724**	**2,15,685**	**2,15,685**	**2,15,685**
6.	Increase in capital investment	**5,95,600**	-	-	-	-	-
7.	Increase in working capital	-	4,86,600	-	-	-	-
8.	Interest	-	47,889	38,734	26,762	15,494	4,225
9.	Repayment of Term Loan	-	67,609	78,877	90,145	90,145	90,144
B.	**TOTAL DISPOSALS**	**5,95,600**	**6,02,098**	**1,17,611**	**1,16,907**	**1,05,639**	**94,369**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**
D.	**NET SURPLUS**	**NIL**	**46,265**	**71,113**	**98,778**	**1,10,046**	**1,21,316**
E.	**CLOSING BALANCE**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**

Projected Balance Sheet: (Rs. in Thousands)

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	29,780	1,32,754	2,71,844	4,49,867	6,39,158
2.	Surplus from operation	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
	NET WORTH:	1,32,754	2,71,844	4,49,867	6,39,158	8,39,718
3.	**Subsidy**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**
4.	Term loan outstanding	3,49,311	2,70,434	1,80,289	90,144	-
	TOTAL LIABILITIES	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**
1.	Gross Block	1,09,000	1,09,000	1,09,000	1,09,000	1,09,000
	Less Depreciation	10,900	21,800	32,700	43,600	54,500
	NET BLOCK	**98,100**	**87,200**	**76,300**	**65,400**	**54,500**
2.	Working capital	4,86,600	4,86,600	4,86,600	4,86,600	4,86,600
3.	Cash & Bank Balance	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**
	TOTAL ASSETS	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**

Supplies of Machinery & Equipments :

1. Amic Industries Pvt. Ltd, Near Dunlop, B.T.Road, Kolkata
2. Kusum Engg Co, 25, Shallow Lane, kolkata- 70 001

COMPUTER & IT INDUSTRIES

SOFTWARE DEVELOPMENT CENTRE

Introduction: Computer software development is an important trend of computer science. For using and operating upon the computer, software is required. Both kinds of software's standard and customized are developed. Every commercial and business unit require standard and customized software. Presently, there are many enterprises dealing with software development. In the given unit, software packages would be made regarding accounting, finance control, material management, production planning & control annual.

Production Target and Sales: The unit would work for 300 days. Annual production would be accordingly:-

a. Customized software development 400 hrs
b. Standard Software packages 50 copy

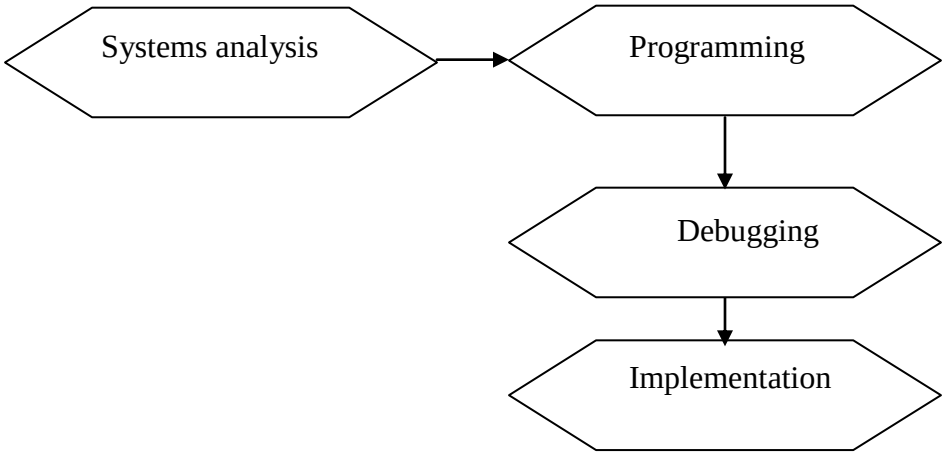
Rate of customized software would be Rs. 675/- per hr and of standard software,. Thus, the income would be Rs.32,40,000/-

Production Process of Software Packages: In order to development any software, one has to pass through following stages:

a. Systems analysis
b. Programming
c. Debugging
d. Implementation

The system which has to have a software, is studied. This study is basically done to understand the finer points of the system so that the software proves to be of optimum utility. At every stage, system has a flow chart. With the help of this flow chart, Programmes and sub Programmes are made and tested as well as. After ensuring its flawless functioning, final software is made.

Flow Chart :



Raw Materials availability: Raw materials are to be sourced mainly from the open market. At present availability and supply of the raw materials is not problem e.g (Computer stationery, Printer Ribbon, Floppy Disk, Files etc) etc. to be sourced from open local markets. Computer Stationery paper, Printer Ribbon, Floppy Disk, Files etc) etc. worth **Rs.1,35,000/-**

Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department and approximately it will be cost Rs.14,400/- per annum.

Water: Requirement of water mainly for washing and cleaning of Raw Jute, Silk Screen print developing etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will provide employment to 5 persons including staff and engineers for factory administration and sales, labour etc. and all man power to be arrange from local area. Monthly requirement and cost of manpower is shown below:

1.	Manager cum Supervisor	Self	Self
2.	Computer Programmer	1nos	Rs.6,000/-
3.	Office Boy	1 no	Rs. 2,000/-
4.	Software Sales Man	1no	Rs. 3,000/-
		Total	**Rs.11,000/-**

CAPITAL COST ESTIMATE:

Land & Building: **On Rent.**

Plant & Machinery :

a. Two nos. Desktop Computer, one Printer and one UPS **Rs.65,000/-**

Miscellaneous Fixed Asset

a)	Electrification	Rs. 5,000/-
b)	Furniture & Miscellaneous others	Rs. 24,500/-
2.	Provision for contingencies	**Rs. 4,000/-**
3.	Preliminary & pre-operative expenses	**Rs. 10,500/-**
	Total Fixed Investment	**Rs.1,09,000/-**

6. **Working Capital (P.M.)**

a)	Raw Material	Rs.1,35,000/-
b)	Utilities	Rs. 1,200/-
c)	Salary & Wages	Rs. 11,000/-
d)	Other expenses	Rs. 15,000/-
	Total:	**Rs.1,62,200/-**

Total working capital for 3 months : Rs. 4,86,600/-

Total Project Cost: Rs. 5,95,600/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	4,16,920/-	3,57,360/-
2.	Promoter's contribution	29,780/-	29,780/-
3.	Subsidy	1,48,900/-	2,08,460/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: **(Rs. in Thousands)**

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized	60%	70%	80%	80%	80%
2.	Annual Sales Realization in Rs.	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
3.	**Annual Costs in Rs.**					
a)	Raw Materials	9,72,000	11,34,000	12,96,000	12,96,000	12,96,000
b)	Utilities	8,640	10,080	11,520	11,520	11,520
c)	Selling expenses	1,10,397	1,28,796	1,47,195	1,47,195	1,47,195
	Variable Cost	**1,09,037**	**12,72,876**	**14,54,715**	**14,54,715**	**14,54,715**
d)	Wages & Salaries	79,200	92,400	1,05,600	1,05,600	1,05,600
e)	Administrative expenses	1,08,000	1,26,000	1,44,000	1,44,000	1,44,000
f)	Depreciation	10,900	10,900	10,900	10,900	10,900
g)	Interest on Composite Loan	47,889	38,734	26,762	15,494	4,225
	Fixed & Semi Variable Cost	2,45,989	2,68,034	2,87,262	2,75,994	2,64,725
4.	**Total Cost**	**13,37,026**	**15,40,910**	**17,41,977**	**17,30,709**	**17,19,440**
5.	Annual Profit	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
6.	Return on Investment	17.28%	23.35%	29.88%	31.78%	33.67%
7.	Return on sales	4.29%	5.79%	7.41%	7.88%	8.35%
8.	Annual contribution	3,48,963	-	-	-	-
9.	Break Even Point	42.29%				
10.	Cash accrual	1,13,874	1,49,990	1,88,923	2,00,191	2,11,460
11.	Debt Servicing Capacity	1,61,763	1,88,724	2,15,685	2,15,685	2,15,685
12.	Repayment of Composite Loan	67,609	78,877	90,145	90,145	90,144
13.	Debt Serviced	1,15,498	1,17,611	1,16,907	1,05,639	94,369
14.	Pay Back Period	1 year 4 months 24 days				
15.	Debt Service Coverage Ratio	1.40:1				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Preope-rative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	29,780	-	-	-	-	-
2.	Increase in Term loan	4,16,920	4,86,600	-	-	-	-
3.	Subsidy	1,48,900	-	-	-	-	-
4.	Depreciation	-	10,900				
5.	Profit before interests	-	1,50,863	1,77,824	2,04,785	2,04,785	2,04,785
A.	**TOTAL SOURCES**	**5,95,600**	**6,48,363**	**1,88,724**	**2,15,685**	**2,15,685**	**2,15,685**
6.	Increase in capital investment	**5,95,600**	-	-	-	-	-
7.	Increase in working capital	-	4,86,600	-	-	-	-
8.	Interest	-	47,889	38,734	26,762	15,494	4,225
9.	Repayment of Loan	-	67,609	78,877	90,145	90,145	90,144
B.	**TOTAL DISPOSALS**	**5,95,600**	**6,02,098**	**1,17,611**	**1,16,907**	**1,05,639**	**94,369**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**
D.	**NET SURPLUS**	**NIL**	**46,265**	**71,113**	**98,778**	**1,10,046**	**1,21,316**
E.	**CLOSING BALANCE**	**NIL**	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**
1.	Capital Account of Promoter	29,780	1,32,754	2,71,844	4,49,867	6,39,158
2.	Surplus from operation	1,02,974	1,39,090	1,78,023	1,89,291	2,00,560
	NET WORTH:	1,32,754	2,71,844	4,49,867	6,39,158	8,39,718
3.	**Subsidy**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**	**1,48,900**
4.	Term loan outstanding	3,49,311	2,70,434	1,80,289	90,144	-
	TOTAL LIABILITIES	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**
1.	Gross Block	1,09,000	1,09,000	1,09,000	1,09,000	1,09,000
	Less Depreciation	10,900	21,800	32,700	43,600	54,500
	NET BLOCK	**98,100**	**87,200**	**76,300**	**65,400**	**54,500**
2.	Working capital	4,86,600	4,86,600	4,86,600	4,86,600	4,86,600
3.	Cash & Bank Balance	**46,265**	**1,17,378**	**2,16,156**	**3,26,202**	**4,47,518**
	TOTAL ASSETS	**6,30,965**	**6,91,178**	**7,79,056**	**8,78,202**	**9,88,618**

Supplies of Machinery & Equipments :

1. P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. Computer Link, Swasti Market, Agartala, Tripura
3. M/S Coral Business Systems Pvt Ltd. 73 Zone 2 , M.P. Nagar, Bhopal

DESKTOP PUBLISHING

Introduction: Desktop Top publishing systems have radically changed the way publishing has always been done but in the process, the world of DTP has got divided into two distinct groups. One swears by the PageMaker Software on the Apple Macintosh and the other, by the Ventura which runs on the IBM PCS. DTP in India is fast finding application for news letters, journals, brochures and advertisement s, technical documents and manuals.

Suggested Capacity: The minimum economic capacity of a DTP centre shall be to process out 27000 paginations per annum based on two shift operation for 300 days working schedule in a year.

Manufacturing Process: The Project plans to have an integrated facility of DTP, photo typesetting and offset printing. It is proposed to obtain the microprocessor, PageMaker and Ventura software's and laser printer and a DTP package from abroad. The single colour offset printing machine will also be included in the imported package. As far as the process of page making in the micro processor is concerned, it differs widely from software to software and entrepreneurs can refer to the concerned manual to have a clear understanding of the pacemakers process.

A. Page Definition : The basic ingredients of all desk top publishing programmes is that enable you to define the layout of the text on the page. First the size and shape of the page itself is defined using guides available on the programme-usually in the form of pull down menu.

B. Place the Text: The next stage of the process is to put the next in place. The text matter is usually transferred from separate files generated on one of the popular word processing packages. Such as Microsoft word.

C. Page presentation : One of the most important aspects of the DTP software is how the finished document, integrated from the various graphics and text files, is to be presented on the screen.

D. Implementing DTP: The individual or the small company has no problems when it comes to implementing a DTP system. It is simply a matter of choosing the most appropriate and flexible system, connecting it up, plugging it in and getting down to serious business.

Raw Materials availability: Raw materials are to be sourced mainly from the open market. At present availability and supply of the raw materials is not problem e.g ink, perforated paper, Ribbon, cartridge, CD, Polyester film, Bromide paper, Floppy, Ivory paper etc to be sourced from open markets. Annual Requirement Rs.14,50,000/-

Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department. The unit will require a total connected load of 180000Kwh and approximately it will be cost Rs.17,280/- per month.

Water: Requirement of water mainly for washing of film developing etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will provide employment to 9 persons including staff for factory supervision, administration and sales, labour, watch & ward etc. and all man power to be arrange from local area.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	60,000/-
2.	Administrative & Sales Staff	2	84,000/-
3.	Skilled Worker	3	1,62,000/-
4.	Unskilled Worker	3	90,000/-
	Total:	9	3,96,000/-

CAPITAL COST ESTIMATE:

Land & Building: **On Rent**

Plant & Machinery :

Slno	Description	Qty	Rate	Amount
1.	Desktop Computer	2nos	Rs.25,000/-	50,000/-
2.	1KVA on line UPS	1 no	Rs.40,000/-	45,000/
3.	Scanner	1 no	Rs.15,000/-	15,000/-
4.	Multifunction Laser Printer	1no	Rs.42,000/-	42,000/-
5.	Offset Printing Machine	1no	Rs.1,58,000/-	1,58,000/-
6.	1.5Ton AC	1no	Rs.25,000/-	25,000/-
			Total	**Rs.3,35,000/-**

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 30,000/-
b)	Furniture & Miscellaneous others	Rs. 70,000/-
		Rs.1,00,000/-
4.	Provision for contingencies	**Rs. 20,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 30,000/-**
	Total Fixed Investment	**Rs. 4,85,000/-**

Working Capital:

Raw Materials (For three month):

Perforated paper, Ribbon, Ink, Tonner, Printing Materials, Printing Ink, A4 size paper, various types of Ivoiry paper, CD / Floppy etc — Rs.3,62,500/-

b)	Power	Rs. 4,320/-
c)	Salary & Wages	Rs. 99,000/-
d)	Miscellaneous expenses	Rs. 14,180/-
	Total:	**Rs. 4,80,000/-**
	Total Project Cost:	**Rs. 9,65,000/-**

	Means of Finance	**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 6,76,000/-	Rs. 5,79,000/-
b.	Subsidy	Rs. 2,41,000/-	Rs. 3,37,750/-
c.	Promoters contribution	Rs. 48,000/-	Rs. 48,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

(Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,800**	**2,100**	**2,400**	**2,400**	**2,400**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	870	1,015	1,160	1,160	1,160
(b)	Power	10	12	14	14	14
(c)	Wages & Salaries	360	377	393	403	413
(d)	Repair & Maintenance	19	19	19	19	19
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	270	315	360	360	360
(g)	Depreciation	45	45	45	45	45
(h)	Interest	76	64	47	28	9
	Total:	1,727	1,926	2,121	2,116	2,111
	Total Variable Cost	**1,150**	**1,342**	**1,534**	**1,534**	**1,534**
4.	**Annual profit**	**73**	**174**	**279**	**284**	**289**
5.	Return on investment	7.56%	18.03%	28.91%	29.43%	29.95%
6.	Return on sales	4.06%	8.29%	11.63%	11.83%	12.04%
7.	Annual Contribution	650	-	-	-	-
8.	Break Even Point as percent of capacity	53.26%	-	-	-	-
9.	Cash accrual	118	219	324	329	334
10.	**Debt servicing capacity**	**196**	**283**	**371**	**357**	**343**
11.	Repayment of Composite Loan	101	125	150	150	150
12.	**Debt serviced**	**179**	**189**	**197**	**178**	**159**
13.	**Pay Back Period**	**3 years 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.72:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	48	-	-	-	-	-
2.	Increase in subsidy	241	-	-	-	-	-
3	Increase in loan	676	-	-	-	-	-
4.	Depreciation	-	45	45	45	45	45
5.	Profit before interests	-	151	238	326	312	298
A.	**TOTAL SOURCES**	**965**	**196**	**283**	**371**	**357**	**343**
6.	Increase in capital investment	**485**	-	-	-	-	-

7.	Increase in Current Assets	480	-	-	-	-	-
8.	Interests	-	78	64	47	28	9
9.	Repayment of loan	-	101	125	150	150	150
B.	**TOTAL DISPOSALS**	**965**	**179**	**189**	**197**	**178**	**159**
C.	**OPENING BALANCE**	**-**	**-**	**17**	**111**	**285**	**464**
D.	**NET SURPLUS**	**-**	**17**	**94**	**174**	**179**	**184**
E.	**CLOSING BALANCE**	**-**	**17**	**111**	**285**	**464**	**648**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	48	121	295	574	858
2.	Surplus from operations	**73**	**174**	**279**	**284**	**289**
	NET WORTH:	**121**	**295**	**574**	**858**	**1,147**
3.	Subsidy	241	241	241	241	241
4.	Loan Account	575	450	300	150	-
A.	**TOTAL LIABILITIES**	**937**	**986**	**1,115**	**1,249**	**1,388**
1.	Gross Fixed Assets	485	485	485	485	485
	Less Depreciation	45	90	135	180	225
	NET BLOCK	**440**	**395**	**350**	**305**	**260**
2	Closing stocks	480	480	480	480	480
3.	Cash & Bank Balance	**17**	**111**	**285**	**464**	**648**
B.	**TOTAL ASSETS**	**937**	**986**	**1,115**	**1,249**	**1,388**

Supplies of Machinery & Equipments :

1 P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. Computer Link, Swasti Market, Agartala, Tripura
3. M/S Coral Business Systems Pvt Ltd, 73 Zone 2 , M.P. Nagar, Bhopal

COMPUTER ASSEMBLING

Introduction; Information Technology is becoming pervasive in the country as more organization take to using computers. The Computer industry has shown quick response in bring new products to the market. The computer industry has started making serious globalization effects. It is building up a critical class of skills and knowledge which is expected to enable than to help achieve globalization.

The unit Suggested Capacity; The minimum economic capacity of a Computer Assembling Centre shall be to Product 108 nos. per annum based on one shift operation for 240 days working schedule in a year.

Computer Assembling Process:

1. Gather and Inspect Components and Tools.
2. Remove Cover From System Case.
3. Prepare System Case for Assembly.
4. Plan System Layout.
5. Install Floppy Disk Drive.
6. Configure Hard Disk Drive and CD-ROM Drive.
7. Install Hard Disk Drive.
8. Install CD-ROM Drive.
9. Configure Motherboard.
10. Install Processor.
11. Install Heat Sink (for processors without integrated cooling).
12. Install Cache Module (for systems using cache modules only).
13. Install Memory Modules.
14. Install Motherboard.
15. Install I/O Port Connectors (AT form factor only).
16. Install PS/2 Mouse Port Connector (optional, AT form factor only).
17. Connect Motherboard and Case.
18. Connect Floppy Disk Drive to Motherboard.
19. Connect Hard Disk Drive to Motherboard.
20. Connect CD-ROM Drive to Motherboard.
21. Install Video Card.
22. Perform Post-Assembly Inspection.
23. Connect External Peripherals.
24. Perform Initial Boot.
25. Perform Initial BIOS Setup.
26. Perform Initial System Tests.
27. Install Additional Peripherals.
28. Partition and Format Hard Disk.
29. Install CD-ROM Driver.
30. Install Windows 95 (or other operating system).
31. Complete Assembly.
32. Document System.

Raw Materials availability: Raw materials are to be sourced mainly from the open market. At present availability and supply of the raw materials is not problem e.g Mother Board, HDD, RAM, Cabinet, Monitor, KBD, Mouse, DVDR, etc to be sourced from open local markets.

Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department. The unit will require a total connected load of 180000Kwh and approximately it will be cost Rs.17,280/- per month.

Water: Requirement of water mainly for washing of film developing etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will provide employment to 9 persons including staff and engineers for factory administration and sales, labour etc. and all man power to be arrange from local area.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	60,000/-
2.	Administrative & Sales Staff	2	84,000/-
3.	Skilled Worker	3	1,62,000/-
4.	Unskilled Worker	3	90,000/-
	Total:	**9**	**3,96,000/-**

CAPITAL COST ESTIMATE:

Land & Building: **On Rent**

Plant & Machinery :

Slno	Description	Qty	Rate	Amount
1.	Assembling Instruments,	2nos	Rs.25,000/-	50,000/-
2.	Testing Tools & Network	1 no	Rs.45,000/-	45,000/
3.	1 KVA online UPS	1 no	Rs.65,000/-	65,000/-
4.	Laser Printer	1no	Rs.42,000/-	42,000/-
5.	Desktop Computer	3nos	Rs.35,000/-	1,05,000/-
6.	1.5Ton AC	1no	Rs.28,000/-	28,000/-
			Total	**Rs.3,35,000/-**

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 30,000/-
b)	Furniture & Miscellaneous others	Rs. 70,000/-
		Rs.1,00,000/-
4.	Provision for contingencies	**Rs. 20,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 30,000/-**
	Total Fixed Investment	**Rs. 4,85,000/-**

Working Capital:

Raw Materials (For three month):

a.	Processor, M.B, HDD, RAM, Monitor, KBD, Mouse, Cabinet,	Rs.3,62,500/-
b)	Power	Rs. 4,320/-

c)	Salary & Wages	Rs. 99,000/-
d)	Miscellaneous expenses	Rs. 14,180/-
		Total: **Rs. 4,80,000/-**
		Total Project Cost: Rs. 9,65,000/-

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 6,76,000/-	Rs. 5,79,000/-
b.	Subsidy	Rs. 2,41,000/-	Rs. 3,37,750/-
c.	Promoters contribution	Rs. 48,000/-	Rs. 48,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

(Rs. in Thousands)

Sl. No.	**Description**	**1st Year**	**2nd Year**	**3rd year**	**4th Year**	**5th Year**
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,800**	**2,100**	**2,400**	**2,400**	**2,400**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	870	1,015	1,160	1,160	1,160
(b)	Power	10	12	14	14	14
(c)	Wages & Salaries	360	377	393	403	413
(d)	Repair & Maintenance	19	19	19	19	19
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	270	315	360	360	360
(g)	Depreciation	45	45	45	45	45
(h)	Interest	76	64	47	28	9
	Total:	1,727	1,926	2,121	2,116	2,111
	Total Variable Cost	**1,150**	**1,342**	**1,534**	**1,534**	**1,534**
4.	**Annual profit**	**73**	**174**	**279**	**284**	**289**
5.	Return on investment	7.56%	18.03%	28.91%	29.43%	29.95%
6.	Return on sales	4.06%	8.29%	11.63%	11.83%	12.04%
7.	Annual Contribution	650	-	-	-	-
8.	Break Even Point as percent of capacity	53.26%	-	-	-	-
9.	Cash accrual	118	219	324	329	334
10.	**Debt servicing capacity**	**196**	**283**	**371**	**357**	**343**
11.	Repayment of Composite Loan	101	125	150	150	150
12.	**Debt serviced**	**179**	**189**	**197**	**178**	**159**
13.	**Pay Back Period**	**3 years 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.72:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	48	-	-	-	-	-
2.	Increase in subsidy	241	-	-	-	-	-
3	Increase in loan	676	-	-	-	-	-
4.	Depreciation	-	45	45	45	45	45
5.	Profit before interests	-	151	238	326	312	298
A.	**TOTAL SOURCES**	**965**	**196**	**283**	**371**	**357**	**343**
6.	Increase in capital investment	**485**	-	-	-	-	-
7.	Increase in Current Assets	480	-	-	-	-	-
8.	Interests	-	78	64	47	28	9
9.	Repayment of loan	-	101	125	150	150	150
B.	**TOTAL DISPOSALS**	**965**	**179**	**189**	**197**	**178**	**159**
C.	**OPENING BALANCE**	**-**	**-**	**17**	**111**	**285**	**464**
D.	**NET SURPLUS**	**-**	**17**	**94**	**174**	**179**	**184**
E.	**CLOSING BALANCE**	-	**17**	**111**	**285**	**464**	**648**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	48	121	295	574	858
2.	Surplus from operations	**73**	**174**	**279**	**284**	**289**
	NET WORTH:	**121**	**295**	**574**	**858**	**1,147**
3.	Subsidy	241	241	241	241	241
4.	Loan Account	575	450	300	150	-
A.	**TOTAL LIABILITIES**	**937**	**986**	**1,115**	**1,249**	**1,388**
1.	Gross Fixed Assets	485	485	485	485	485
	Less Depreciation	45	90	135	180	225
	NET BLOCK	**440**	**395**	**350**	**305**	**260**
2	Closing stocks	480	480	480	480	480
3.	Cash & Bank Balance	**17**	**111**	**285**	**464**	**648**
B.	**TOTAL ASSETS**	**937**	**986**	**1,115**	**1,249**	**1,388**

Supplies of Machinery & Equipments :

1 P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. Computer Link, Swasti Market, Agartala, Tripura

COMPUTER NETWORKING

Introduction: Information Technology is becoming pervasive in the country as more Organization take to using Computers. The computer Industry has shown quick response in bringing new products to the market. The computer industry has started making serious globalization effects. It is building up a critical class of skills and knowledge which is expected to enable than to help achieve globalization.

Market: Considering the growth and demand of micro and personal computers in the country, there will be good demand for computer Servicing Unit in the country. This industry has grown both in terms of physical output as well as range of products introduced in the market.

Suggested Capacity; The minimum economic capacity of a Computer Networking and Job work Centre shall be to installation and Networking 100 Job per annum based on one /two shift operation for 300 days working schedule in a year.

Raw Materials availability: Raw materials are to be sourced mainly from the open market. The annual requirements and costs of raw materials, to be sourced from local market, is shown below.

1. Networking Testing equipments, (Line tester), Testing equipments, RJ 45 connector, Cable and Networking software. — Rs.21,50,000/-

Power: The unit will need 26 KW of total connected load at 40/440 volts 50 Hz, AC, 3 phase & 4 wire. The annual consumption of power is estimated at 39600 KW Hrs costing Rs. 83,160/- at the installed capacity

Fuel: The unit will use its own production of sludge Bricks as fuel. For better results annually 30,000 kilograms of coal shall be mixed with sludge Bricks. The coal shall cost Rs. 2,10,000/-.

Water: The unit will need 1000 Liters of water per day. The cost of drawing the required water is shown with power cost.

Manpower: The unit will provide employment to 6 persons including staff and engineers for factory administration and sales, labour etc. and all man power to be arrange from local area. The annual needs and costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	84,000/-
2.	Administrative & Sales Staff	3	1,26,000/-
3.	Skilled Worker	3	1,80,000/-
4.	Unskilled Worker	2	60,000/-
	Total:	9	4,50,000/-

CAPITAL COST ESTIMATE:

Land & Building: **On Rent**

Plant & Machinery :

Slno	**Description**	**Qty**	**Rate**	**Amount**
1.	Instruments,	1 set	Rs.25,000/-	25,000/-
2.	1 KVA online UPS	1 no	Rs.65,000/-	65,000/-
3.	Laser Printer	1no	Rs.25,000/-	25,000/-
4.	Desktop Computer	25 nos	Rs.25,000/-	6,25,000/-
5.	1.5Ton AC	2no	Rs.60,000/-	60,000/-
				Total Rs.8,00,000/-

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 1,30,000/-
b)	Furniture & Miscellaneous others	Rs. 6,40,000/-
c)	Interior Decoration	Rs. 2,50,000/-
4.	Provision for contingencies	**Rs. 50,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 30,000/-**
	Total Fixed Investment	**Rs. 11,00,000/-**
6.	**Working Capital**	
a)	Raw Materials (Networking Testing equipments, (Line tester), Testing equipments, RJ 45 connector, Cable and Networking software)	Rs. 1,79,167/-
b)	Fuel	Rs. 17,500/-
c)	Power	Rs. 6,930/-
d)	Salary & Wages	Rs. 37,500/-
e)	Miscellaneous expenses	Rs. 8,903/-
	Total:	**Rs. 2,50,000/-**
	Total Project Cost:	**Rs. 13,50,000/-**

Means of Finance

		Urban	**Rural**
a.	Composite loan under PMEGP	Rs. 9,45,000/-	Rs. 8,10,000/-
b.	Subsidy	Rs. 3,37,000/-	Rs. 4,72,500/-
c.	Promoters contribution	Rs. 68,000/-	Rs. 67,500/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	**Description**	**1st Year**	**2nd Year**	**3rd year**	**4th Year**	**5th Year**
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**2,808**	**3,276**	**3,744**	**3,744**	**3,744**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	1,290	1,505	1,720	1,720	1,720
(b)	Fuel	126	147	168	168	168
(c)	Power	50	58	67	67	67
(d)	Wages & Salaries	450	461	473	485	497
(e)	Repair & Maintenance	44	44	44	44	44
(f)	Administrative overheads	10	105	110	116	122
(g)	Selling expenses	421	491	562	562	562
(h)	Depreciation	105	105	105	105	105

(i)	Interest	109	88	64	38	13
	Total:	2,695	3,004	3,313	3,305	3,298
	Total Variable Cost	**1,887**	**2,201**	**2,517**	**2,517**	**2,517**
4.	**Annual profit**	**113**	**272**	**431**	**439**	**446**
5.	Return on investment	8.37%	20.15%	31.93%	32.52%	33.04%
6.	Return on sales	4.02%	8.30%	11.51%	11.73%	11.91%
7.	Annual Contribution	921	-	-	-	-
8.	Break Even Point as percent of capacity	52.64%	-	-	-	-
9.	Cash accrual	218	377	536	544	551
10.	**Debt servicing capacity**	**327**	**465**	**600**	**582**	**564**
11.	Repayment of Composite Loan	150	180	205	205	205
12.	**Debt serviced**	**259**	**268**	**269**	**243**	**218**
13.	**Pay Back Period**	**2 years 7 months 21 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.02:1**				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	68	-	-	-	-	-
2.	Increase in subsidy	337	-	-	-	-	-
3	Increase in loan	945	-	-	-	-	-
4.	Depreciation	-	105	105	105	105	105
5.	Profit before interests	-	222	360	495	477	459
A.	**TOTAL SOURCES**	**1,350**	**327**	**465**	**600**	**582**	**564**
6.	Increase in capital investment	1,100	-	-	-	-	-
7.	Increase in Current Assets	250	-	-	-	-	-
8.	Interests	-	109	88	64	38	13
9.	Repayment of loan	-	150	180	205	205	205
B.	**TOTAL DISPOSALS**	**1,350**	**259**	**268**	**269**	**243**	**218**
C.	**OPENING BALANCE**	-	-	**68**	**265**	**596**	**935**
D.	**NET SURPLUS**	-	**68**	**197**	**331**	**339**	**346**
E.	**CLOSING BALANCE**	-	**68**	**265**	**596**	**935**	**1,281**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	68	181	453	884	1,323
2.	Surplus from operations	113	272	431	439	446
	NET WORTH:	**181**	**453**	**884**	**1,323**	**1,769**
3.	Subsidy	337	337	337	337	337
4.	Loan Account	795	615	410	205	-
A.	**TOTAL LIABILITIES**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**
1.	Gross Fixed Assets	1,100	1,100	1,100	1,100	1,100
	Less Depreciation	105	210	315	420	525
	NET BLOCK	**995**	**890**	**785**	**680**	**575**
2	Current Assets	250	250	250	250	250
3.	Cash & Bank Balance	**68**	**265**	**596**	**935**	**1,281**
B.	**TOTAL ASSETS**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**

Supplies of Machinery & Equipments :

1. P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. M/S Coral Business Systems Pvt Ltd, 73 Zone 2 , M.P. Nagar, Bhopal

CYBER CAFÉ-INTERNET BROWSING

Introduction : Internet has engineered many diversification and business growth opportunities in IT sector. Cybercafés, e commerce, telemedicine call centers to name a few are some of the IT enable services which has shown tremendous potential for growth in recent times. The cyber cafes are considered to be lucrative business option for IT entrepreneurs. The cybercafés are places which provide net browsing facilities to people. It is also a place to relax, communicate with people and make friends by using internet. A number of cybercafés have come up in the sate Agartala in a span of three years. Although some of the cybercafés which have come up lack the modern amenities like dinning services, music, video conferencing, online games, etc. however, these provide facilities for people who would like to get the most out of net.

Demand: There is a good demand for such type of centre. Whereas Agartala is turning out to be a fast growing business centre in the NE Region, the demand for cybercafés will be more as more people are likely to flock these centres for sending e mail and downloading valuable information from the net.

Power: The unit will need 26 KW of total connected load at 40/440 volts 50 Hz, AC, 3 phase & 4 wire. The annual consumption of power is estimated at 39600 KW Hrs costing Rs. 83,160/- at the installed capacity

Fuel: The unit will use its own production of sludge Bricks as fuel. For better results annually 30,000 kilograms of coal shall be mixed with sludge Bricks. The coal shall cost Rs. 2,10,000/-.

Water: The unit will need 1000 Liters of water per day. The cost of drawing the required water is shown with power cost.

Suggested Capacity: The minimum economic capacity of the centre 2400 hours shall be to process per annum based on two shift operation for 300 days working schedule in a year.

Raw Materials availability: Raw materials are to be sourced mainly from the open market. At present availability and supply of the raw materials is not problem e.g ink, perforated paper, Ribbon, cartridge, CD, Floppy, Ivory paper etc to be sourced from open markets and cost would be Rs.50,000/- per month.

Manpower: The unit will provide employment to 9-10 persons including staff for factory supervision, administration and sales, labour, watch & ward etc. and all man power to be arrange from local area.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	84,000/-
2.	Administrative & Sales Staff	3	1,26,000/-
3.	Skilled Worker	3	1,80,000/-
4.	Unskilled Worker	2	60,000/-
	Total:	9	4,50,000/-

CAPITAL COST ESTIMATE:

Land & Building: **On Rent**

Plant & Machinery :

Slno	Description	Qty	Rate	Amount
1.	Instruments,	1 set	Rs.25,000/-	25,000/-
2.	1 KVA online UPS	1 no	Rs.65,000/-	65,000/-
3.	Laser Printer	1no	Rs.25,000/-	25,000/-
4.	Desktop Computer	25 nos	Rs.25,000/-	6,25,000/-
5.	1.5Ton AC	2no	Rs.60,000/-	60,000/-
			Total	**Rs.8,00,000/-**

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 1,30,000/-
b)	Furniture & Miscellaneous others	Rs. 6,40,000/-
c)	Interior Decoration	Rs. 2,50,000/-
4.	Provision for contingencies	**Rs. 50,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 30,000/-**
	Total Fixed Investment	**Rs. 11,00,000/-**
6.	**Working Capital**	
a)	Raw Materials (Networking Testing equipments, (Line tester), Testing equipments, RJ 45 connector, Cable and Networking software)	Rs. 1,79,167/-
b)	Fuel	Rs. 17,500/-
c)	Power	Rs. 6,930/-
d)	Salary & Wages	Rs. 37,500/-
e)	Miscellaneous expenses	Rs. 8,903/-
	Total:	**Rs. 2,50,000/-**
	Total Project Cost:	**Rs. 13,50,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 9,45,000/-	Rs. 8,10,000/-
b.	Subsidy	Rs. 3,37,000/-	Rs. 4,72,500/-
c.	Promoters contribution	Rs. 68,000/-	Rs. 67,500/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**2,808**	**3,276**	**3,744**	**3,744**	**3,744**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	1,290	1,505	1,720	1,720	1,720
(b)	Fuel	126	147	168	168	168
(c)	Power	50	58	67	67	67
(d)	Wages & Salaries	450	461	473	485	497
(e)	Repair & Maintenance	44	44	44	44	44
(f)	Administrative overheads	10	105	110	116	122

(g)	Selling expenses	421	491	562	562	562
(h)	Depreciation	105	105	105	105	105
(i)	Interest	109	88	64	38	13
	Total:	2,695	3,004	3,313	3,305	3,298
	Total Variable Cost	**1,887**	**2,201**	**2,517**	**2,517**	**2,517**
4.	**Annual profit**	**113**	**272**	**431**	**439**	**446**
5.	Return on investment	8.37%	20.15%	31.93%	32.52%	33.04%
6.	Return on sales	4.02%	8.30%	11.51%	11.73%	11.91%
7.	Annual Contribution	921	-	-	-	-
8.	Break Even Point as percent of capacity	52.64%	-	-	-	-
9.	Cash accrual	218	377	536	544	551
10.	**Debt servicing capacity**	**327**	**465**	**600**	**582**	**564**
11.	Repayment of Composite Loan	150	180	205	205	205
12.	**Debt serviced**	**259**	**268**	**269**	**243**	**218**
13.	**Pay Back Period**	**2 years 7 months 21 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.02:1**				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	68	-	-	-	-	-
2.	Increase in subsidy	337	-	-	-	-	-
3	Increase in loan	945	-	-	-	-	-
4.	Depreciation	-	105	105	105	105	105
5.	Profit before interests	-	222	360	495	477	459
A.	**TOTAL SOURCES**	**1,350**	**327**	**465**	**600**	**582**	**564**
6.	Increase in capital investment	1,100	-	-	-	-	-
7.	Increase in Current Assets	250	-	-	-	-	-
8.	Interests	-	109	88	64	38	13
9.	Repayment of loan	-	150	180	205	205	205
B.	**TOTAL DISPOSALS**	**1,350**	**259**	**268**	**269**	**243**	**218**
C.	**OPENING BALANCE**	-	-	**68**	**265**	**596**	**935**
D.	**NET SURPLUS**	-	**68**	**197**	**331**	**339**	**346**
E.	**CLOSING BALANCE**	-	**68**	**265**	**596**	**935**	**1,281**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs.Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	68	181	453	884	1,323
2.	Surplus from operations	113	272	431	439	446
	NET WORTH:	**181**	**453**	**884**	**1,323**	**1,769**
3.	Subsidy	337	337	337	337	337
4.	Loan Account	795	615	410	205	-
A.	**TOTAL LIABILITIES**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**
1.	Gross Fixed Assets	1,100	1,100	1,100	1,100	1,100
	Less Depreciation	105	210	315	420	525
	NET BLOCK	**995**	**890**	**785**	**680**	**575**
2	Current Assets	250	250	250	250	250
3.	Cash & Bank Balance	**68**	**265**	**596**	**935**	**1,281**
B.	**TOTAL ASSETS**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**

Supplies of Machinery & Equipments :

2. P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. M/S Coral Business Systems Pvt Ltd, 73 Zone 2 , M.P. Nagar, Bhopal

COMPUTER HARDWARE TRAINING INSTITUTE

Introduction: Computer Hardware Training Institute is an important trend of computer science. For using and operating upon the computer, software is required. Every commercial and business unit require standard and customized Hardware Engineer. Presently, there are many enterprises dealing with Hardware and software development. In the given unit, software packages would be made regarding accounting, finance control, material management, production planning & control annual. So now- a-days Computer Hardware institute is good unit in the I.T Sector.

Market: Considering the growth and demand of micro and personal computers in the country, there will be good demand for computer Servicing Unit in the country. This industry has grown both in terms of physical output as well as range of products introduced in the market.

Suggested Capacity: The minimum economic capacity of a Computer Hardware Training Centre shall be two shifts and each shift working our will be 4 hours.

Course Duration	90 days or 3 Months
Yearly	4 Batch
Each Batch	50 nos. Students.
Course Fee	Rs.8,000/-per student
Total capacity	200 students per annum.

Raw Materials: Raw materials are to be sourced mainly from the open market. At present availability and supply of the raw materials is not problem e.g ink, Computer Paper, , Hardware materials like Ribbon, cartridge, CD, HDD, Mother Board, Logic Card, RAM, FDD, DVD writer, Mouse, Keyboard and other networking materials and cost will be **Rs.6.00 lacks (P.A)** and the above materials to be collect from Computer Link, Swasti Market, Agartala, P&S Unique System, Lake Road, Agartala, Computer Source, H.G.B.Road, Agartala.

Power: The unit will need 26 KW of total connected load at 40/440 volts 50 Hz, AC, 3 phase & 4 wire. The annual consumption of power is estimated at 39600 KW Hrs costing Rs. 83,160/- at the installed capacity

Fuel: The unit will use its own production of sludge Bricks as fuel. For better results annually 30,000 kilograms of coal shall be mixed with sludge Bricks. The coal shall cost Rs. 2,10,000/-.

Water: The unit will need 1000 Liters of water per day. The cost of drawing the required water is shown with power cost.

Manpower: The unit will provide employment to 9-10 persons including staff for factory supervision, administration and sales, labour, watch & ward etc. and all man power to be arranged from local area.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	84,000/-
2.	Administrative & Sales Staff	3	1,26,000/-
3.	Engineer/faculty	4	1,80,000/-
4.	Unskilled Worker	2	60,000/-
	Total:	10	4,50,000/-

CAPITAL COST ESTIMATE:

Land & Building: **On Rent**

Plant & Machinery :

Slno	Description	Qty	Rate	Amount
1.	Instruments,	1 set	Rs.25,000/-	25,000/-
2.	1 KVA online UPS	1 no	Rs.65,000/-	65,000/-
3.	Laser Printer	1no	Rs.25,000/-	25,000/-
4.	Desktop Computer	25 nos	Rs.25,000/-	6,25,000/-
5.	1.5Ton AC	2no	Rs.60,000/-	60,000/-
				Total Rs.8,00,000/-

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 1,30,000/-
b)	Furniture & Miscellaneous others	Rs. 6,40,000/-
c)	Interior Decoration	Rs. 2,50,000/-
4.	Provision for contingencies	**Rs. 50,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 30,000/-**
	Total Fixed Investment	**Rs. 11,00,000/-**
6.	**Working Capital**	
a)	Raw Materials (Networking Testing equipments, (Line tester), Testing equipments, RJ 45 connector, Cable and Networking software)	Rs. 1,79,167/-
b)	Fuel	Rs. 17,500/-
c)	Power	Rs. 6,930/-
d)	Salary & Wages	Rs. 37,500/-
e)	Miscellaneous expenses	Rs. 8,903/-
	Total:	**Rs. 2,50,000/-**
	Total Project Cost:	**Rs. 13,50,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 9,45,000/-	Rs. 8,10,000/-
b.	Subsidy	Rs. 3,37,000/-	Rs. 4,72,500/-
c.	Promoters contribution	Rs. 68,000/-	Rs. 67,500/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**2,808**	**3,276**	**3,744**	**3,744**	**3,744**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	1,290	1,505	1,720	1,720	1,720
(b)	Fuel	126	147	168	168	168
(c)	Power	50	58	67	67	67

(d)	Wages & Salaries	450	461	473	485	497
(e)	Repair & Maintenance	44	44	44	44	44
(f)	Administrative overheads	10	105	110	116	122
(g)	Selling expenses	421	491	562	562	562
(h)	Depreciation	105	105	105	105	105
(i)	Interest	109	88	64	38	13
	Total:	2,695	3,004	3,313	3,305	3,298
	Total Variable Cost	**1,887**	**2,201**	**2,517**	**2,517**	**2,517**
4.	**Annual profit**	**113**	**272**	**431**	**439**	**446**
5.	Return on investment	8.37%	20.15%	31.93%	32.52%	33.04%
6.	Return on sales	4.02%	8.30%	11.51%	11.73%	11.91%
7.	Annual Contribution	921	-	-	-	-
8.	Break Even Point as percent of capacity	52.64%	-	-	-	-
9.	Cash accrual	218	377	536	544	551
10.	**Debt servicing capacity**	**327**	**465**	**600**	**582**	**564**
11.	Repayment of Composite Loan	150	180	205	205	205
12.	**Debt serviced**	**259**	**268**	**269**	**243**	**218**
13.	**Pay Back Period**	**2 years 7 months 21 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.02:1**				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	68	-	-	-	-	-
2.	Increase in subsidy	337	-	-	-	-	-
3	Increase in loan	945	-	-	-	-	-
4.	Depreciation	-	105	105	105	105	105
5.	Profit before interests	-	222	360	495	477	459
A.	**TOTAL SOURCES**	**1,350**	**327**	**465**	**600**	**582**	**564**
6.	Increase in capital investment	1,100	-	-	-	-	-
7.	Increase in Current Assets	250	-	-	-	-	-
8.	Interests	-	109	88	64	38	13
9.	Repayment of loan	-	150	180	205	205	205
B.	**TOTAL DISPOSALS**	**1,350**	**259**	**268**	**269**	**243**	**218**
C.	**OPENING BALANCE**	-	-	**68**	**265**	**596**	**935**
D.	**NET SURPLUS**	-	**68**	**197**	**331**	**339**	**346**
E.	**CLOSING BALANCE**	-	**68**	**265**	**596**	**935**	**1,281**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
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4.	Loan Account	795	615	410	205	-
A.	**TOTAL LIABILITIES**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**
1.	Gross Fixed Assets	1,100	1,100	1,100	1,100	1,100
	Less Depreciation	105	210	315	420	525
	NET BLOCK	**995**	**890**	**785**	**680**	**575**
2	Current Assets	250	250	250	250	250
3.	Cash & Bank Balance	**68**	**265**	**596**	**935**	**1,281**
B.	**TOTAL ASSETS**	**1,313**	**1,405**	**1,631**	**1,865**	**2,106**

Supplies of Machinery & Equipments :

1 P&S UNIQUE SYSTEM, Lake Road, Agartala, Pin;799001,
2. Computer Link, Swasti Market, Agartala, Tripura
3. M/S Coral Business Systems Pvt Ltd, 73 Zone 2 , M.P. Nagar, Bhopal

CHEMICAL BASED INDUSTRIES

RE-REFINNING OF USED LUBRICANTS

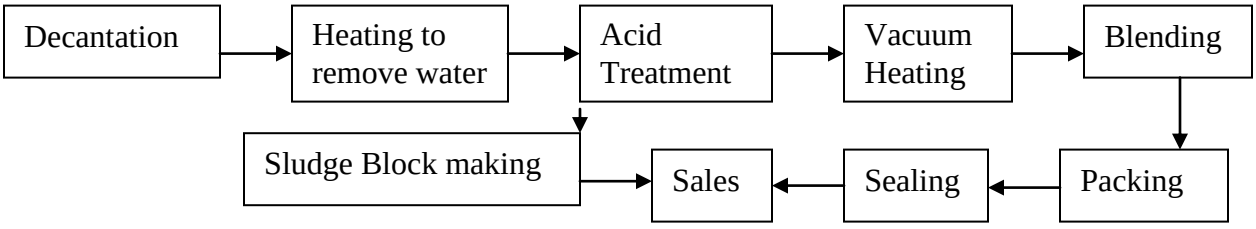
Introduction: Indian crude oil normally certain higher percentage of wax and hence extraction of Lubricants oil from Indian Guide oil is uneconomic. Thus Lubricants Oils are imported to India either as finished product or as Guide Oil. Lubricants Oils are never destroyed. They only get contaminated by dust, dirt, carbon particles, moisture, etc. Such contaminated Lubricating oils can be refined and hence made equivalent or better than original Lubricants oil. Re- refined Lubricants Oils are prone to oxidation. Otherwise these are better than original Lubricants. Re-refining of Lubricants can also reduce the pressure on the Country by way of import of Lubricants either as finished goods or as Crude Oil. Bureau of Indian standards has IS:9048 for re-fined automotive internal combustion engine lubricants oil. Lubricants & Grease are not destroyed in nature and hence reprocessing of contaminated oil helps in reducing water pollution.

Market: Refined Lubricating oil show almost the same properties as original Lubricants. Its colour is better than original Lubricants. With proper additives Refined Lubricants show better properties than original Lubricants. Refined Lubricants are normally blended with Original Lubricants and as base material for Grease manufacturing. Low viscosity & poor-point refined oils are used as transformer oil, Axle oil, Spindle oil, Hydraulic oil, etc. refined oils are by far cheaper than Original Lubricants as these are derived from used Lubricants. Lubricating oil manufacturing companies purchase quality Refined oils for blending in their factories. This is the best avenue for selling Refined Lubricants. Grease manufacturers & transformer industry also purchase refined lubricants. Thus there is good marketing scope for Refined Lubricants.

Installed Capacity: It is assumed that the unit will operate for single shift of 8 hours per day for 300 working days per annum. Based on this assumption the annual installed capacity is estimated at 90,000 liters of Refined Lubricating oil by refining 1,50,000 Liters of contaminated Lubricants.

Process of Manufacture: Used lubricating oil obtained in 200 Liter capacity Drum contain water and moisture. These are transferred by pump into a shallow dehydration vessel. The vessel is heated to remove water and moisture from oil. The moisture free oil is transferred to Lead Lined Acid treatment plant. Here ileum is sprayed on oil so that contaminants form a sludge and sink below the oil. Oil is drained from the Tap in the side of the plant while sludge is removed from the opening at the bottom of the plant. The sludge is treated with lime and placed inside moulds to form fuel bricks. The oil is mixed with Fullers earth and heated under vacuum. It is then allowed to settle for about four hours. The oil is then filtered in a Filter Press to separate activated clay from oil. The refined oil is prone to oxidation and discoloration and hence mixed with Antioxidant.

Flow Sheet:



Raw Materials: Used and Contaminated Lubricating Oil shall be the principal raw-material of the unit. Oil & Natural Gas Commission and Indian Oil Corporation are the principal generator of such Lubricating Oils. They sell their contaminated oil against tender. Various automobile repairing and servicing units also remove contaminated oils from vehicles. These are also available, through in smaller quantities. Other raw materials like 98% ileum, Fullers earth & Lime are to be purchased from sources outside the state. Chinabazar in Kolkata have a large number of suppliers of these chemicals. The requirement at the installed capacity and annual costs of raw materials are shown below:

Sl.No.	Raw Materials	Quantity	Annual Cost
1.	Contaminated Lubricants	1,50,000 Liters	13,20,000/-
2.	98% Ileum	14,000 Liters	3,85,000/-
3.	Fullers earth	9,000 kilograms	4,95,000/-
4.	Lime	900 kilograms	9,900/-
5.	Antioxidants	900 Liters	1,48,500/-
6.	Seals for Drums	460 Nos.	6,600/-
		Total:	**23,65,000/-**

Power: The unit will need 26 KW of total connected load at 40/440 volts 50 Hz, AC, 3 phase & 4 wire. The annual consumption of power is estimated at 39600 KW Hrs costing Rs. 87,318/- at the installed capacity.

Fuel: The unit will use its own production of sludge Bricks as fuel. For better results annually 30,000 kilograms of coal shall be mixed with sludge Bricks. The coal shall cost Rs. 2,31,000/-.

Water: The unit will need 1000 Liters of water per day. The cost of drawing the required water is shown with power cost.

Manpower: The unit will need the following manpower at the annual cost shown alongside. The chemist of the unit need to be well experienced in Lubricating oil testing.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	92,400/-
2.	Administrative & Sales Staff	3	1,38,600/-
3.	Skilled Worker	3	1,98,000/-
4.	Unskilled Worker	2	66,000/-
	Total:	9	4,95,000/-

CAPITAL COST ESTIMATE:

1.	Land & Building : Covered Area 232 sq. Mtrs:	On rent
2.	**Plant & Machinery**:	
a)	One 200 Ltr. Capacity Decantation tank	Rs. 60,000/-
b)	One 800 Ltr. Capacity Dehydration vessel	Rs. 30,000/-
c)	One 800 Ltr. Capacity Lead-lined Acid Treatment Plant	Rs. 2,70,000/-
d)	One 500 Ltr capacity vacuum heating plant	Rs. 3,00,000/-
e)	One 24 Plate Oil Filter Press	Rs. 90,000/-
f)	One 500 Ltr capacity blending plant	Rs. 60,000/-
g)	Testing equipments	Rs. 90,000/-
h)	Coal/ sludge fired furnace	Rs. 60,000/-
	Total:	Rs. 9,60,000/-

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 88,000/-
b)	Water Installation	Rs. 27,500/-
c)	Furniture & Miscellaneous others	Rs. 1,04,500/-
		Rs. 2,20,000/-
4.	Provision for contingencies	**Rs. 55,000/-**
5.	Preliminary & Preoperative Exp	Rs. 55,000/-
	Total Fixed Investment	**Rs. 12,90,000/-**
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 1,97,084/-
b)	Fuel	Rs. 19,250/-
c)	Power	Rs. 7,623/-
d)	Salary & Wages	Rs. 41,250/-
e)	Miscellaneous expenses	Rs. 9,793/-
	Total:	**Rs. 2,75,000/-**
	Total Project Cost:	**Rs.15,65,000/-**

Means of Finance

		Urban	**Rural**
a.	Composite loan under PMEGP	Rs. 10,95,500/-	Rs. 9,39,000/-
b.	Subsidy	Rs. 3,91,250/-	Rs. 5,47,750/-
c.	Promoters contribution	Rs. 78,250/-	Rs. 78,250/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3089**	**3604**	**4118**	**4118**	**4118**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	1419	1655	1892	1892	1892
(b)	Fuel	139	162	184	184	184
(c)	Power	55	64	74	74	74
(d)	Wages & Salaries	495	507	520	534	546
(e)	Repair & Maintenance	48	48	48	48	48
(f)	Administrative overheads	110	115	121	128	134
(g)	Selling expenses	463	540	618	618	618
(h)	Depreciation	129	129	129	129	129
(i)	Interest	125	101	74	44	15
	Total:	2983	3321	3660	3651	3640
	Total Variable Cost	**2021**	**2357**	**2694**	**2694**	**2694**
4.	**Annual profit**	**106**	**283**	**458**	**467**	**478**
5.	Return on investment	8.37%	20.15%	31.93%	32.52%	33.04%
6.	Return on sales	3.43%	8.30%	11.51%	11.73%	11.91%
7.	Annual Contribution	1068	-	-	-	-
8.	Break Even Point as percent of capacity	54.04%	-	-	-	-
9.	Cash accrual	235	412	587	596	607

10.	**Debt servicing capacity**	**360**	**513**	**661**	**640**	**622**
11.	Repayment of Composite Loan	178	207	237	237	237
12.	**Debt serviced**	**303**	**308**	**311**	**281**	**252**
13.	**Pay Back Period**	**2 years 7 months 21 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.02:1**				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	78	-	-	-	-	-
2.	Increase in subsidy	391	-	-	-	-	-
3	Increase in loan	1096	-	-	-	-	-
4.	Depreciation	-	129	129	129	129	129
5.	Profit before interests	-	231	384	532	511	493
A.	**TOTAL SOURCES**	**1565**	**360**	**513**	**661**	**640**	**622**
6.	Increase in capital investment	1290	-	-	-	-	-
7.	Increase in Current Assets	275	-	-	-	-	-
8.	Interests	-	125	101	74	44	15
9.	Repayment of loan	-	178	207	237	237	237
B.	**TOTAL DISPOSALS**	**1565**	**303**	**308**	**311**	**281**	**252**
C.	**OPENING BALANCE**	**-**	**-**	**57**	**262**	**612**	**971**
D.	**NET SURPLUS**	**-**	**57**	**205**	**350**	**359**	**370**
E.	**CLOSING BALANCE**	**-**	**57**	**262**	**612**	**971**	**1341**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	78	184	467	925	1392
2.	Surplus from operations	106	283	458	467	478
	NET WORTH:	**184**	**467**	**925**	**1392**	**1870**
3.	Subsidy	391	391	391	391	391
4.	Loan Account	918	711	474	237	-
A.	**TOTAL LIABILITIES**	**1493**	**1569**	**1790**	**2020**	**2261**
1.	Gross Fixed Assets	1290	1290	1290	1290	1290
	Less Depreciation	129	258	387	516	645
	NET BLOCK	**1161**	**1032**	**903**	**774**	**645**
2	Current Assets	275	275	275	275	275
3.	Cash & Bank Balance	**57**	**262**	**612**	**971**	**1341**
B.	**TOTAL ASSETS**	**1493**	**1569**	**1790**	**2020**	**2261**

Suppliers of Machinery:

1. Technochem Development & Projects, 3 Fern Place, Ballygunge, Kolkata-700019.
2. North eastern Chemical Corporation, Near Harisabha, SC Goswami Road, Guwahati-788001.
3. Amalgamated, 6, Muralidhar Sen Lane, Kolkata-700073.

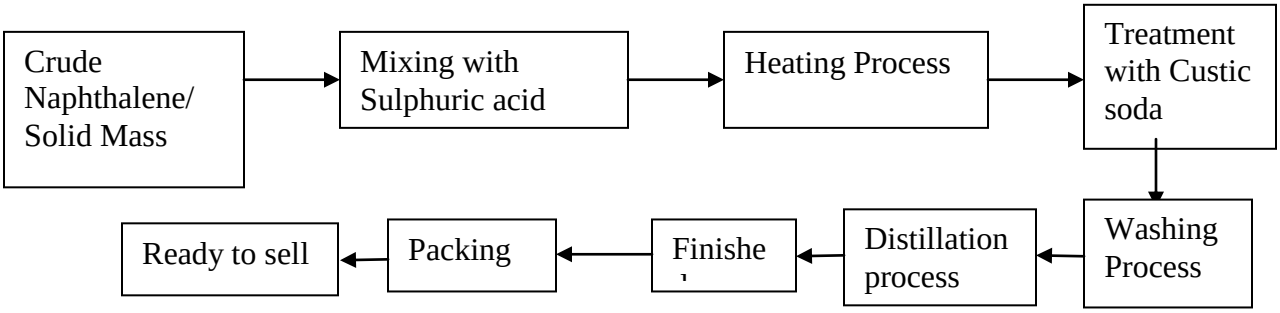
NAPTHALENE BALLS

Introduction: Naphthalene balls are used as a moth repellant. Now para-discloro benzene in cubcake form is also used for the purpose. The scheme aims at utilizing crude Naphthalene available from coke oven batteries of steel plants. However, availability of raw materials must be ensured before setting up the unit.

Market Potential: The demand of Naphthalene balls is increasing gradually with the increase of population and urbanization and improving living conditions. In view of this there seems good scope of the product.

Production process: The crude Naphthalene is available either in the from of solid mass or liquid. The latter contains 40 to 60 per cent Naphthalene. The crude Naphthalene is put into kettle and meted by steam or suitable heating arrangements and then treated with sulphuric acid. The acid treated Naphthalene is then neutralized with caustic soda and washed several times with water in hot condition. After treatment with caustic soda, Naphthalene is purified by steam distillation or sub-limitation process. The powered Naphthalene is covered to balls.

Process flow:



Production Target: Assuming that the Unit will operate for Single Shift of 8 hours per day for 300 working days the annual installed capacity is estimated 240 M.T Naphthalene Balls and estimated sales value will be **Rs.34,65,000/-**

Manpower: The unit will need the following manpower, all of whom are locally available.

1)	3 skilled worker	Rs. 13,200/-
2)	Manager/Account	Self
3)	Sales man	Rs. 4,400/-
4)	2 unskilled worker	Rs. 6,600/-
		Total: Rs. 24,200/-

Raw Materials: The principal raw material of the Unit is crude naphthalene, Custic soda, Suphuric acid, and packing materials, which is available from Hundustan Steel Ltd, Durgapur, West Bengal and Indian Oil Corporation, Haldia Refinery, West Bengal. The annual requirements and costs of raw-materials will be **Rs. 21,03,200/-**

Power: The Unit shall need a total connected load of 20KW at 400/440 Volts, 50 Hz, AC, 3 Phase Four wires. The power is available from the State Electricity Supply Corporation Grid. The annual consumption of power is estimated at 48,000 KWHrs costing **Rs. 1,13,400/-**

Water: The Unit will need 5000 Liters of water per day, which may be available at the site.

Capital Cost Estimate:

A.	**Fixed Capital**			
1)	**Land & Building**	1,000 sq.ft.		**Rented**
2)	**Plant & Machinery**			
i)	Steam jaeketed M.S Kettle with stirrer of 3HP Motor capacity 2500ltrs for acid treatment		2nos	Rs. 2,37,500/-
ii)	Steam jaeketed M.S Kettle with stirrer of 3HP Motor with complete accessories capacity 2000 ltrs for neutralization 2500ltrs for acid treatment		2nos	Rs.2,24,000/-
Iii)	Steam jaeketed M.S Kettle with condenser and steam injection etc and other complete accessories capacity 2000 ltrs.		1no	Rs. 93,750/-
iv)	Sulphuric acid storage tanks capacity 10MT		2nos	Rs. 1,04,000/-
V)	Delivery pump and 1HP motor and pipeline etc			
vi)	Edge runner 4" dia 7.5 HP motor with complete accessories		2nos	Rs. 70,750/-
vii)	Misc. tools and equipments			Rs. 50,000/-
viii)	Boiler 100PSI 250kg, evaporation rate with chimmey etc.		LS	Rs. 1,20,000/-
ix)	Installation of Machinery			Rs. 1,20,000/-
x)	Office furniture and other assets			Rs. 2,40,000/-
xi)	Electrification			Rs.1,20,000/-
		Total Fixed Capital		**Rs.13,80,000/-**
B.	**Working Capital**			
1)	Raw Material			Rs. 1,76,000**/-**
2)	Salary & Wages			Rs. 24,200/-
3)	Utilities			Rs. 9,900/-
4)	Misc expenses			Rs. 23,650/-
		Total Working Capital:-		**Rs. 2,33,750/-**
		Total Project Cost:		**Rs.16,13,750/-**

Means of Finance:		**Urban**	**Rural**
1)	Composite loan @ 70%	11,29,800/-	9,68,400/-
2)	Promoters contribution @5%	80,700/-	80,700/-
3)	Subsidy @ 25% / 35%	4,03,500/-	5,64,900/-
4)	Debt equity ratio	2.33:1	1.5:1

Profitability: **(Rs. in Thousands)**

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized in percent	60	70	80	80	80
2.	**Annual Sales Realization in Rs.**	**2079**	**2425**	**2772**	**2772**	**2772**
3.	**Annual Costs in Rs**					
a)	Raw Materials	1267	1478	1690	1690	1690
b)	Utilities	71	83	95	95	95
c)	Selling expenses	43	51	58	58	58
	Variable Cost	**1381**	**1612**	**1843**	**1843**	**1843**
d)	Wages & Salaries	142	166	190	190	190
e)	Administrative expenses	158	185	211	211	211
f)	Depreciation	135	135	135	135	135
g)	Interest on Composite Loan	111	99	72	43	14
	Fixed & Semi Variable Cost	540	585	608	579	550
4.	**Total Cost**	**1927**	**2197**	**2451**	**2422**	**2393**
5.	**Annual Profit**	**152**	**228**	**321**	**350**	**379**
6.	Return on Investment	9.94%	15.88%	22.05%	23.95%	25.84%
7.	Return on sales	7.16%	9.81%	11.92%	12.94%	13.97%
8.	**Annual contribution**	698				
9.	**Break Even Point in percent**	**46.93**				
10.	Cash accrual	287	363	456	485	514
11.	Debt Servicing Capacity	398	462	528	528	528
12.	Repayment of Composite Loan	183	213	245	245	244
13.	Debt Serviced	294	312	317	288	258
14.	**Pay Back Period**	**1 year 4 month 9 days**				
15.	**Debt Service Coverage Ratio**	**1.36:1**				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	81	-	-	-	-	-
2.	Increase in loan	1130	-	-	-	-	-
3.	Subsidy	403	-	-	-	-	-
4.	Depreciation	-	135	135	135	135	135
5.	Profit before interests	-	263	327	393	393	393
A.	**TOTAL SOURCES**	**1614**	**398**	**462**	**528**	**528**	**528**
6.	Increase in capital investment	1380	-	-	-	-	-
7.	Increase in working capital	234	-	-	-	-	-
8.	Interest	-	111	99	72	43	14

9.	Repayment of Term Loan	-	183	213	245	245	244
B.	**TOTAL DISPOSALS**	**1614**	**294**	**312**	**317**	**288**	**258**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**104**	**254**	**465**	**705**
D.	**NET SURPLUS**	**NIL**	**104**	**150**	**211**	**240**	**270**
E.	**CLOSING BALANCE**	**NIL**	**104**	**254**	**465**	**705**	**975**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	81	233	461	782	1132
2.	Surplus from operation	152	228	321	350	379
	NET WORTH:	**233**	**461**	**782**	**1132**	**1511**
3.	**Subsidy**	**403**	**403**	**403**	**403**	**403**
4.	Term loan outstanding	947	734	489	244	-
	TOTAL LIABILITIES	**1583**	**1598**	**1674**	**1779**	**1914**
1.	Gross Block	1380	1380	1380	1380	1380
	Less Depreciation	135	270	405	540	675
	NET BLOCK	**1245**	**1110**	**975**	**840**	**705**
2.	Working capital	234	234	234	234	234
3.	Cash & Bank Balance	104	254	465	705	975
	TOTAL ASSETS	**1583**	**1598**	**1674**	**1779**	**1914**

Suppliers of Machinery

1.Rank & Co, A135 Industrial Area Wazirpur, New Delhi,

2. Machneil and Magor Ltd, 28 Kasturba Gandhi Marg, Delhi-10

GUM/ADESIVE

Introduction: There are number of adhesive preparation in the market today, supplemented by hundreds of available formulations, which are capable of holding materials together by surface attachment. Office Gum paste are adhesive preparations which are based on gum Arabic, acacia and starch. These are generally used as moderately quick setting adhesives for general office use, bonding of paper products. Starch adhesives are low in cost, non toxic and are available in large quantities. There are various varieties of starch adhesives depending upon their origin and processing condition corn starch is the chief source but Tapioca, wheat flour and potato starch are also used.

Market Demand; There is a good demand for office gum paste, adhesive of good quality. It is a consumable item used regularly by different offices, educational institutions etc.

Process of Manufacture: Following are the main components of adhesive :

1. The active component including the materials which products gelatinization.
2. Solvent , generally water is used a solvent
3. Modifying agents like borax, Formaldehyde, proteins etc.
4. Plasticizers which impart flexibility

A paste can be obtained by dissolving gum Arabic in cold water. It is quick drying and is stable over prolonged period. The best method for preparation of gum mucilage is to have baskets made of wires which can be lowered in the vats containing cold water. More and more gum is added in the baskets as the dissolution proceeds and required density s obtained. The mucilage after dissolution is filtered and then stored for further clarification. The ratio of water to gum varies from 2:1 to 3:1. for better quality little quantities of borax and sodium benzoate are added. Through different starches are used for gum paste manufacture but potato starch is good for making office paste which can be stored for longer period. Mixing of main ingredients with other components is carried out in vessel made of enameled iron dipped in outer vessel containing water chemicals which are added generally are Borax, it increases adhesion, viscosity rate of track and speed of production. Sodium hydroxide accentuates borax action and also improves penetration. Urea works the opposite of borax thus enabling manufacturers to use gummy products.

Production Target: Assuming that the Unit will operate for Single Shift of 8 hours per day for 300 working days the annual installed capacity is estimated 60,000 nos. of gum/adhesive packet per annum is envisaged in this project and estimated sales value will be Rs.6,62,500 on 100% capacity and 60% capacity it will be Rs.3,97,500/-

Raw Materials: The main raw materials required for manufacture of gum/ adhesive are Gum Arabic/ Gum, Starch, Chemicals (Borax, Urea, calcium, Choride, Zinc Chloride etc), Plastic/Glass Bottles of different sizes to be sourced from open local markets and out side of Tripura and cost will be Rs.12,000/- per month.

Power: The unit shall not need any power for the process. A 1 KW connection at 200/220 volts, 50 Hz, AC & 3 wire in Single phase may suffice. The annual consumption of power is estimated at 2190 KW Hrs costing Rs. 3,942/-.

Water: Requirement of water mainly for washing and cleaning of room etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Fuel: The Unit shall need 12,800 Kilograms of coal at a cost of Rs.89,600/- per annum for the Up- Draft Kiln.

Manpower: The unit required two skilled persons for production and one person for sale and one unskilled worker and all manpower is readily available in Tripura. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	48,000/-
2.	Skilled worker	2	84,000/-
3.	Unskilled Worker	1	30,000/-
	Total:	4	1,62,000/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 56 sq. Mtrs.	**On Rent**
2)	**Plant & Machinery**	
2.	**Plant & Machinery**	
(a) M.S Tank (b) Wooden Vat, Stirer with 5HP meter (c) wooden case		Rs.50,000/-
(d) Baby boiler (e) Plastic drums, wire basket		
Miscellaneous Fixed Assets		
a)	Electrification	Rs. 7,500/-
b)	Water Installation	Rs. 7,500/-
c)	Furniture & Miscellaneous others	Rs. 10,000/-
		Rs. 25,000/-
4.	Provision for contingencies	**Rs. 3,750/-**
5.	Preliminary & pre-operative expenses	**Rs. 6,250/-**
	Total Fixed Capital	**Rs. 85,000/-**
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 9,250/-
b)	Fuel	Rs. 22,400/-
c)	Power	Rs. 986/-
d)	Salary & Wages	Rs. 40,500/-
e)	Miscellaneous expenses	Rs. 1,864/-
	Total:	**Rs. 75,000/-**
	Total Project Cost:	**Rs. 1,60,000/-**

Means of Finance:		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs.1,12,000/-	Rs. 96,000/-
b.	Subsidy	Rs. 40,000/-	Rs. 56,000/-
c.	Promoters contribution	Rs. 8,000/-	Rs. 8,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**397**	**463**	**530**	**530**	**530**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	22	26	30	30	30
(b)	Fuel	54	63	72	72	72
I	Power	3	4	4	4	4
(d)	Wages & Salaries	162	166	170	174	179
(e)	Repair & Maintenance	3	3	3	3	3
(f)	Administrative overheads	50	53	55	58	61
(g)	Selling expenses	60	69	80	80	80
(h)	Depreciation	8	8	8	8	8
(i)	Interest	13	118	8	5	2
	Total:	**375**	**403**	**430**	**434**	**439**
	Total Variable Cost	139	162	186	186	186
4.	**Annual profit**	**22**	**60**	**100**	**96**	**91**
5.	Return on investment	13.75%	37.50%	62.50%	60.00%	56.88%
6.	Return on sales	5.54%	12.96%	18.87%	18.11%	17.17%
7.	Annual Contribution	258	-	-	-	-
8.	Break Even Point	54.88%	-	-	-	-
9.	Cash accrual	30	68	108	104	99
10.	**Debt servicing capacity**	**43**	**79**	**116**	**109**	**101**
11.	Repayment of Loan	17	20	25	25	25
12.	**Debt serviced**	**30**	**31**	**33**	**30**	**27**
13.	**Pay Back Period**	**2 years 1 month 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.97:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	8	-	-	-	-	-
2.	Increase in subsidy	40	-	-	-	-	-
3	Increase in loan	112	-	-	-	-	-
4.	Depreciation	-	8	8	8	8	8
5.	Profit before interests	-	35	71	108	101	93
A.	**TOTAL SOURCES**	**160**	**43**	**79**	**116**	**109**	**101**
6.	Increase in capital investment	**85**	-	-	-	-	-
7.	Increase in Current Assets	75	-	-	-	-	-

8.	Interests	-	13	11	8	5	2
9.	Repayment of loan	-	17	20	25	25	25
B.	**TOTAL DISPOSALS**	**160**	**30**	**31**	**33**	**30**	**27**
C.	**OPENING BALANCE**	**-**	**-**	**13**	**61**	**144**	**223**
D.	**NET SURPLUS**	**-**	**13**	**48**	**83**	**79**	**74**
E.	**CLOSING BALANCE**	**-**	**13**	**61**	**144**	**223**	**297**

Projected Balance sheet:

Sl. No.	**Description**	**Amount in Rs. Thousand as at the end of the**				
		1st Yr.	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**
1.	Capital Account of the Promoter	8	30	90	190	286
2.	Surplus from operations	**22**	**60**	**100**	**96**	**91**
	NET WORTH:	**30**	**90**	**190**	**286**	**377**
3.	Subsidy	40	40	40	40	40
4.	Loan Account	95	75	50	25	-
A.	**TOTAL LIABILITIES**	**165**	**205**	**280**	**351**	**417**
1.	Gross Fixed Assets	85	85	85	85	85
	Less Depreciation	8	16	24	32	40
	NET BLOCK	**77**	**69**	**61**	**53**	**45**
2	Current Assets	75	75	75	75	75
3.	Cash & Bank Balance	**13**	**61**	**144**	**223**	**297**
B.	**TOTAL ASSETS**	**165**	**205**	**280**	**351**	**417**

Address ; Anil Starch Products Ltd, Anil Road, PB no 93, Ahmedabad 2,
Supreme Chemicals Industries, 55.56 Industrial Estate, Pologround, Indore.

ALUM

Introduction: Alum, in chemistry, is a term given to the crystallized double sulfates of the typical formula M2SO4·MIII2(SO4)3·24H2O, where M is the sign of an alkali metal (potassium, sodium, rubidium, caesium), silver or ammonium), and MIII denotes one of the trivalent metals (Aluminium, chromium, or ferric iron). They are soluble in water, have an astringent, acid, and sweetish taste, react acid to litmus, and crystallize in regular octahedra. When heated they liquefy; and if the heating be continued, the water of crystallization is driven off, the salt froths and swells, and at last an amorphous powder remains. Alum is generic name for double salts of Aluminium Sulphate with either Potassium Sulphate, Sodium Sulphate or Ammonium Sulphate. In the commercial line Aluminium Sulphate itself is also call Alum. Ferric Alum is used for water purifying to a large extent. Alum is used in paper industry. The principal raw materials are bauxite and Sulphate Acid.

Market Potential: Most of the alum produced today is used in the pulp & paper industry as well as water and wastewater treatment. It is inexpensive and effective for a broad range of treatment problems because it can function as a coagulant, flocculant, recipitant and emulsion breaker. As a coagulant and flocculant, alum removes turbidity, suspended solids and colloidal color, reduces biochemical oxygen demand (BOD) and clarifies potable, process and wastewater. The main uses of alum are: Water treatment: used as a coagulant to remove suspended solids and or some metals (eg Cr, Ba, Cu) from water (either drinking water or in waste treatment facilities). Paper sizing: used as a rosin sizing control in paper production, affects the drainage of liquor from the paper. The product has got a very good market at present as this is extensively used in water purifying. As it is also used in paper industries, there will be no difficulties in marketing the products if quality is properly controlled.

Production Target: Assuming that the Unit will operate for Single Shift of 8 hours per day for 300 working days the annual installed capacity is estimated 1500 M.T. and estimated sales value will be **Rs.34,65,000/-**

Manufacturing Process: Alum is made by dissolving bauxite in Suplphuric acid. Crude bauxite is crushed to about 1" size in jaw crusher and then fed into a pulveriser for further grinding. The powdered bauxite is charges into a lead lined M.S reaction tank. Sulphuric Acid of 60 percent concentration is added and the reaction mass is thoroughly agitated by steam. A mechanical lead lined stirrer may also be fitted to the reaction vesselfor uniform agitation. The temperature is kept at 105^0C to 115^0C by means of steam. Normally an excess of bauxite is fed achieve maximum conversion three of four hours required for completing the reaction. When the specific gravity reaches upto 60^0 TW, the solution is run to large setting tank. After setting the clear soln of Aluminium Sulphate is decanted or filtered in wooden plate and frame press. The pressed cake is washed with water, and washing can be used in next batch. In the setting tanks, flaked glue is also added to facilitate coagulation of suspended materials, if pure Aluminium Sulphate is required, barium sulphide is added in the form of Black Ash to reduce ferric Sulphate to the ferrous state and effect precipitation of iron. The clear liquor is drawn from the setting tank and sent concentrating 8 to 10 hrs are required for concentrating. The concentrated liquid is taken at this stage to the moulds, where it solidifies on further cooling.

Manpower: The unit will need the following manpower, all of whom are locally available.

1)	3 skilled worker	Rs. 13,200/-
2)	Manager/Account	Self
3)	Sales man	Rs. 4,400/-
4)	2 unskilled worker	Rs. 6,600/-
		Total: Rs. 24,200/-

Raw Materials: The principal raw material of the Unit is bauxite, Sulphuric acid and Glue and packing materials, which is available from D.C.M Chemical Works, najafgarh Road, New Delhi 15 and Hindustan Copper limited, Ghatsila, Bihar. The annual requirements and costs of raw-materials will be **Rs. 21,12,000/-**

Power: The Unit shall need a total connected load of 20KW at 400/440 Volts, 50 Hz, AC, 3 Phase Four wires. The power is available from the State Electricity Supply Corporation Grid. The annual consumption of power is estimated at 48,000 KWHrs costing **Rs. 1,13,400/-**

Water: The Unit will need 5000 Liters of water per day, which may be available at the site.

Capital Cost Estimate:

A.	**Fixed Capital**		
1)	**Land & Building**	1,000 sq.ft.	**Rented**
2)	**Plant & Machinery**		
i)	Jaw Crusher Single toggle type size 5"x9 with managanese steel Jaws & side plates heavy duty fly wheel capacity 1 ton per hour complete with 5HP motor and starter.	:2nos	Rs. 1,30,000/-
ii)	Pulveriser, swing hammer type 32' size suction blowers, air separator : complete with 40HP motor and starte	:1no	Rs. 1,25,000/-
iii)	Digester M.S lead lined tank, capacity 3500 litres inside lead covered with acid proof bricks fitted with mechanical stirrer operated by 5HP motor along with reduction gear assembly lead bonded steam coils and discharge values.	:2nos	Rs. 1,60,000/-
iv)	Setting Tank 3500 ltrs capacity conical bottom and lined from inner side with acid proof brick with discharge value and other fittings.	:3nos	Rs. 95,000/-
v)	Evaporation tanks M.S lead lined fitted with led bonded steam heating coils capacity 3500 ltrs.	:3nos	Rs 1,10,000/-
vi)	Boiler coal/ oil-fired capacity 300 kg/ hrs smoke tube multi tubular vertical working pressure 100 psi complete with box, seeam, generator, water heater motorized pump, overhead tanks standard boiler mounting fitting fire doors and bars ash plates chimney and refectory etc.		Rs. 1,62,000/-
vii)	Water softening plant		Rs. 35,000/-
viii)	Sulphuric Acid Storage Tank, 25 MT capacity made from M.S. lead lined with acid feeding and discharge attachments etc.	2nos	Rs 1,00,000/-
ix)	Acid Pump complete with 3HP motor		Rs. 25,000/-
x)	Chain Hoist & Changing bucket with supporting guarders		Rs. 26,000/-
xii)	Chemical balance, glass ware & equipments for chemical laboratory		Rs. 35,000/-
xiii)	Cost of Moulds		Rs. 39,000/-
xiv)	Installation of Machinery		Rs. 1,03,000/-
xv)	Office furniture and other assets		Rs. 1,45,000/-
xvi)	Electrification		Rs. 90,000/-
		Total Fixed Capital	**Rs.13,80,000/-**
B.	**Working Capital**		
1)	Raw Material		Rs. 1,76,000**/-**
2)	Salary & Wages		Rs. 24,200/-
3)	Utilities		Rs. 9,900/-
4)	Misc expenses		Rs. 23,650/-
		Total Working Capital:-	**Rs. 2,33,750/-**
		Total project cost:	**Rs.16,13,750/-**

Means of Finance:		**Urban**	**Rural**
1)	Composite loan @ 70%	11,29,800/-	9,68,400/-
2)	Promoters contribution @5%	80,700/-	80,700/-
3)	Subsidy @ 25% / 35%	4,03,500/-	5,64,900/-
4)	Debt equity ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized in percent	60	70	80	80	80
2.	**Annual Sales Realization in Rs.**	**2079**	**2425**	**2772**	**2772**	**2772**
3.	**Annual Costs in Rs**					
a)	Raw Materials	1267	1478	1690	1690	1690
b)	Utilities	71	83	95	95	95
c)	Selling expenses	43	51	58	58	58
	Variable Cost	**1381**	**1612**	**1843**	**1843**	**1843**
d)	Wages & Salaries	142	166	190	190	190
e)	Administrative expenses	158	185	211	211	211
f)	Depreciation	135	135	135	135	135
g)	Interest on Composite Loan	111	99	72	43	14
	Fixed & Semi Variable Cost	540	585	608	579	550
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5.	**Annual Profit**	**152**	**228**	**321**	**350**	**379**
6.	Return on Investment	9.94%	15.88%	22.05%	23.95%	25.84%
7.	Return on sales	7.16%	9.81%	11.92%	12.94%	13.97%
8.	**Annual contribution**	698				
9.	**Break Even Point in percent**	**46.93**				
10.	Cash accrual	287	363	456	485	514
11.	Debt Servicing Capacity	398	462	528	528	528
12.	Repayment of Composite Loan	183	213	245	245	244
13.	Debt Serviced	294	312	317	288	258
14.	**Pay Back Period**	**1 year 4 month 9 days**				
15.	**Debt Service Coverage Ratio**	**1.36:1**				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	81	-	-	-	-	-
2.	Increase in loan	1130	-	-	-	-	-
3.	Subsidy	403	-	-	-	-	-
4.	Depreciation	-	135	135	135	135	135
5.	Profit before interests	-	263	327	393	393	393
A.	**TOTAL SOURCES**	**1614**	**398**	**462**	**528**	**528**	**528**

6.	Increase in capital investment	1380	-	-	-	-	-
7.	Increase in working capital	234	-	-	-	-	-
8.	Interest	-	111	99	72	43	14
9.	Repayment of Term Loan	-	183	213	245	245	244
B.	**TOTAL DISPOSALS**	**1614**	**294**	**312**	**317**	**288**	**258**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**104**	**254**	**465**	**705**
D.	**NET SURPLUS**	**NIL**	**104**	**150**	**211**	**240**	**270**
E.	**CLOSING BALANCE**	**NIL**	**104**	**254**	**465**	**705**	**975**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	81	233	461	782	1132
2.	Surplus from operation	152	228	321	350	379
	NET WORTH:	**233**	**461**	**782**	**1132**	**1511**
3.	**Subsidy**	**403**	**403**	**403**	**403**	**403**
4.	Term loan outstanding	947	734	489	244	-
	TOTAL LIABILITIES	**1583**	**1598**	**1674**	**1779**	**1914**
1.	Gross Block	1380	1380	1380	1380	1380
	Less Depreciation	135	270	405	540	675
	NET BLOCK	**1245**	**1110**	**975**	**840**	**705**
2.	Working capital	234	234	234	234	234
3.	Cash & Bank Balance	104	254	465	705	975
	TOTAL ASSETS	**1583**	**1598**	**1674**	**1779**	**1914**

Suppliers of Machinery

1.Batliboi & Co, 26 R.N. Mukharjee Road, Calcutta -1,

2. N.V Industries (P) ltd, Sudha Park, Raja S.C Mallick Road, kolkata -2

BLEACHING POWDER

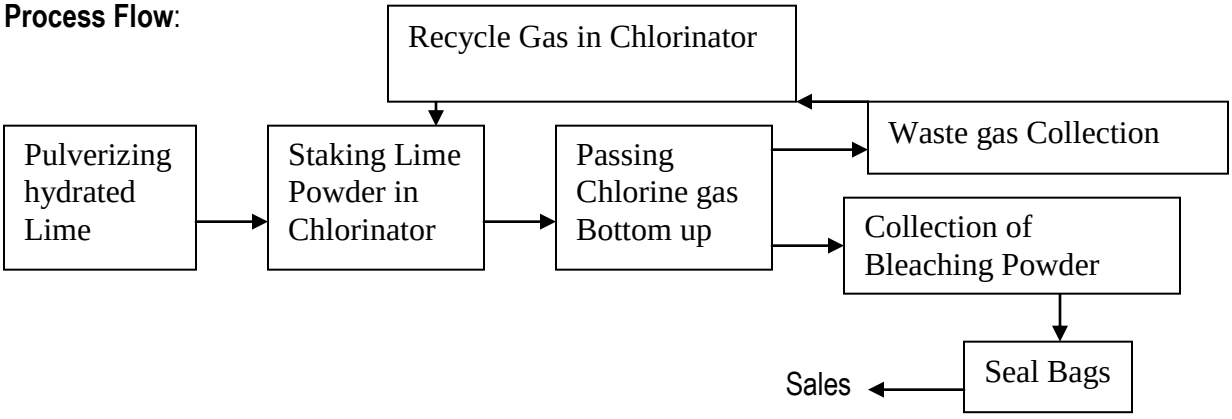
Introduction: Bleaching Powder, though an oxidizing Agent is used for its available Chlorine. It is $Caocl_2$ containing about 35 percent chlorine. Chlorine is used primarily for Bleaching. In purification of water Bleaching Powder is used in large quantities. By using Chlorine produced in Paper mills and Hydrated Lime Bleaching Powder can be manufactured.

Market: Public Health Engineering and potable water supply Departments are bulk consumers of Bleaching powder for purification of water. When Bleaching powder is dissolved in water the reaction yields ionized Calcium Chloride and hypochlorite. The Oct ion decomposes liberating Oxygen and hence it oxidizes. Chlorination of water also destroys pathogenic microorganisms. In Tripura bulk of bleaching powder is used for purification of water for public supply. In the state efforts are on to ensure supply of drinking water to all inhabited Village & Towns by 2012. This may enhance the demand for Bleaching Powder to the order of 7,00,000 kilograms per annum from the present level of 3,00,000 kilograms, there is no manufacturer of Bleaching Powder in the State. The entire quantity of Bleaching Powder Consumed is now bought from West Bengal.

Capacity: it is assumed that the unit will operate for single shift of 8 hours per day for 300 working days per annum. Considering this and the capacity of Batch Type chlorinator the annual installed capacity is estimated at 300 Tonnes per annum.

Process of Manufacture: The hydrated lime (CaOH) purchased from Lime kilns shall be pulverized in a Disintegrator. The Lime Powder shall be staked in perforated shelves of chlorinator. The Chlorine Cylinder valve shall be opened so that Chlorine passes through hydrated lime power to form Bleaching powder from bottom to top. The exhaust gas from the top of the chlorinator shall pass through a sieve to collect dust and the clean gas will be collected in Cylinder so that the gas can be re-circulated with fresh chlorine through the chlorinator. The Chlorinator is opened and Bleaching Powder is collected in Laminated Jute bags after testing.

Process Flow:



Raw- Materials: Chlorine and Hydrated Lime are the raw materials required by the Unit. Chlorine shall be available from Hindustan Paper Corporation Units at Panchgram and Jagiroad. It is al;so available from Durgapur Chemicals Limited, 6, Little Russel Street, Kolkata- 700 071 and Kay Kay Corporation, 5/1 Clive Row, 3rd Floor, Room No.-79, Kolkata- 700 001. Hydrated Lime is available from one local Unit, Meghalaya and the Kay Kay Corporation, Kolkata. Laminated Jute Bags are available locally. The annual requirements at the installed capacity and costs are shown below.

Sl. No.	Name of the Raw Material	Quantity	Annual Cost
1.	Hydrated Lime	200 Tonnes	Rs. 33,00,000/-
2.	Chlorine	110 Tonnes	Rs. 8,76,700/-
3.	Printed & Laminated Jute Bags	6300 Numbers	Rs. 2,74,200/-
		Total	**Rs. 44,54,450**/-

Power: The Unit shall need 5 KW of total Connected Power Load at 200/220 Volts, 50 Hz, AC, Single phase & 3 wire. The annual consumption of power is estimated at 11,250 KWHrs costing Rs. 38,362/-.

Water: The reaction between Chlorine and Hydrated Lime need to be completed at a temperature below 50°C and hence the chlorinator need to be cooled by water. The cooling water shall be recycled. The unit will need 3000 Liters of water per day, cost of which is included in power cost.

Manpower: The manpower required by the unit is locally available. Requirement and annual cost of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Costs
1.	Manager	1	92,400/-
2.	Sales & Administrative staff	3	1,38,600/-
3.	Skilled Worker	1	66,000/-
4.	Unskilled worker	3	99,000/-
	Total:	8	3,96,000/-

Capital Cost Estimate

1. Land & Building: Covered area 120 Square Meters — on Rent
2. Plant & Machinery
(a) One M.S. Chlorinator with perforated staking trays, water cooling system Dust extractor, Chlorin inlet valve, waste chlorine storage vessel, waste Chlorine recycling valve etc. — Rs. 6,00,000/-
(b) One Pulocrizer for preparing Hydrated Lime — Rs. 72,000/-
(c) Miscellaneous hand tools — Rs. 18,000/-
Rs. 6,90,000/-

3) **Miscellaneous Fixed Asset**
a) Electrification — Rs. 38,500/-
b) Water Installation — Rs. 16,500/-
c) Furniture & Miscellaneous others — Rs. 55,000/-
Rs. 1,10,000/-

4. Provision for contingencies — **Rs. 38,500/-**
5. Preliminary & pre-operative expenses — **Rs. 44,000/-**
Total Fixed Investment Rs.8,82,500/-

6. **Working Capital (for 3 months)**
a) Raw Materials — Rs. 11,13,612/-
b) Power — Rs. 9,591/-
c) Salary & Wages — Rs. 99,000/-
d) Miscellaneous expenses — Rs. 26,297/-
Rs. 12,48,500/-

Total Project Cost: Rs. 21,31,000/-

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 14,91,700/-	Rs. 12,78,600/-
b.	Subsidy	Rs. 5,32,750/-	Rs. 7,45,850/-
c.	Promoters contribution	Rs. 1,06,550/-	Rs. 1,06,550/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**4307**	**5025**	**5742**	**5742**	**5742**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	2673	3119	3564	3564	3564
(b)	Power	23	26	31	31	31
©	Wages & Salaries	396	406	416	427	437
(d)	Repair & Maintenance	34	34	34	34	34
(e)	Administrative overheads	110	116	121	128	134
(f)	Selling expenses	646	745	851	851	851
(g)	Depreciation	85	85	85	85	85
(h)	Interest	175	142	105	62	21
	Total:	4142	4673	5207	5182	5157
	Total Variable Cost	3342	3890	4446	4446	4446
4.	**Annual profit**	**165**	**352**	**535**	**560**	**585**
5.	Return on investment	8.59%	17.56%	26.31%	27.42%	28.54%
6.	Return on sales	3.83%	7.00%	9.31%	9.75%	10.18%
7.	Annual Contribution	965	-	-	-	-
8.	Break Even Point as percent of capacity	49.74%	-	-	-	-
9.	Cash accrual	250	437	620	645	670
10.	**Debt servicing capacity**	**425**	**579**	**725**	**707**	**691**
11.	Repayment of Loan	242	282	323	323	323
12.	**Debt serviced**	**417**	**424**	**428**	**385**	**344**
13.	**Pay Back Period**	**3 years 2 months 9 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.62:1**				

Cash Flow Statement:

(Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	106	-	-	-	-	-
2.	Increase in subsidy	533	-	-	-	-	-
3	Increase in loan	1492	-	-	-	-	-
4.	Depreciation	-	85	85	85	85	85
5.	Profit before interests	-	340	494	640	622	606

A.	**TOTAL SOURCES**	**2131**	**425**	**579**	**725**	**707**	**691**
6.	Increase in Fixed investment	**883**	-	-	-	-	-
7.	Increase in working capital	1248	-	-	-	-	-
8.	Interests	-	175	142	105	62	21
9.	Repayment of loan	-	242	282	323	323	324
B.	**TOTAL DISPOSALS**	**2131**	**417**	**424**	**428**	**385**	**345**
C.	**OPENING BALANCE**	**-**	**-**	**8**	**163**	**460**	**782**
D.	**NET SURPLUS**	**-**	**8**	**155**	**297**	**322**	**346**
E.	**CLOSING BALANCE**	**-**	**8**	**163**	**460**	**782**	**1130**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	106	271	623	1158	1718
2.	Surplus from operations	165	352	535	560	385
	NET WORTH:	**271**	**623**	**1158**	**1718**	**2303**
3.	Subsidy	533	533	533	533	533
4.	Loan Account	1250	968	645	322	-
A.	**TOTAL LIABILITIES**	**2054**	**2124**	**2336**	**2573**	**2836**
1.	Gross Fixed Assets	883	883	883	883	883
	Less Depreciation	85	170	255	340	425
	NET BLOCK	**798**	**713**	**628**	**543**	**458**
2	Current Assets	1248	1248	1248	1248	1248
3.	Cash & Bank Balance	8	163	460	782	1130
B.	**TOTAL ASSETS**	**2054**	**2124**	**2336**	**2573**	**2836**

Suppliers of Machinery:

1. Technochem Development & Projects, 3, Fern Place, Ballygunge, Kolkata-700019
   B.B. Engineering Enterprise, 166/22, B.T. Road, kolkata-700035.

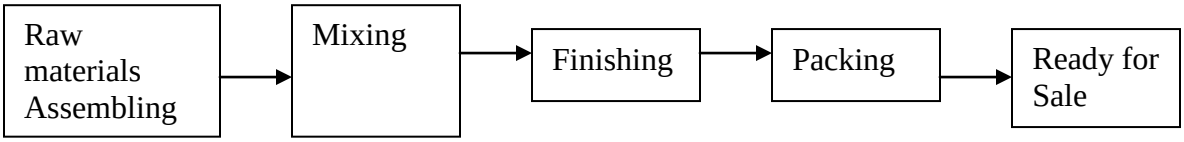
FLOOR POLISH

Introduction & Market: Floor Polish of a mixture of few waxes well distributed in a suitable solvent. With the rapid growth of sophisticated dwelling units like star hotel, tourist, resorts etc the use of floors polish is likely to pick up at a much quicker rate. Floor polish has good export potential too.

Raw Materials: The main raw materials required for floor polish are waxes soft hard such as car numb wax, japan was, moton was, paraffin wax, micro crystalline was, bees wax etc, solvents mineral turpentine, vegetable turpine oil, white spirit, card boxes etc. Thus cost would be Rs.17,82,000/- and Raw materials are to be sourced mainly from the open market at present availability in Tripura.

Process: Melt was starting with wax having the highest melting point and then add the other wax in descending order of, their melting points (around 90-95^{0}C) . Continuous stirring is required. When the wax melt become homogeneous emulsifier is added at 80^{0}C, wax soluble dyes, if desired, my be added dissolved in a suitable solvents. Charge should not be allowed to cool rapidly. It is poured in standard tin containers while still in Viscous state. Pouring is done in an air conditioned channel.

Process Flow:



Power: The unit will need a connected load of 6 KW at 400/440 volts, 50 Hz, AC, 3 phase & wire. The annual consumption of power is estimated at 13500 KWHrs costing Rs. 24,300/-.

Water: The unit will need 4 liters of Distilled Water and 500 Liters of potable water per day. It may annually cost Rs. 12,000/-.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	96,000/-
2.	Administrative & Sales Staff	2	84,000/-
3.	Skilled Worker	2	1,20,000/-
4.	Unskilled Worker	4	1,20,000/-
	Total:	9	4,20,000/-

Financial Aspect of the unit:

1)	Land & Building	**Rented**
2)	**Plant & Machinery:**	
a.	Vessel stainless still jacketed 30" dia 25"ht with electric heater capacity 75 kg	Rs. 75,000/-
b.	Air conditioner for 10"x15" chamber	Rs. 45,000/-
c.	Miscellaneous equipment such as Aluminum vessels, solvent storage tanks, enameled mugs, weighing scales & concealing equipment.	Rs. 95,000/-
	Total	**Rs.2,15,000/-**

3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 5,000/-
b)	Furniture & Miscellaneous others	Rs. 60,000/-
4.	Provision for contingencies	**Rs. 25,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 15,500/-**
		Total Rs.1,05,000/-
	Total Fixed Investment Rs.3,20,000	
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 1,97,500/-
b)	Power	Rs. 6,075/-
c)	Salary & Wages	Rs. 1,05,000/-
d)	Miscellaneous expenses	Rs. 11,425/-
		Total: **Rs. 3,20,000/-**
	Total Project Cost:	**Rs. 6,40,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs.4,48,000/-	Rs. 3,84,000/-
b.	Subsidy	Rs.1,60,000/-	Rs. 2,24,000/-
c.	Promoters contribution	Rs. 32,000/-	Rs. 32,000/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

(Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,308**	**1,526**	**1,744**	**1,744**	**1,744**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	474	553	632	632	632
(b)	Power & water	22	25	29	29	29
(c)	Wages & Salaries	372	392	411	421	432
(d)	Repair & Maintenance	12	12	12	12	12
(e)	Administrative overheads	100	105	110	116	122
(f)	Selling expenses	196	229	262	262	262
(g)	Depreciation	30	30	30	30	30
(h)	Interest	52	43	31	19	6
	Total:	**1,258**	**1,389**	**1,517**	**1,521**	**1,525**
	Total Variable Cost	692	807	923	923	923
4.	**Annual profit**	**50**	**137**	**227**	**223**	**219**
5.	Return on investment	7.81%	21.41%	35.47%	34.84%	34.22%
6.	Return on sales	3.82%	8.98%	13.02%	12.79%	12.56%
7.	Annual Contribution	616	-	-	-	-
8.	Break Even Point in percent	**55.13**	-	-	-	-
9.	Cash accrual	80	167	257	253	249
10.	**Debt servicing capacity**	**132**	**210**	**288**	**272**	**255**
11.	Repayment of Loan	68	80	100	100	100

12.	**Debt serviced**	**120**	**123**	**131**	**119**	**106**
13.	**Pay Back Period**	**2 years 9 months 10 days**				
123	**Debt Service Coverage Ratio (DSCR)**	**1.93:1**				

Cash Flow Statement: **(Rs. in Thousands)**

Sl. No.	Description	Pre-ope-rative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	32	-	-	-	-	-
2.	Increase in subsidy	160	-	-	-	-	-
3	Increase in loan	448	-	-	-	-	-
4.	Depreciation	-	30	30	30	30	30
5.	Profit before interests	-	102	180	258	242	225
A.	**TOTAL SOURCES**	**640**	**132**	**210**	**288**	**272**	**255**
6.	Increase in capital investment	**320**	-	-	-	-	-
7.	Increase in Current Assets	320	-	-	-	-	-
8.	Interests	-	52	43	31	19	6
9.	Repayment of loan	-	68	80	100	100	100
B.	**TOTAL DISPOSALS**	**640**	**120**	**123**	**131**	**119**	**106**
C.	**OPENING BALANCE**	**-**	**-**	**12**	**99**	**256**	**409**
D.	**NET SURPLUS**	**-**	**12**	**87**	**157**	**153**	**149**
E.	**CLOSING BALANCE**	**-**	**12**	**99**	**256**	**409**	**558**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	32	82	219	446	669
2.	Surplus from operations	50	137	227	223	219
	NET WORTH:	82	219	446	669	888
3.	Subsidy	160	160	160	160	160
4.	Loan Account	380	300	200	100	-
A.	**TOTAL LIABILITIES**	**622**	**679**	**806**	**929**	**1,048**
1.	Gross Fixed Assets	320	320	320	320	320
	Less Depreciation	30	60	90	120	150
	NET BLOCK	**290**	**260**	**230**	**200**	**170**
2	Current Assets	320	320	320	320	320
3.	Cash & Bank Balance	12	99	256	409	558
B.	**TOTAL ASSETS**	**622**	**679**	**806**	**929**	**1,048**

Machinery Suppliers:

1 Indian Oil Corp Ltd, Tel Bhawan, Janapath, New Dehi,

2. Montan, Japan Wax, Carnuba Wax through inputs. 3. Rank & Co , Wazirpur, Indl, Area , New Delhi.

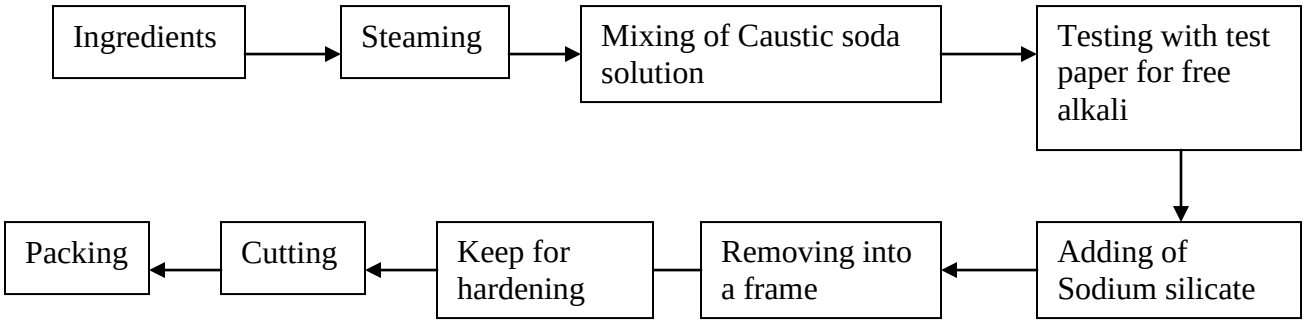
WASHING SOAP

Introduction: Washing soaps are such an important commodity that are used almost in every household or laundry. In this context, we have seen that in cities and especially in high to middle income groups, synthetic soaps are used but in village, still the traditional washing soap is used. Thus traditional soaps have a widespread market. Moreover, Khadi Commission sufficiently encourages people to set up a unit of such washing soap and especially where such units are set up in rural area with population less than 20000, then it is also exempted from sales tax permanently. Therefore, if such a project is established in rural areas and keeping a good quality of product, the project would be a success.

Market: Now a days synthetic detergents we gaining importance day by day for washing purposes. Even then the use of soap has not decreased the least. Rather there is very good scope for the growth of soap industry with the increase in population and standard of living going up.

Production Process: The production process of soap is quite an easy. Traditionally there are three procedures for making a soap bar-cold process, semi boiled soap process, fully boiled soap process. In the given unit, we shall deal with the semi-boiled process in which first the water is boiled and then caustic soda is mixed in it. Followed by sodium silicate. After mixing sodium silicate, it is boiled from 2 to 3 hrs. and then non-edible oil like Castor oil, Neem oil or Karanji oil is mixed. Later hard oil or the remain ants of edible oil is mixed. This mixture is boiled up to 60° to 70° C finally colour and perfumes are mixed in it. At last this mixture is poured in moulds and allowed to cool. In winters, it takes about six hrs. for the material to cool and in summers, it takes 2 days for the cooling process. After this, the dried pieces are sized and stamped to their respective brands and are packed for to be presented in the market. For a good quality of the soap it is important that sodium silicate must be less in quantity.

Process Flow:



Raw Material: The main raw material for this unit are fatty acid, caustic soda, sodium silicate and other chemicals. The raw materials can be obtained from local market. and annually Rs.35,40,600/-

Fuel: The unit need to generate steam for blanching clean Mushroom and to prepare brine solution. For these purposes one Commercial Gas connection shall be required. Annually 100 commercial LP Gas Cylinders costing Rs. 50,000/- may be required.

Power: The unit shall need 10 KW of total connected Load at 400/440 volts, 50 Ha, AC, 3 phase, 4 wires which is available from State Power Supply Corporation Grid. The annual consumption of power is estimated at 22,050 KW Hrs. costing Rs. 39,690/- at the installed capacity.

Manpower: The proposed unit shall need 4 persons, out of which three skilled worker and one salesman. Four of them are readily available in Tripura. The annual cost of manpower is estimated at Rs. 3,90,000/-

Sl.No.	Type of Manpower	No. of Persons	Annual Costs
1.	Manager	1	1,02,000/-
2.	Skilled worker	3	1,44,000/-
3.	Sales man	3	1,44,000/-
	Total:	**5**	**3,90,000/-**

Financial Aspect of the Unit

A) **Fixed Capital**

1) Land & Building — Rented

2) **Plant & Machinery** — 2,15,000/-

i)Boiling Kettle MS plate open type, Cylindrical pans Stirring ladles, 5 ft. long hollow tube, Soap colling frames , Soap cutting machine, Chemical laboratory.

3) **Miscellaneous Fixed Assets:**

1. Furniture & fixture — 1,00,000/-

4) Preliminary & Pre-operative expenses — 15,000/-

5) Electrification & Provision for Contingency — 15,000/-

Total fixed cost Rs: 3,45,000/-

6. **Working Capital (for 3 months)**

a)	Raw Materials	Rs. 2,95,050/-
b)	Fuel	Rs. 4,167/-
c)	Power	Rs. 3,308/-
d)	Salary & Wages	Rs. 32,500/-
d)	Miscellaneous expenses	Rs. 4,975/-
	Total:	**Rs. 3,40,000/-**
	Total Project Cost:	**Rs. 6,85,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 4,80,000/-	Rs. 4,11,000/-
b.	Subsidy	Rs. 1,71,000/-	Rs. 2,39,750/-
c.	Promoters contribution	Rs. 34,000/-	Rs. 34,250/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,370**	**3,931**	**4,493**	**4,493**	**4,493**
3.	**Annual Costs in**					
(a)	Raw Materials	2,124	2,478	2,832	2,832	2,832
(b)	Fuel	30	35	40	40	40
(c)	Power	24	28	32	32	32
(d)	Wages & Salaries	354	371	387	397	407
(e)	Repair & Maintenance	13	13	13	13	13
(f)	Administrative overheads	100	105	110	116	122
(g)	Selling expenses	506	590	674	674	674
(h)	Depreciation	35	35	35	35	35
(i)	Interest	55	45	33	20	7
	Total:	3,241	3,700	4,156	4,159	4,162
	Total Variable Cost	**2,684**	**3,131**	**3,578**	**3,578**	**3,578**
4.	**Annual profit**	**129**	**231**	**337**	**334**	**331**
5.	Return on investment	**18.83%**	**33.72%**	**49.20%**	**48.76%**	**48.32%**
6.	Return on sales	**3.83%**	**5.88%**	**7.50%**	**7.43%**	**7.37%**
7.	Annual Contribution	**686**	**-**	**-**	**-**	**-**
8.	Break Even Point	**48.72%**	**-**	**-**	**-**	**-**
9.	Cash accrual	164	266	372	369	366
10.	**Debt servicing capacity**	**219**	**311**	**405**	**389**	**373**
11.	Repayment of Composite Loan	75	90	105	105	105
12.	**Debt serviced**	**130**	**135**	**138**	**125**	**112**
13.	**Pay Back Period**	**2 years 1 month 16 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.65:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-ope-rative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	34	-	-	-	-	-
2.	Increase in subsidy	171	-	-	-	-	-
3	Increase in loan	480	-	-	-	-	-
4.	Depreciation	-	35	35	35	35	35
5.	Profit before interests	-	184	276	370	354	338
A.	**TOTAL SOURCES**	**685**	**219**	**311**	**405**	**389**	**373**
6.	Increase in capital investment	**345**	-	-	-	-	-
7.	Increase in Current Assets	340	-	-	-	-	-
8.	Interests	-	55	45	33	20	7
9.	Repayment of loan	-	75	90	105	105	105
B.	**TOTAL DISPOSALS**	**685**	**130**	**135**	**138**	**125**	**112**
C.	**OPENING BALANCE**	**-**	**-**	**189**	**265**	**532**	**796**
D.	**NET SURPLUS**	**-**	**89**	**176**	**267**	**264**	**261**
E.	**CLOSING BALANCE**	**-**	**89**	**265**	**532**	**796**	**1,057**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	34	163	394	731	1,065
2.	Surplus from operations	**129**	**231**	**337**	**334**	**331**
	NET WORTH:	**163**	**394**	**731**	**1,065**	**1,396**
3.	Subsidy	171	171	171	171	171
4.	Loan Account	405	315	210	105	-
A.	**TOTAL LIABILITIES**	**739**	**880**	**1,112**	**1,341**	**1,567**
1.	Gross Fixed Assets	345	345	345	345	345
	Less Depreciation	35	70	105	140	175
	NET BLOCK	**310**	**275**	**240**	**205**	**170**
2	Current Assets	340	340	340	340	340
3.	Cash & Bank Balance	**89**	**265**	**532**	**796**	**1,057**
B.	**TOTAL ASSETS**	**739**	**880**	**1,112**	**1,341**	**1,567**

Supplier Machines & Equipments

1. M/s Jaybharat Engineering Works, Lalkuan, Delhi.
2. M/s Huma Traders, In front of Thana Shajanabad, Shahjanabad, Bhopal – 462001.

Suppliers of the Raw Materials

Local suppliers can be contacted for non edible oil, salt stone etc.

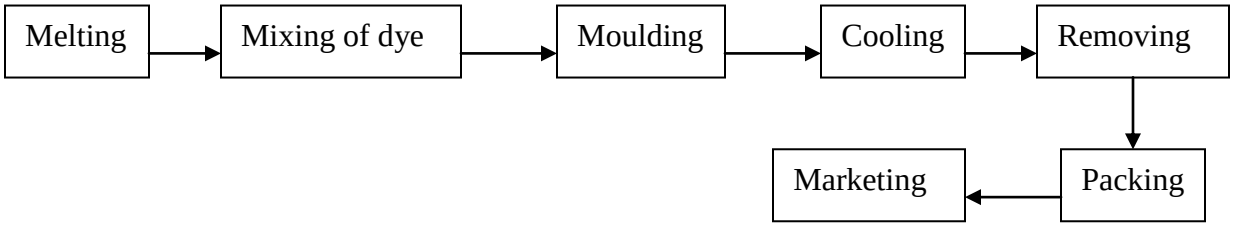
CANDLE MAKING

Introduction: Wax candles are cylindrical structures made of wax and used for illumination purposes in houses etc. in the event of power failures as also in hotels, restaurants, churches for decorative purposes. Wax candles are available in ordinary as well as fancy shapes & sizes. They vary in size from a few mm to about 15 cms. in dia and from 4 to 100 cms. In length and are available in both white as well as coloured shades. Candles being an item of mass consumption have a good market demand and there exists sufficient scope for new units to come up.

Market: Although it is an age of electrical illumination however light out of wax candles has got its charm and pleasure. Candles are mass consumption item and are widely used for lighting and illumination in household, churches, and other religious places, hotels and restaurants etc. the demand for candle is increasing day by day due to its various uses. Artistic and decorative candles also have very good expected potentials.

Manufacturing Process: Wax candles: Paraffin wax and stearic acid (5 to 10% of wax) are melted in a mild steel or aluminium vessel in a furnace. If desired the dye (wax soluble is mixed to the molten mass with stirring to disperse it uniformly. The wick is inserted in the candle moulding machine and the molten mass is poured in the channels leading to the upper parts of the mould. The moulds are cooled by circulating water. The candles are allowed to set and subsequently removed by ejections, the wick threads are cut and the candles packed.

Process Flow:



Capacity: Operating single shift of 8 hrs, per day for 300 working days. The unit will have annual production of 8,00,000 pcs. @ Rs. 2.50. Annual cost: will be 20,00,000.Annual sales realization Rs. 20,00,000/-.

Raw Material:

i)	Paraffin wax	2,79,550/-
ii)	Stearic Acid	9,000/-
iii)	Dyes	3,500/-
iv)	Wick Hanks	3,500/-
v)	Packaging material & others	8,500/-
	Total cost of Raw Material	**Rs.2,95,050/-**

Raw Material: The main raw material for this unit are Paraffin wax, Stearic Acid, Dyes, Wick Hanks and Packing materials & others chemicals. The above raw materials can be obtained from local market. The main raw material for the unit in paraffin wax. Raw material can be obtained from local market as well as from the following address:

1) K.C. Daw & Co, 17 R.G. Kar Road, Kolkata – 4
2) Rajasthan Candle Works, 167 N.S. Road, 2nd Floor, kolkata – I.

Fuel: The unit need to generate steam for blanching clean Mushroom and to prepare brine solution. For these purposes one Commercial Gas connection shall be required. Annually 100 commercial LP Gas Cylinders costing Rs. 50,000/- may be required.

Power: The unit shall need 10 KW of total connected Load at 400/440 volts, 50 Ha, AC, 3 phase, 4 wires which is available from State Power Supply Corporation Grid. The annual consumption of power is estimated at 22,050 KW Hrs. costing Rs. 39,690/- at the installed capacity.

Water: The unit will need 1000 ltrs. Per day which is readily available at the location. The annual cost of water is estimated Rs. 350/-.

Manpower: Two skilled person and one sales man will need for the unit, all of whom are locally available. The annual cost of manpower is estimated Rs. 3,90,000/-.

Sl.No.	Type of Manpower	No. of Persons	Annual Costs
1.	Manager	1	54,000/-
2.	Skilled worker	4	1,68,000/-
3.	Sales man	3	1,08,000/-
	Unskilled worker	**2**	**60,000/-**
	Total		**3,90,000/-**

Financial Aspect of the Unit:

A.	**Fixed Cost**			
1)	Land & Building	400 sq.ft.		Rented
2)	Plant & Machinery			
i)	Candle moulding machine complete with following sets & size			
a)	6" x 1" (with 300 moulds)	2		70,500/-
b)	8' x 3" (with 200 moulds)	2		70,000/-
ii)	Wax melting aluminium vessels	4		30,000/-
iii)	Coal/ wood fired furnace			15,000/-
iv)	Misc. items like jugs, weighing seaks etc.			2,500/-
v)	Testing equipments, physical balance, calipers etc.			12,000/-
			Total	**Rs.2,00,000/-**
3)	Furniture & fixture			Rs. 1,00,000/-
4)	Preliminary & pre-operative expense.			Rs. 15,000/-
5)	Misc. fixed assets			Rs. 20,000/-
			Total fixed Cost:	**Rs. 3,45,000/-**

6. **Working Capital (for 3 months)**

a)	Raw Materials	Rs. 2,95,050/-
b)	Fuel	Rs. 4,167/-
c)	Power	Rs. 3,308/-
d)	Salary & Wages	Rs. 32,500/-
d)	Miscellaneous expenses	Rs. 4,975/-
	Total:	**Rs. 3,40,000/-**
	Total Project Cost:	**Rs. 6,85,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 4,80,000/-	Rs. 4,11,000/-
b.	Subsidy	Rs. 1,71,000/-	Rs. 2,39,750/-
c.	Promoters contribution	Rs. 34,000/-	Rs. 34,250/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,370**	**3,931**	**4,493**	**4,493**	**4,493**
3.	**Annual Costs in**					
(a)	Raw Materials	2,124	2,478	2,832	2,832	2,832
(b)	Fuel	30	35	40	40	40
(c)	Power	24	28	32	32	32
(d)	Wages & Salaries	354	371	387	397	407
(e)	Repair & Maintenance	13	13	13	13	13
(f)	Administrative overheads	100	105	110	116	122
(g)	Selling expenses	506	590	674	674	674
(h)	Depreciation	35	35	35	35	35
(i)	Interest	55	45	33	20	7
	Total:	3,241	3,700	4,156	4,159	4,162
	Total Variable Cost	**2,684**	**3,131**	**3,578**	**3,578**	**3,578**
4.	**Annual profit**	**129**	**231**	**337**	**334**	**331**
5.	Return on investment	**18.83%**	**33.72%**	**49.20%**	**48.76%**	**48.32%**
6.	Return on sales	**3.83%**	**5.88%**	**7.50%**	**7.43%**	**7.37%**
7.	Annual Contribution	**686**	**-**	**-**	**-**	**-**
8.	Break Even Point	**48.72%**	**-**	**-**	**-**	**-**
9.	Cash accrual	164	266	372	369	366
10.	**Debt servicing capacity**	**219**	**311**	**405**	**389**	**373**
11.	Repayment of Composite Loan	75	90	105	105	105
12.	**Debt serviced**	**130**	**135**	**138**	**125**	**112**
13.	**Pay Back Period**	**2 years 1 month 16 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.65:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	34	-	-	-	-	-
2.	Increase in subsidy	171	-	-	-	-	-
3	Increase in loan	480	-	-	-	-	-
4.	Depreciation	-	35	35	35	35	35
5.	Profit before interests	-	184	276	370	354	338
A.	**TOTAL SOURCES**	**685**	**219**	**311**	**405**	**389**	**373**
6.	Increase in capital investment	**345**	-	-	-	-	-
7.	Increase in Current Assets	340	-	-	-	-	-
8.	Interests	-	55	45	33	20	7
9.	Repayment of loan	-	75	90	105	105	105
B.	**TOTAL DISPOSALS**	**685**	**130**	**135**	**138**	**125**	**112**
C.	**OPENING BALANCE**	**-**	**-**	**189**	**265**	**532**	**796**
D.	**NET SURPLUS**	**-**	**89**	**176**	**267**	**264**	**261**
E.	**CLOSING BALANCE**	**-**	**89**	**265**	**532**	**796**	**1,057**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	34	163	394	731	1,065
2.	Surplus from operations	**129**	**231**	**337**	**334**	**331**
	NET WORTH:	**163**	**394**	**731**	**1,065**	**1,396**
3.	Subsidy	171	171	171	171	171
4.	Loan Account	405	315	210	105	-
A.	**TOTAL LIABILITIES**	**739**	**880**	**1,112**	**1,341**	**1,567**
1.	Gross Fixed Assets	345	345	345	345	345
	Less Depreciation	35	70	105	140	175
	NET BLOCK	**310**	**275**	**240**	**205**	**170**
2	Current Assets	340	340	340	340	340
3.	Cash & Bank Balance	**89**	**265**	**532**	**796**	**1,057**
B.	**TOTAL ASSETS**	**739**	**880**	**1,112**	**1,341**	**1,567**

NAIL POLISH

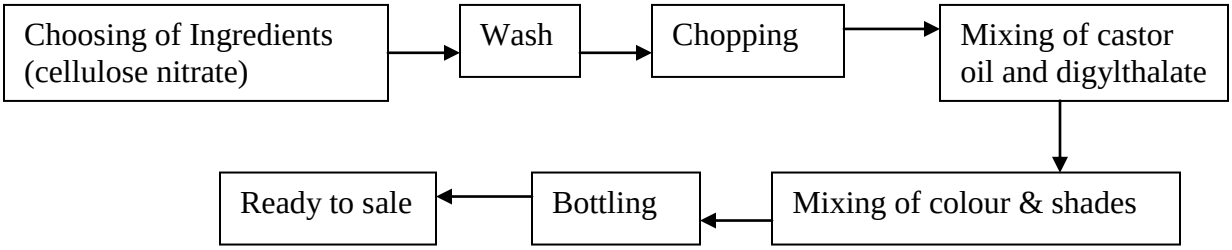
Introduction & Market: One of the major beauty cosmetics for girls and ladies are- nail polish. Nail polish is used by women of every section of the society. There is a wide range of nail polish from Rs. 27/- a bottle to Rs. 450/- depending on the purchasing power. This is a product of high demand and low investment. Starting this unit at a small level, can still yield satisfactory profits.

Production process: There are different formulate for the making of nail polish and according to these formulae there are different proportion of ingredients required. According to the most famous procedure of making nail polish, first of all take photographic film or cellulose Nitrate, wash it well and chop into small pieces and then dissolve into the solvent of either, ethyle alcohol or emyle acitate etc. Later castor oil and digylthalate are mixed in it, so that after the nail polish is applied, it does not get removed easily. Later colours and shades are mixed in it according to dustic. This mixture is later put into bottles and presented for markets. The tradition for mulae for making nail paint is following:

1.	Cellulose nitrate	5 part
2.	Dibutyle thalate (plastisizer)	25 part
3.	Loban	20 part
4.	Lakh	10 part
5.	Camphor	20 part
6.	Acetone	25 part
7.	Etyle alcohol	7 part
8.	Colour	7.5 part

According to requirement changes might be brought and other accepted chemicals might as well as used.

Process Flow:



Production Target: In the given project, nail polish of various quality are proposed to be produced. In this project around 72,000 bottles would be produced in a year. In the market there is a wide range of nail polishes starting from Rs. 27/- to Rs. 450/- and since this unit aims at the local customers (including lower, middle income group) therefore the cost of each bottle would be Rs. 17/- making the net income around Rs. 12,24,000/-.

Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department and approximately it will be cost Rs.19,500/- per annum.

Water: Requirement of water mainly for washing and cleaning of Raw Jute, Silk Screen print developing etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower: The unit will provide employment to 5 persons including staff and engineers for factory administration and sales, labour etc. and all man power to be arrange from local area. Monthly requirement and cost of manpower is shown below:

1.	Manager cum Supervisor	Self	Self
2.	Skilled labour	2nos	Rs.20,000/-
3.	Office Boy	1 no	Rs. 2,000/-
4.	Sales Representative	1no	Rs. 3,000/-
		Total	**Rs.25,000/-**

Financial Aspect of the Unit:

Fixed Capital

1)	Land & building	500 sq.ft.	Rented
2)	Plant & Machinery		
a)	Chemical Mixer, stirrer, stainless steel tanks, weighting balances laboratory apparatus and automatic liquid filling machine etc. would all cost		1,05,700/-
b)	Furniture & fixture:-		30,000/-
c)	Electrification & water installation		5,300/-
d)	Preliminary & pre-operative expenses		15,000/-
		Total fixed cost: Rs.	**1,56,000/-**

Miscellaneous Fixed Assets:

1.	Chair & Working Table	Rs.35,000/-
2.	Fan & Lighting and wearing	Rs.10,000/-
3.	Interior decoration	**Rs.30,000/-**
		Total: **Rs.75,000/-**

Preliminary & Preoperative Exp.:

1.	Preparation of Project profile	Rs.2,000/-
2.	Legal Exp	Rs.1,000/-
3.	Sign Board	Rs.1,000/-
4.	Printing & Stationery exp	Rs. 500/-
	Total:	**Rs.4,500/-**

Fixed Capital : Rs.2,35,500/-

Working Capital (P.m)

1.	Salary & Wages	Rs. 25,000/-
2.	Administrative expenses	Rs. 12,424/-
3.	Selling expenses	Rs. 3,000/-
4.	Raw Materials	Rs.2,00,000/-
5.	Utilities	Rs. 3,500/-
	Total:	**Rs.2,43,924/-**

Total Cost of the Project : Rs.4,94,424/-

Means of Finance :

			Urban		Rural
a.	**Composite loan under PMEGP**	**70%**	**Rs.3,35,597/-**	**60%**	**Rs.2,87,654/-**
b.	**Subsidy**	**25%**	**Rs.1,19,856/-**	**35%**	**Rs.1,67,799/-**
c.	**Margin Money**	**5%**	**Rs. 23,971/-**	**5%**	**Rs. 23,971/-**
		Total	**Rs.4,79,424/-**		**Rs. 4,79,424/-**
d.	**Debt Equity Ratio**		**2.33:1**		**1.5:1**

Profitability: (Rs. in Thousands)

Sl.No	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60**	**70**	**80**	**80**	**80**
2.	**Annual Sales Rs.**	**19,44,000**	**22,68,000**	**25,92,000**	**25,92,000**	**25,92,000**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
(b)	Utilities	25,200	29,400	33,600	33,600	33,600
(c)	Selling expenses	21,600	25,200	28,800	28,800	28,800
4	**Variable Cost**	**14,86,800**	**17,34,600**	**19,82,400**	**19,82,400**	**19,82,400**
(a)	Wages & Salaries	1,80,000	2,10,000	2,40,000	2,40,000	2,40,000
(b)	Administrative expenses	89,453	1.04,362	1,19,270	1,19,270	1,19,270
(c)	Depreciation	23,550	23,550	23,550	23,550	23,550
(d)	Interest on Composite Loan	38,548	31,179	22,675	13,605	4,535
5	**Fixed & Semi Variable Cost**	**3,31,551**	**3,69,091**	**4,05,495**	**3,96,425**	**3,87,355**
6	**Total Cost**	**18,18,351**	**21,03,691**	**23,87,895**	**23,78,825**	**23,69,755**
7.	**Annual profit**	**1,25,649**	**1,64,309**	**2,04,105**	**2,13,175**	**2,22,245**
8	Return on investment					
9.	Return on sales					
10.	Annual Contribution	**4,57,200**	**5,33,400**	**6,09,600**	**6,09,600**	**6,09,600**
11	Break Even Point as percent of capacity	**43.51**	**48.44**			
12	Cash accrual	1,49,199	1,87,859	2,22,655	2,23,725	2,45,795
13.	**Debt servicing capacity**	**1,87,749**	**2,19,038**	**2,50,330**	**2,50,330**	**2,50,330**
14	Repayment of Composite Loan	54,420	63,491	72,562	72,562	72,562
15.	**Debt serviced**	**92,968**	**94,670**	**95,237**	**86,167**	**77,097**
16	**Pay Back Period**	**2 years 7 month 6 days**				
17.	**Debt Service Coverage Ratio (DSCR)**	**4.6:1**				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			60%	70%	80%	80%	80%
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	23,971	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	3,35,597	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	1,19,856	NIL	NIL	NIL	NIL	NIL
4.	Depreciation		23,550	23,550	23,550	23,550	23,550
5.	Profit before interests		1,64,197	1,95,488	2,26,780	2,26,780	2,26,780
A.	**TOTAL SOURCES**	**4,79,424**	**1,87,747**	**2,19,038**	**2,50,330**	**2,50,330**	**2,50,330**
6.	Increase in capital investment	**2,35,500**	NIL	NIL	NIL	NIL	NIL
7.	Increase in working capital	2,43,924	NIL	NIL	NIL	NIL	NIL
8.	Interests	NIL	38,548	31,179	22,675	13,605	4,535
9.	Repayment of loan	NIL	54,420	63,491	72,562	72,562	72,562
B.	**TOTAL DISPOSALS**	**4,79,424**	**92,968**	**94,670**	**95,237**	**86,237**	**77,097**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**
D.	**NET SURPLUS**	**NIL**	**94,779**	**1,24,368**	**1,55,093**	**1,64,163**	**1,73,233**
E.	**CLOSING BALANCE**	**NIL**	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**	**7,71,636**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	23,971	1,49,620	3,13,929	5,18,034	7,31,209
2.	Surplus from operations	**1,25,649**	**1,64,309**	**2,04,105**	**2,13,175**	**2,22,245**
	NET WORTH:	1,49,620	3,13,929	5,18,034	7,31,209	**9,53,454**
3.	Composite loan	2,81,177	2,17,686	1,45,124	72,562	nil
4.	Subsidy	1,19,856	1,19,856	1,19,856	1,19,856	1,19,856
A.	**TOTAL LIABILITIES**	**5,50,653**	**6,51,471**	**7,83,014**	**9,23,627**	**10,73,310**
1.	Gross Block	2,35,500	2,35,500	2,35,500	2,35,500	2,35,500
	Less Depreciation	23,550	47,100	70,650	94,200	117750
2	**NET BLOCK**	**211950**	**188400**	**164850**	**141300**	**117750**
3	Current Assets	243924	243924	243924	243924	243924
4.	Cash & Bank Balance	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**	**7,71,636**
B.	**TOTAL ASSETS**	**5,50,653**	**6,51,471**	**7,83,014**	**9,23,627**	**10,73,310**

WASHING POWDER

Introduction & Market: Washing powder is used to clean utensils. Previously ash and clay was used for the same purpose but for cleanliness and safety of hands, washing powder's growing demand is justified. Washing powder is used not only in cities but in villages as well. Apart from established names in this field such as of Vim, Odopic etc. there are popular local brands as well like Saibaba, Sunny, Shivshakti etc. washing powder is not a very expensive affair, more over it is an integral part of our daily cleaning works, hence if this project is started on district level it would be rather profitable. If in the beginning the product is popularized by home delivery through sales agents, bigger market can be found for washing powder later.

Production Target: The project aims at producing 25,000 kg of cleaning powder.

Production Process: Washing powder can be produced both manually and by machines. The given project would be established by the use of machines which are as follow:

Sl.No.	Machines/ equipments
1.	Horizontal mixer (with motor)
2.	Socket and chain guard
3.	Sealing machine for jute bags
4.	Sealing machine for polybags
5.	Weighing balance
6.	Sales tax over machines installation charges, traveling etc.

Financial Aspects of the Project:

A. Fixed capital

1)	Land & building	Rented
2)	**Plant & Machinery** Horizontal mixer, Socket and chain guard Sealing machine for jute poly bags, Weighing balances.	**Rs.45,000/-**
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 7,500/-
b)	Water Installation	Rs. 5,000/-
c)	Furniture & Miscellaneous others	Rs. 7,500/-
		Rs. 20,000/-
4.	Provision for contingencies	**Rs. 5,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 5,000/-**
	Total Fixed Capital	**Rs. 75,000/-**

B. Working Capital:

1) Raw Material

Sl.No.	Raw Materials/ packing Material	Annual Cost (Rs.)
1.	Dolomite powder	1,97,000/-
2.	Acid slery	1,30,000/-
3.	Soda ash	27,650/-
4.	T.S.P.	25,225/-
5.	Salt	55,750/-

6.	Perfume/Aromatic Material	2,83,500/-
7.	Packing material	1,56,000/-
	Total	8,75,125/-

Salary & Wages:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	60,000/-
2.	Skilled worker	3	1,26,000/-
3.	Unskilled Worker	3	90,000/-
	Total:	7	2,76,000/-

Power: The unit shall need 25 KW of total connected Load at 200/220 volts, 50 Ha, AC, single phase, 3 wire. The power is available from State Power Supply Corporation. The annual consumption of power is estimated at 4050 KW Hrs. costing Rs. 7,290/-.

Fuel: For pre-cooking the unit shall need a commercial LPG connection. Annually 20 cylinders costing Rs. 10,000/- shall be consumed at the installed capacity.

Water: The daily requirement of water is estimated at 500 Liters which may be readily available at the site.

6. **Working Capital (for 3 months)**

a)	Raw Materials	Rs. 2,18,781/-
b)	Power	Rs. 1,823/-
c)	Salary & Wages	Rs. 69,000/-
d)	Miscellaneous expenses	Rs. 396/-
	Total:	Rs. 2,90,000/-
	Total Project Cost	**Rs .3,65,000/-**

Means of Finance

		Urban	Rural
a.	Composite loan under PMEGP	Rs. 2,56,000/-	Rs. 2,19,000/-
b.	Subsidy	Rs. 91,000/-	Rs. 1,27,750/-
c.	Promoters contribution	Rs. 18,000/-	Rs. 18,250/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1,116**	**1,302**	**1,488**	**1,488**	**1,488**
3.	**Annual Costs in**					
(a)	Raw Materials	525	613	700	700	700
(b)	Power	5	6	7	7	7
(c)	LPGas	6	7	8	8	8
(d)	Wages & Salaries	240	254	267	274	281
(e)	Repair & Maintenance	3	3	3	3	3

(f)	Administrative overheads	64	67	69	73	77
(g)	Selling expenses	167	195	223	223	223
(h)	Depreciation	7	7	7	7	7
(i)	Interest	29	24	17	10	3
	Total:	1,046	1,176	1,301	1,305	1,309
	Total Variable Cost	**703**	**821**	**938**	**938**	**938**
4.	**Annual profit**	**70**	**126**	**187**	**183**	**179**
5.	Return on investment	**19.18%**	**34.52%**	**51.23%**	**50.14%**	**49.04%**
6.	Return on sales	**6.27%**	**9.68%**	**12.57%**	**12.30%**	**12.03%**
7.	Annual Contribution	**413**	**-**	**-**	**-**	**-**
8.	Break Even Point as percent of capacity	**49.83%**	**-**	**-**	**-**	**-**
9.	Cash accrual	77	133	194	190	186
10.	**Debt servicing capacity**	**106**	**157**	**211**	**200**	**189**
11.	Repayment of Composite Loan	41	50	55	55	55
12.	**Debt serviced**	**70**	**74**	**72**	**65**	**58**
13.	**Pay Back Period**	**2 years 2 months 22 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.55:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-ope-ra-tive Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	18	-	-	-	-	-
2.	Increase in subsidy	91	-	-	-	-	-
3	Increase in loan	256	-	-	-	-	-
4.	Depreciation	-	7	7	7	7	7
5.	Profit before interests	-	99	150	204	193	182
A.	**TOTAL SOURCES**	**365**	**106**	**157**	**211**	**200**	**189**
6.	Increase in Fixed Assets	**75**	-	-	-	-	-
7.	Increase in Current Assets	290	-	-	-	-	-
8.	Interests	-	29	24	17	10	3
9.	Repayment of loan	-	41	50	55	55	55
B.	**TOTAL DISPOSALS**	**365**	**70**	**74**	**72**	**65**	**58**
C.	**OPENING BALANCE**	**-**	**-**	**36**	**119**	**258**	**393**
D.	**NET SURPLUS**	**-**	**36**	**83**	**139**	**135**	**131**
E.	**CLOSING BALANCE**	**-**	**36**	**119**	**258**	**393**	**524**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	18	88	214	401	584
2.	Surplus from operations	70	126	187	183	179
	NET WORTH:	**88**	**214**	**401**	**584**	**763**
3.	Subsidy	91	91	91	91	91
4.	Loan Account	215	165	110	55	-
A.	**TOTAL LIABILITIES**	**394**	**470**	**602**	**730**	**854**
1.	Gross Fixed Assets	75	75	75	75	75
	Less Depreciation	7	14	21	28	35
	NET BLOCK	**68**	**61**	**54**	**47**	**40**
2	Current Assets	290	290	290	290	290
3.	Cash & Bank Balance	**36**	**119**	**258**	**393**	**524**
B.	**TOTAL ASSETS**	**394**	**470**	**602**	**730**	**854**

WASHING BLUE

Introduction: In India, out of all the materials used for washing clothes, Blue has a special and popular place in them. after washing white clothes the clothes are dipped once into the water with blue mixed in it for clean look and additional whiteness as well. Blue is available in the powder form but it does not dissolve properly in water leaving clothes with blue patches on them. That is why blue was made into liquid form. Not only does the liquid blue dissolve easily into water but it leaves no mark on the clothes. Moreover the liquid blue is cheaper than the powdered one's hence, it is more preferred. Since, blue is an integral part of the clothes washing process, hence, there are sufficient rather ever increasing possibilities for its market.

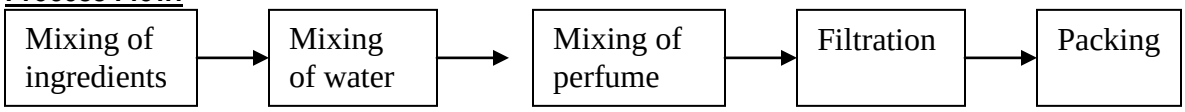
Production Target: Under this project 62,307 litres would be produced in 300 working days of the year. Keeping the selling price at Rs. 52 per litre Rs. 32,39,964, say Rs.32,40,000/- sale would be made in a year. This product would be sold in 250 ml, 500 ml. and one litre pack (plastic bottles).

Production Process: usually for the making of liquid blue following raw materials raw materials are used in the given proportions:-

1.	Acid wet dye	10 gms.
2.	Tinapaul	10 gms.
3.	Pigment blue	2 gms.
4.	Carboxy melthyle acitate (C.M.A.)	5 gms.
5.	Stearic acid	5 gms.
6.	Pefume	7 ml.
7.	Others	Water

Pigment blue is available in blue, violet and peacock blue colour. Colour of the choice can be bought and all the above liquids can be mixed thoroughly in 1 litre of water. At least, the perfume is mixed in this mixture. Later, this mixture can be filtered and poured into either bottles or jar. Depending of the quality or the raw materials, the proportion of the ingredients can be increased on decreased to a slight extent.

Process Flow:



1)	**Raw Material**	**Quantity(Rs.)**	**Amount(Rs.)**
i)	Acid wet dye	18,000	54,000/-
ii)	Tinopaul	15,000	45,000/-
iii)	C.M.A.	5,400	18,900/-
iv)	Citric Acid	2,700	10,800/-
v)	Perfume	4,250	11,000/-
vi)	Packaging Material	-	60,300/-
			Total: 2,00,0000/-

Raw Materials can be obtained from local market of as well as from the following addresses
1)A1 Watco India, 20, Circus Avenue, Kolkata – 17. 2) Bajaj AICHEM, 3 Bentinct Streeet, Kolkata – 1.

Suppliers of Machineries

1) M/s Bharat Chemical Machinery Work, Andheri Kurla Road, Mumbai – 59.
2) M/s Supreme Industries, 36, Nondlal Pura, Indore, M.P.

Manpower: The unit will provide employment to the following 7 persons and all of whom are locally available.

1	Manager cum Supervisor	Self	Self
2.	Skilled Worker	4nos	Rs.20,000/-
3.	Office Boy	1 no	Rs. 2,000/-
4.	Sales Man	1no	Rs. 3,000/-
		Total	**Rs.25,000/-**

Miscellaneous Fixed Assets:

1.	Chair & Working Table		Rs.15,000/-
2.	Fan & Lighting and wearing		Rs.15,000/-
3.	Interior decoration		**Rs.35,000/-**
		Total	**Rs.75,000/-**
Preliminary & Preoperative Exp.:			**Rs. 4,500/-**
		Total Fixed Capital:	**Rs.2,35,500/-**

A) **Fixed Capital**

1)	Land & Building	500 sq.ft.	Rented
2)	Plants & Machinery		
i)	Drum type liquid mixture		1,00,000/-
ii)	Containers of various sorts like buckets, spoons, mugs, jars, trey, sieves etc.		56,000/-
			Total: 1,56,000/-

Working Capital:

1.	Salary & Wages		Rs. 25,000/-
2.	Administrative expenses		Rs. 12,424/-
3.	Selling expenses		Rs. 3,000/-
4.	Raw Materials		Rs.2,00,000/-
5.	Utilities		Rs. 3,500/-
		Total	**Rs.2,43,924/-**
		Total Cost of the Project :	**Rs.4,94,424/-**

Means of Finance

			Urban		**Rural**
a.	**Composite loan under PMEGP**	**70%**	**Rs.3,35,597/-**	**60%**	**Rs.2,87,654/-**
b.	**Subsidy**	**25%**	**Rs.1,19,856/-**	**35%**	**Rs.1,67,799/-**
c.	**Margin Money**	**5%**	**Rs. 23,971/-**	**5%**	**Rs. 23,971/-**
		Total	**Rs.4,79,424/-**		**Rs. 4,79,424/-**
d. Debt Equity Ratio			**2.33:1**		**1.5:1**

Profitability: (Rs. in Thousands)

Sl.No	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60**	**70**	**80**	**80**	**80**
2.	**Annual Sales Rs.**	**19,44,000**	**22,68,000**	**25,92,000**	**25,92,000**	**25,92,000**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	14,40,000	16,80,000	19,20,000	19,20,000	19,20,000
(b)	Utilities	25,200	29,400	33,600	33,600	33,600
(c)	Selling expenses	21,600	25,200	28,800	28,800	28,800
4	**Variable Cost**	**14,86,800**	**17,34,600**	**19,82,400**	**19,82,400**	**19,82,400**
(a)	Wages & Salaries	1,80,000	2,10,000	2,40,000	2,40,000	2,40,000
(b)	Administrative expenses	89,453	1.04,362	1,19,270	1,19,270	1,19,270
(c)	Depreciation	23,550	23,550	23,550	23,550	23,550
(d)	Interest on Composite Loan	38,548	31,179	22,675	13,605	4,535
5	**Fixed & Semi Variable Cost**	**3,31,551**	**3,69,091**	**4,05,495**	**3,96,425**	**3,87,355**
6	**Total Cost**	**18,18,351**	**21,03,691**	**23,87,895**	**23,78,825**	**23,69,755**
7.	**Annual profit**	**1,25,649**	**1,64,309**	**2,04,105**	**2,13,175**	**2,22,245**
8	Return on investment	**26.20**	**34.27**			
9.	Return on sales	**6.467**	**7.24**			
10.	Annual Contribution	**4,57,200**	**5,33,400**	**6,09,600**	**6,09,600**	**6,09,600**
11	Break Even Point as percent of capacity	**43.51**	**48.44**			
12	Cash accrual	1,49,199	1,87,859	2,22,655	2,23,725	2,45,795
13.	**Debt servicing capacity**	**1,87,749**	**2,19,038**	**2,50,330**	**2,50,330**	**2,50,330**
14	Repayment of Composite Loan	54,420	63,491	72,562	72,562	72,562
15.	**Debt serviced**	**92,968**	**94,670**	**95,237**	**86,167**	**77,097**
16	**Pay Back Period**	**2 years 7 month 6 days**				
17.	**Debt Service Coverage Ratio (DSCR)**	**4.6:1**				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			60%	70%	80%	80%	80%
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	23,971	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	3,35,597	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	1,19,856	NIL	NIL	NIL	NIL	NIL
4.	Depreciation		23,550	23,550	23,550	23,550	23,550
5.	Profit before interests		1,64,197	1,95,488	2,26,780	2,26,780	2,26,780
A.	**TOTAL SOURCES**	**4,79,424**	**1,87,747**	**2,19,038**	**2,50,330**	**2,50,330**	**2,50,330**
6.	Increase in capital investment	**2,35,500**	NIL	NIL	NIL	NIL	NIL
7.	Increase in working capital	2,43,924	NIL	NIL	NIL	NIL	NIL
8.	Interests	NIL	38,548	31,179	22,675	13,605	4,535
9.	Repayment of loan	NIL	54,420	63,491	72,562	72,562	72,562
B.	**TOTAL DISPOSALS**	**4,79,424**	**92,968**	**94,670**	**95,237**	**86,237**	**77,097**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**
D.	**NET SURPLUS**	**NIL**	**94,779**	**1,24,368**	**1,55,093**	**1,64,163**	**1,73,233**
E.	**CLOSING BALANCE**	**NIL**	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**	**7,71,636**

Projected Balance sheet: (Rs. in Thousands)

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	23,971	1,49,620	3,13,929	5,18,034	7,31,209
2.	Surplus from operations	**1,25,649**	**1,64,309**	**2,04,105**	**2,13,175**	**2,22,245**
	NET WORTH:	1,49,620	3,13,929	5,18,034	7,31,209	**9,53,454**
3.	Composite loan	2,81,177	2,17,686	1,45,124	72,562	nil
4.	Subsidy	1,19,856	1,19,856	1,19,856	1,19,856	1,19,856
A.	**TOTAL LIABILITIES**	**5,50,653**	**6,51,471**	**7,83,014**	**9,23,627**	**10,73,310**
1.	Gross Block	2,35,500	2,35,500	2,35,500	2,35,500	2,35,500
	Less Depreciation	23,550	47,100	70,650	94,200	117750
2	**NET BLOCK**	**211950**	**188400**	**164850**	**141300**	**117750**
3	Current Assets	243924	243924	243924	243924	243924
4.	Cash & Bank Balance	**94,779**	**2,19,147**	**3,74,240**	**5,38,403**	**7,71,636**
B.	**TOTAL ASSETS**	**5,50,653**	**6,51,471**	**7,83,014**	**9,23,627**	**10,73,310**

LIQUID PHENYL MANUFACTURING UNIT

Phenyl is used to kill germs as well as to remove four smell. Liquid phenyl is are usually of two type white phenyl and black or brown phenyl. Places where phenyl is used utmost are- homes, hospitals, nursing homes, offices, hostels, restaurant, school and colleges, railway station and other such places of human inhabitation. The demand for this product is constancy increasing. Usually in each household atleast 1 litre of phenyl is used in a month. Presently, the brand names popular in this field are-Alfaplus, Trishul, Surya, Doctor etc. besides these, other brands of phenyl are being sold in the market. Not only for domestic purpose but phenyl is sold in large scale to government institutions. Hence, there is an ever increasing hygiene consciousness of people. If project of phenyle production is set up with the maintenance of good quality product, then there are bright chances of success of the unit.

Standards used for Phenyl production: Elements with the details of their proportions are mentioned here as under:-

(Total production) - 10 Litre phenyl

Sl.No.	Element	Quantity
1.	Black rouzen	1 kg.
2.	Castor oil	40 gms.
3.	Castic solution	520 gms.
4.	Creosote oil	640 gms.
5,	Other materials like carbolic acid, perfume etc.	240 gms.
6.	Pine oil	100 gms.
7.	Water	8 gms.

Production Process: Since Rogene of Biroza is available in markets in the form of hard lumps, hence, first of all, it is heated in a pan and when it completely melts, then the solution of coustic soda (caustic soda mixed in water) mixed in liquid Rogene. With the help of either mixer or stirres, these solutions are thoroughly mixed. When these materials are properly mixed, then creosote oil is mixed in it and water is added in such a quantity so that the whole mixture is properly mixed. Well mixed and stirred solution is then left to cool, later, it is poured in bottles and jars.

Production Target: Under this project 24,300 litres would be produced in 300 working days of the year. Keeping the selling price at Rs. 52 per litre Rs. 12,63,600/- sale would be made in a year. This product would be sold in 250 ml, 500 ml. and one litre pack (plastic bottles).

Raw Materials: Raw Materials for the unit are as follows:

Sl.No.	Details of raw materials	Quantity	Cost
1.	Castor rozion soap solution	18 kg.	1,755/-
2.	Black rozene	400 kg	39,200/-
3.	Caustic salts	210 kg.	8,410
4.	Creosote oil	200 kg.	15,000/-
5.	Carbolic acid perfumes etc.	95 kg.	21,000/-
6.	Pine oil	-	65,135/-
7.	Packaging & labeling		25,000/-
			Total: 1,75,500/-

These Raw Materials can be obtained locally or from the following address:

1)Sarat Resin & Chemical Pvt. Ltd., 12, A.N.S. Road, Kolkata-1.

Manpower: 4 person will be needed for this unit and four of them are locally available.

Skilled worker	3 person	12,000/-
Sales Representative	1 person	4,000/-
		Total: 16,000/-

FINANCIAL ASPECT OF THE PROJECT

A) **Fixed Capital**

1) Land & Building 500 sq.ft. Rented
2) Plants & Machinery

Sl.No.	Machines/ equipments	No.	Cost (in Rs.)
1.	M.S. Tank of 500 litres capacity (of around 4.5 feet Diameter and 3 feet high)	1	19,550/-
2.	For caustic salt solution making a mixing tank of 200 litre capacity (with ½ horsepower vessels)	1	25,200/-
3.	100 litre capacity for storage vessels	5	8,750/-
4.	Planetary mixture (with ½ horsepower motor)	1	4,550/-
5.	Pan	2	3,850/-
6.	Furnance (with platform and Diesel pump)	1	8,575/-
7.	Balance and measuring equipments		9,525/-
8.	Hydro meter	1	14,000/-
9.	Bottles/ caps sealing machine	1	16,000/--
		Total:	**1,10,000/--**

3) Furniture & fixture 30,000/-
4) Preliminary & Pre-operative expenses 20,000/-
5) Electrification & water installation 18,000/-
6) Installation, Transportation etc. 25,000/-

Total Fixed Cost: 2,03,000/-

B. Working Capital

1) Raw Material Rs. 1,75,500/-
2) Salary & Wages Rs. 16,000/-
3) **Utilities**
Expenditure over water & Electricity would be Rs. 2,000/-
4) **Misc. Expenditure**
Office charges, insurance, rent, etc. would be cost around Rs. 10,000/-

Total Working Capital Rs. 2,03,500/-
Total Project Cost Rs 4,06,500/-

Means of Finance:		**Urban**	**Rural**
1)	Composite loan @ 70%	2,84,550	2,43,900
2)	Promoters Contribution @5%	20,325	20,325
3)	Subsidy @25%	1,01,625	1,42,275
4)	Debt equity ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	Annual Sales Realization in Rs.	7,58,160	8,84,520	10,10,880	10,10,880	10,10,880
3.	**Annual Costs in Rs.**					
a)	Raw Materials	4,21,200	4,91,400	5,61,600	5,61,600	5,61,600
b)	Utilities	14,400	16,800	19,200	19,200	19,200
c)	Selling expenses	28,800	33,600	38,400	38,400	38,400
	Variable Cost	**4,64,400**	**5,41,800**	**6,19,200**	**6,19,200**	**6,19,200**
d)	Wages & Salaries	86,400	1,00,800	1,15,200	1,15,200	1,15,200
e)	Administrative expenses	72,000	84,000	96,000	96,000	96,000
f)	Depreciation	20,300	20,300	20,300	20,300	20,300
g)	Interest on Composite Loan	32,679	26,432	19,223	10,573	2,883
	Fixed & Semi Variable Cost	2,11,379	2,31,532	2,50,723	2,42,073	2,34,383
4.	**Total Cost**	**6,75,779**	**7,73,332**	**8,69,923**	**8,61,273**	**8,53,583**
5.	Annual Profit	82,381	1,11,188	1,40,957	1,49,607	1,57,297
6.	Return on Investment	20.26%	27.35%	34.67%	36.80%	38.69%
7.	Return on sales	10.85%	12.57%	13.94%	14.79%	15.56%
8.	Annual contribution	2,93,760	3,42,720	3,91,680	3,91,680	3,91,680
9.	Break Even Point as percent of capacity	43.17%				
10.	Cash accrual	1,02,681	1,31,488	1,61,257	1,69,907	1,77,597
11.	Debt Servicing Capacity	1,35,360	1,57,920	1,80,480	1,80,480	1,80,480
12.	Repayment of Composite Loan	46,143	53,834	61,524	61,524	61,524
13.	Debt Serviced	78,822	80,266	80,747	72,097	64,407
14.	Pay Back Period	1 year 8 months 15 days				
15.	Debt Service Coverage Ratio	1.71:1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	20,325	-	-	-	-	-
2.	Increase in Term loan	2,84,550	2,03,500	-	-	-	-
3.	Subsidy	1,01,625	-	-	-	-	-
4.	Depreciation	-	20,300	20,300	20,300	20,300	20,300
5.	Profit before interests	-	1,15,060	1,37,620	1,60,180	1,60,180	1,60,180
A.	**TOTAL SOURCES**	**4,06,500**	**3,38,860**	**1,57,920**	**1,80,480**	**1,80,480**	**1,80,480**
6.	Increase in capital investment	4,06,500	-	-	-	-	-
7.	Increase in working capital	-	2,03,500	-	-	-	-
8.	Interest	-	32,679	26,432	19,223	10,573	2,883
9.	Repayment of Term Loan	-	46,143	53,834	61,524	61,524	61,525
B.	**TOTAL DISPOSALS**	**4,06,500**	**2,82,322**	**80,266**	**80,747**	**72,097**	**64,408**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**56,538**	**1,34,192**	**2,33,925**	**3,42,308**
D.	**NET SURPLUS**	**NIL**	**56,538**	**77,654**	**99,733**	**1,08,383**	**1,16,072**
E.	**CLOSING BALANCE**	**NIL**	**56,538**	**1,34,192**	**2,33,925**	**3,42,308**	**4,58,380**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	20,325	1,02,706	2,13,894	3,54,851	5,04,458
2.	Surplus from operation	82,381	1,11,188	1,40,957	1,49,607	1,57,297
	NET WORTH:	**1,02,706**	**2,13,894**	**3,54,851**	**5,04,458**	**6,61,755**
3.	**Subsidy**	**1,01,625**	**1,01,625**	**1,01,625**	**1,01,625**	**1,01,625**
4.	Term loan outstanding	2,38,407	1,84,573	1,23,049	61,525	-
	TOTAL LIABILITIES	**4,42,738**	**5,00,092**	**5,79,525**	**6,67,608**	**7,63,380**
1.	Gross Block	2,03,000	2,03,000	2,03,000	2,03,000	2,03,000
	Less Depreciation	20,300	40,60	60,900	81,200	1,01,500
	NET BLOCK	**1,82,700**	**1,62,400**	**1,42,100**	**1,21,800**	**1,01,500**
2.	Working capital	2,03,500	2,03,500	2,03,500	2,03,500	2,03,500
3.	Cash & Bank Balance	56,538	1,34,192	2,33,925	3,42,308	4,58,380
	TOTAL ASSETS	**4,42,738**	**5,00,092**	**5,79,525**	**6,67,608**	**7,63,380**

Suppliers of Machinery

1) M/s Bharat Industries Corporation, 6C, Coleen Street, Kolkata – 16.
2) M/s Richard Engineering Bombay Pvt. Ltd., 25 M.I.D.C., Ambarnath.

DETERGENT POWDER

Introduction & Market: A commodity which has witnessed an unexpected rise in demand are the washing powder (washing and detergent powder) Nirma had started a large scale marketing in this field and taking inspiration from Nirma many companies have entered into the market. Some of the established brand names are Nirma, Rin Wheel, Sasa, Sunlight, Surf, Key, Arial etc. we are well aware of these names because of advertisements on television. Today, such products are not just popular in cities but in villages too and are accepted widely. There has been aremarkable increment in its demand and in future this demand is expected to go even higher on account of its better potential to clean, easy use and wide spread advertising.

More information about the product: A detergent is one that cleans dirt and grime that is settled over any surface. In general terms, we can say a detergent is the one that cleans any surface, synthetic detergent is quite different from other kinds of detergents, moreover, there is less tension created on the dirty surface yet emulsification takes places and the detergent enters the surface much faster. This is the reason why the cleaning process is quicker and stronger.

Raw Materials used in the Detergent powder: Major raw materials used in the making of detergent powder are: Soda ash, Carboxy methyl chloride, sodium perborate, lather forming chemical, colours and perfume. Following is the utility of the given ingredients.

1. **Soda ash (sodium carborate):** Soda ash depresses acid bleary and makes the washing process alkaline. Moreover, soda ash is a low priced salt to break the dirt.
2. **Carboxy methyl chloride (cellulose):** This prevents the dirt from resettling on the surface of the cloth and is particularly useful for cotton clothes
3. **Sodium perborate:** This is acts as a high bleach and also retains the colours of the clothes. In addition it also breaks up the dirt particals.
4. **Perfume:** Perfumes and aromatic are used in detergent to subside the intense smell of detergent ingredients. Major perfumes used in detergent powders are Methoxy, P Methyle, Di-Oxide, Musk Ketone etc.
5. **Colour:** Instead of white, coloured detergents are the preferred ones. Majorly, copper phthalocyamine is used for this purpose because it also blocks light and temperature.
6. **Lather producing chemical:** This chemical is required to produce lather and also enhances the cleaning capacity of the detergent.

Raw Materials: Raw Materials for the unit are as follows:

	Particulars	**Quantity**	**Cost (Rs.)**
a)	Soda Ash	3,500 kg.	87,500/-
b)	Acid Slury	350 kg.	36,500/-
c)	Soap stone	8925 kg	14,400/-
d)	Socium chloride	190 kg.	2,500/-
e)	Carboxy methyle chlorine	190kg.	7,000/-
f)	Colour	1 kg.	2,,600/-
7).	Perfurne	5 kg	5,000/-
8)	Packing material		20,0000/-
			Total:1,75,500/-

Manpower: Four skilled worker and 1 sales representatives will be needed for this unit and they are locally available. Annual cost for manpower Rs. 1,92,000/-.

Skilled worker	3 person	12,000/-
Sales Representative	1 person	4,000/-
		Total: 16,000/-

Production process of the detergent: The production process is actually quite an easy one and can be undertaken without any special training.

Production Target (Annually): Around 18,000 kg. would be sold Rs. 70.2 kg. fetching an annual income of Rs. 12,63,600/-.

FINANCIAL ASPECT OF THE PROJECT

A) **Fixed Capital**

1) Land & Building 800 sq.ft. Rented
2) Plants & Machinery

Sl.No.	Machine Details	Cost (Rs.)
1.	Mixer Sigma Type	63,000/-
2.	Sealing Machine	5,000/-
3.	Balance & weight	25,000/-
4.	Other equipments (for mixing)	17,000/-
		1,10,000/-

3) Furniture & fixture 30,000/-
4) Preliminary & Pre-operative expenses 20,000/-
5) Electrification & water installation 18,000/-
6) Installation, Transportation etc. 25,000/-

Total Fixed Cost: 2,03,000/-

B. Working Capital

1) Raw Material Rs. 1,75,500/-
2) Salary & Wages Rs. 16,000/-
3) **Utilities**
Expenditure over water & Electricity would be Rs. 2,000/-
4) **Misc. Expenditure**
Office charges, insurance, rent, etc. would be cost around Rs. 10,000/-

Total Working Capital Rs 2,03,500/-
Total Project Cost Rs. 4,06,500/-

Means of Finance:	**Urban**	**Rural**
1) Composite loan @ 70%	2,84,550	2,43,900
2) Promoters Contribution @5%	20,325	20,325
3) Subsidy @25%	1,01,625	1,42,275
4) Debt equity ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	Annual Sales Realization in Rs.	7,58,160	8,84,520	10,10,880	10,10,880	10,10,880
3.	**Annual Costs in Rs.**					
a)	Raw Materials	4,21,200	4,91,400	5,61,600	5,61,600	5,61,600
b)	Utilities	14,400	16,800	19,200	19,200	19,200
c)	Selling expenses	28,800	33,600	38,400	38,400	38,400
	Variable Cost	**4,64,400**	**5,41,800**	**6,19,200**	**6,19,200**	**6,19,200**
d)	Wages & Salaries	86,400	1,00,800	1,15,200	1,15,200	1,15,200
e)	Administrative expenses	72,000	84,000	96,000	96,000	96,000
f)	Depreciation	20,300	20,300	20,300	20,300	20,300
g)	Interest on Composite Loan	32,679	26,432	19,223	10,573	2,883
	Fixed & Semi Variable Cost	2,11,379	2,31,532	2,50,723	2,42,073	2,34,383
4.	**Total Cost**	**6,75,779**	**7,73,332**	**8,69,923**	**8,61,273**	**8,53,583**
5.	Annual Profit	82,381	1,11,188	1,40,957	1,49,607	1,57,297
6.	Return on Investment	20.26%	27.35%	34.67%	36.80%	38.69%
7.	Return on sales	10.85%	12.57%	13.94%	14.79%	15.56%
8.	Annual contribution	2,93,760	3,42,720	3,91,680	3,91,680	3,91,680
9.	Break Even Point as percent of capacity	43.17%				
10.	Cash accrual	1,02,681	1,31,488	1,61,257	1,69,907	1,77,597
11.	Debt Servicing Capacity	1,35,360	1,57,920	1,80,480	1,80,480	1,80,480
12.	Repayment of Composite Loan	46,143	53,834	61,524	61,524	61,524
13.	Debt Serviced	78,822	80,266	80,747	72,097	64,407
14.	Pay Back Period	1 year 8 months 15 days				
15.	Debt Service Coverage Ratio	1.71:1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	20,325	-	-	-	-	-
2.	Increase in Term loan	2,84,550	2,03,500	-	-	-	-
3.	Subsidy	1,01,625	-	-	-	-	-
4.	Depreciation	-	20,300	20,300	20,300	20,300	20,300
5.	Profit before interests	-	1,15,060	1,37,620	1,60,180	1,60,180	1,60,180
A.	**TOTAL SOURCES**	**4,06,500**	**3,38,860**	**1,57,920**	**1,80,480**	**1,80,480**	**1,80,480**
6.	Increase in capital investment	4,06,500	-	-	-	-	-
7.	Increase in working capital	-	2,03,500	-	-	-	-
8.	Interest	-	32,679	26,432	19,223	10,573	2,883
9.	Repayment of Term Loan	-	46,143	53,834	61,524	61,524	61,525
B.	**TOTAL DISPOSALS**	**4,06,500**	**2,82,322**	**80,266**	**80,747**	**72,097**	**64,408**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**56,538**	**1,34,192**	**2,33,925**	**3,42,308**
D.	**NET SURPLUS**	**NIL**	**56,538**	**77,654**	**99,733**	**1,08,383**	**1,16,072**
E.	**CLOSING BALANCE**	**NIL**	**56,538**	**1,34,192**	**2,33,925**	**3,42,308**	**4,58,380**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	20,325	1,02,706	2,13,894	3,54,851	5,04,458
2.	Surplus from operation	82,381	1,11,188	1,40,957	1,49,607	1,57,297
	NET WORTH:	**1,02,706**	**2,13,894**	**3,54,851**	**5,04,458**	**6,61,755**
3.	**Subsidy**	**1,01,625**	**1,01,625**	**1,01,625**	**1,01,625**	**1,01,625**
4.	Term loan outstanding	2,38,407	1,84,573	1,23,049	61,525	-
	TOTAL LIABILITIES	**4,42,738**	**5,00,092**	**5,79,525**	**6,67,608**	**7,63,380**
1.	Gross Block	2,03,000	2,03,000	2,03,000	2,03,000	2,03,000
	Less Depreciation	20,300	40,60	60,900	81,200	1,01,500
	NET BLOCK	**1,82,700**	**1,62,400**	**1,42,100**	**1,21,800**	**1,01,500**
2.	Working capital	2,03,500	2,03,500	2,03,500	2,03,500	2,03,500
3.	Cash & Bank Balance	56,538	1,34,192	2,33,925	3,42,308	4,58,380
	TOTAL ASSETS	**4,42,738**	**5,00,092**	**5,79,525**	**6,67,608**	**7,63,380**

Suppliers of Machineries

1) Top Tech, E-38, Sector 9, Noida.
2) Pioneer Engineering Co., 5-7, Appollo Street, Mumbai.

MOSQUITO REPELLENT COILS

Introduction: Mosquito repellent coils and creams are most popular among various means to get rid of mosquitoes such as insecticides, mats and electronic and are harmful for human beings, the repellents discourage the mosquitoes to approach and are comparatively harmless to human beings. The main constitutents of these coils & creams is pyrethrum which is extracted from the flowers of pyrethrum.The main constituent of mosquito repellent coils and creams is pyrethrum the principal ingredient of pyrethrum flowers. In the different formulations of coils and creams the additives are mixed in fixed proportions. Typical formulation of Mosquito Coil is as follows:

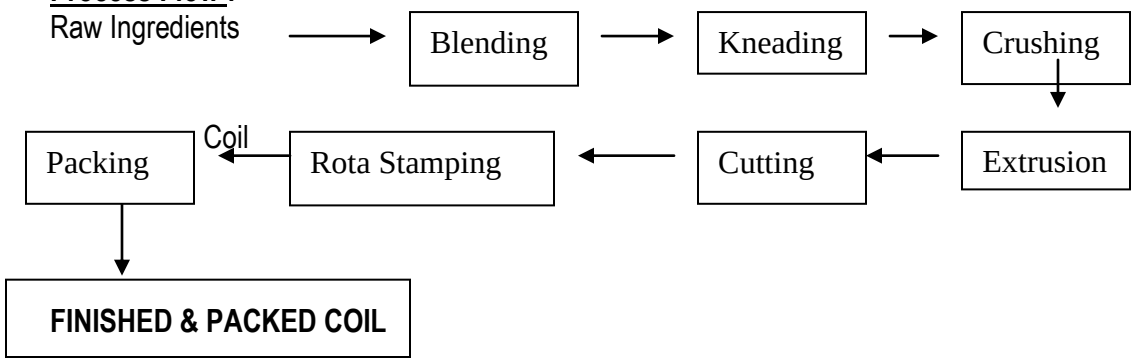
Pyrethrum Mare :	40-50%
Deodar Saw Dust:	8-12%
Maids Wood Bark:	35-45%
Pyrethrum Oleoresin:	1-3%
Citronella Oil:	1-3%
Benzoic Acid:	0.1-0.3%

Market: The market share of coils and creams is 42% & 10% respectively, while for the Electronic devices using mats is balance 48%. As the coil does not require electricity ti is most popular in rural areas where electricity is not available. Price wise also being cheaper. It finds large segment of market. At present there are mainly two manufacturers of Coils. Similarly the cream is also produced by two manufacturers. With population increase and mosquito propagating diseased like malaria the demand for coils and cream, by the turn of the century, is expected to grow above 6000 lakh pieces. For coils and 1800 Tonnes for creams.

Production Target: Assuming that the Unit will operate for Single Shift of 8 hours per day for 300 working days the annual installed capacity is estimated 240 M.T and estimated sales value will be **Rs.34,65,000/-**

Manufacturing Process: The raw ingredients are blended, kneaded and crushed. This mixture is extruded in the form of flat belt and by air blower. This belt shaped material is converted into double coils by moulds and Rota stamping machine and packed in cartons.

Process Flow :



Utilities: The unit will require a total connected load of 20 KVA and maximum demand of 16 KVA. Water requirement is about 3,000 ltrs per day.

Power: The Unit shall need a total connected load of 20KW at 400/440 Volts, 50 Hz, AC, 3 Phase Four wires. The power is available from the State Electricity Supply Corporation Grid. The annual consumption of power is estimated at 48,000 KWHrs costing **Rs. 1,13,400/-**

Water: The Unit will need 5000 Liters of water per day, which may be available at the site.

Raw Material: The requirement of raw materials for the production of 22,66,670 nos. pieces of coils per annum is as under:

(i) Pyrethrum Mare
(ii) Pyrethrum oleoresin
(iii) Deodar Sawdust
i) Maida wood
ii) Citronella oil
iii) Benzoic acid

The annual requirements and costs of raw-materials will be **Rs. 21,03,200/-**

Manpower: The unit will need the following manpower, all of whom are locally available.

1)	3 skilled worker	Rs. 13,200/-
2)	Manager/Account	Self
3)	Sales man	Rs. 4,400/-
4)	2 unskilled worker	Rs. 6,600/-
	Total:	**Rs. 24,200/-**

Financial Aspect of the Unit

A.	**Fixed Capital:**		
i)	**Land & building**		**On Rent**
2)	**Plant & Machinery**		
i)	Power Blending machine		1,65,000/-
ii)	Kneading machine		1,25,000/-
iii)	Crushing machine		1,20,000/-
iv)	Extrusion machine		2,50,000/-
v)	Cutting machine with air blower		1,35,000/-
vi)	Rota stamping machine		2,25,000/-
		Total	**10,20,000/-**
4)	**Office furniture**		**3,10,000/-**
5)	**Preliminary & pre-operative expenditure**		**50,000/-**
		Total Fixed Capital	**Rs.13,80,000/-**

B. **Working Capital**

1)	Raw Material	Rs. 1,76,000**/-**
2)	Salary & Wages	Rs. 24,200/-
3)	Utilities	Rs. 9,900/-
4)	Misc. expenses	Rs. 23,650/-
	Total Working Capital:-	**Rs. 2,33,750/-**
	Total Project cost: -	**Rs.16,13,750/-**

Means of Finance:		**Urban**	**Rural**
1)	Composite loan @ 70%	11,29,800/-	9,68,400/-
2)	Promoters contribution @5%	80,700/-	80,700/-
3)	Subsidy @ 25% / 35%	4,03,500/-	5,64,900/-
4)	Debt equity ratio	2.33:1	1.5:1

Profitability: **Rs in Thousand**

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized in percent	60	70	80	80	80
2.	**Annual Sales Realization in Rs.**	**2079**	**2425**	**2772**	**2772**	**2772**
3.	**Annual Costs in Rs**					
a)	Raw Materials	1267	1478	1690	1690	1690
b)	Utilities	71	83	95	95	95
c)	Selling expenses	43	51	58	58	58
	Variable Cost	**1381**	**1612**	**1843**	**1843**	**1843**
d)	Wages & Salaries	142	166	190	190	190
e)	Administrative expenses	158	185	211	211	211
f)	Depreciation	135	135	135	135	135
g)	Interest on Composite Loan	111	99	72	43	14
	Fixed & Semi Variable Cost	540	585	608	579	550
4.	**Total Cost**	**1927**	**2197**	**2451**	**2422**	**2393**
5.	**Annual Profit**	**152**	**228**	**321**	**350**	**379**
6.	Return on Investment	9.94%	15.88%	22.05%	23.95%	25.84%
7.	Return on sales	7.16%	9.81%	11.92%	12.94%	13.97%
8.	**Annual contribution**	698				
9.	**Break Even Point in percent**	**46.93**				
10.	Cash accrual	287	363	456	485	514
11.	Debt Servicing Capacity	398	462	528	528	528
12.	Repayment of Composite Loan	183	213	245	245	244
13.	Debt Serviced	294	312	317	288	258
14.	**Pay Back Period**	**1 year 4 month 9 days**				
15.	**Debt Service Coverage Ratio**	**1.36:1**				

Cash Flow Statement Rs in Thousand

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	81	-	-	-	-	-
2.	Increase in loan	1130	-	-	-	-	-
3.	Subsidy	403	-	-	-	-	-
4.	Depreciation	-	135	135	135	135	135
5.	Profit before interests	-	263	327	393	393	393
A.	**TOTAL SOURCES**	**1614**	**398**	**462**	**528**	**528**	**528**
6.	Increase in capital investment	1380	-	-	-	-	-
7.	Increase in working capital	234	-	-	-	-	-
8.	Interest	-	111	99	72	43	14
9.	Repayment of Term Loan	-	183	213	245	245	244
B.	**TOTAL DISPOSALS**	**1614**	**294**	**312**	**317**	**288**	**258**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**104**	**254**	**465**	**705**
D.	**NET SURPLUS**	**NIL**	**104**	**150**	**211**	**240**	**270**
E.	**CLOSING BALANCE**	**NIL**	**104**	**254**	**465**	**705**	**975**

Projected Balance sheet: **Rs in Thousand**

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	81	233	461	782	1132
2.	Surplus from operation	152	228	321	350	379
	NET WORTH:	**233**	**461**	**782**	**1132**	**1511**
3.	**Subsidy**	**403**	**403**	**403**	**403**	**403**
4.	Term loan outstanding	947	734	489	244	-
	TOTAL LIABILITIES	**1583**	**1598**	**1674**	**1779**	**1914**
1.	Gross Block	1380	1380	1380	1380	1380
	Less Depreciation	135	270	405	540	675
	NET BLOCK	**1245**	**1110**	**975**	**840**	**705**
2.	Working capital	234	234	234	234	234
3.	Cash & Bank Balance	104	254	465	705	975
	TOTAL ASSETS	**1583**	**1598**	**1674**	**1779**	**1914**

Suppliers of Machinery:

1. S.B.Scientific Works, 14, Rani Sankari Lane, Kolkata- 700 026.
2. Douglas Fraser (India) Ltd, 14, N.S.Road, Kolkata- 700 001.

ENGINEERING & ALLIED INDUSTRIES

BARBED WIRE

Introduction: Barbed wires are fencing materials. Barbed wire constitute of two Galvanized iron wires twisted together to hold barbs of wire inserted at regular intervals. There is no Bureau of Indian Standard Specification for testing and quality of Barbed wire. These are however, found in two types namely conventional and concertina. Concertina Barbed wires find good market with the Defence establishments as much sharper blade type barbs are used in them. Conventional Barbed wire we sharp wire barbs.

Market: In Tripura conventional Barbed wires are used in almost all aspects of use of Barbed wire. Even Border Fencing is using conventional Barbed Wires. Barbed wire finds use in Border Fencing, Fencing of farms, Tea Estates stockyards, Electrical. Private Compounds, etc. These are also the market for Barbed wire has gone up manifolds.

Installed Capacity: Assuming that the Unit will operate for single shift of 8 hours per day for 300 working days per annum the annual installed capacity is estimated at 180 Metric Tonnes.

Process of Manufacture: Two Galvanized Mild Steel Wires of 12 to 14 SWG are fed to the automatic Barbed Wire making machine. Another 22 SWG MS Wire is fed in the machine through its central feeding mechanism. This wire wind itself around the other two wires to form Barbs, which contain four sharp ends per barb. While the other two wires twist themselves together to tightly hold barbs, the machine to form barbs at regular intervals cuts the barb forming wire automatically. The Barbed wire so winded on steel spools at the other end of the machine. The quality of Barbed Wire depends on the quality of GI Wires used. Entire process is automatic except feeding of wires and unloading of barbed Wire. The Barb-cutting tool in the machine needs special care though grinding in Bench Grinder.

Raw Materials: 12 to 14 SWG Galvanized Mild Steel Wires are the only raw – material needed by the Unit. Though local sources exist in Agartala, these are available at much cheaper rates in Kolkata. Annually 180 Metric Tonnes of 123 to 14 SWG Galvanized Iron Wires are required by the Unit, which may cost Rs. 89,10,000/- at the installed capacity. Some sources of Galvanized Iron Wires are shown below:

1. Birani & Co., 62/1A, NS Road, Kolkata- 700 001.
2. Super Galvanizing Works, 50, Natabar Paul Road, Howrah – 711 101.
3. Eastern Wire Products, 223, Maniktola Main Road, Kolkata – 700 011.

Power: The Unit will need a total connected load of 17 KW at 400/440 Volts, 50 Cycle, 3 Phase, 4 wire and AC. The annual consumption of power is estimated at 32640 KWHrs. Costing Rs. 64,627/-. The power is readily available from State Electric Supply Corporation Grid.

Water: The Unit will not need any water for the process the daily requirement of water is estimated at 500 Ltrs. Including that for drinking and ablution

Manpower: Apart from the Machine operator all other manpower is readily available in the State. The requirement at the installed capacity and annual costs are shown below:

Sl. No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	Self	-
2.	Clerk & Salesman	2	Rs. 1,05,600/-
3.	Skilled Workers	1	Rs. 66,000/-
4.	Unskiled Workers	3	Rs. 99,000/-
	Total:	**6**	**Rs. 2,70,600/-**

CAPITAL COST ESTIMATE:

1. **Land & Building** with a covered area of 2000 Sq. ft. — **On rent**
2. **Plant & Machinery**
   - (a) Automatic Barbed-Wire Making machine with capacity to produced 12/14 SWG Barbed Wire with 4"/3"apart Barbs with all accessories — Rs.4,20,000
   - **(b)** 6" wheel Bench Grinder — Rs. 24,000

   Rs. 4,44,000
3. **Miscellaneous fixed Assets**
   - (a) Electrification — Rs. 66,000
   - (b) Water installation — Rs. 11,000
   - © Others — Rs. 33,000

   Rs.1,10,000
4. **Provision for contingency** — **Rs. 27,500**
5. **Preliminary & Pre-operative expenses** — **Rs. 27,500**

Total Fixed costs: Rs.6,09,000

6. **Working Capital**
   - (a) Raw Materials for one month — Rs. 7,42,500
   - (b) Utilities — Rs. 5,386
   - © Wages & Salaries — Rs. 22,550
   - (d) Others — Rs. 25,850

Total Working Capital: Rs. 7,96,286

Total Project Cost: Rs. 14,05,286

Means of finance:

	URBAN	RURAL
1. Composite Loan	Rs. 9,83,700	Rs. 8,43,172
2. Subsidy	Rs. 3,51,322	Rs. 4,91,850
3. Promoter's Contribution	Rs. 70,264	Rs. 70,264
4. Debt Equity Ratio	1:86:1	1.22: 1

Profitability: (Rs in Thousands)

Sl. No.	Description	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capacity Utilization	60%	70%	80%	80%	80%
2.	**Annual Sales realization**	**7306**	**8524**	**9742**	**9742**	**9742**
3.	**Annual Costs in**					
	(a) Raw Materials	5346	6237	7128	7128	7128
	(b) Utilities	52	58	65	65	65
	(c) Wages & Salaries	271	277	284	292	299
	(d) Repair & Maintenance	24	24	24	24	24
	(e) Administrative Overheads	83	87	91	96	100
	(f)Selling Expenses	1096	1278	1461	1461	1461
	(g) Depreciation	55	55	55	55	55
	(h) Interests	108	89	62	39	16
	Total Costs	**7035**	**8105**	**9170**	**9160**	**9148**
	Total variable costs	6494	7578	8654	8654	8654
4.	**Annual Profit**	**271**	**419**	**572**	**582**	**594**
5.	Return on investments	19.28	29.82	40.71	41.42	42.28
6.	Return on Sales	3.70%	4.91%	5.87%	5.94%	6.09%
7.	Annual Contribution	812	-	-	-	-
8.	**Break Even Point**	**39.97%**	-	-	-	-
9.	**Cash Accrual**	**326**	**474**	**627**	**637**	**649**
10.	**Debt Servicing Capacity**	**434**	**563**	**689**	**676**	**665**
11.	Repayment of Loan	160	186	213	213	212
12.	**Debt Serviced**	**268**	**275**	**275**	**252**	**228**
13.	**Pay Back Period**	**2 Years 1 Month 14 Days**				
14.	**Debt Service Coverage Ratio**	**2:54:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative period	Operating years				
			1st	2nd	3rd	4th	5th
1.	Increase in Promoters' Capital	70	-	-	-	-	-
2.	Increase in Subsidy	351	-	-	-	-	-
3.	Increase in Loan	984	-	-	-	-	-
4.	Depreciation	-	55	55	55	55	55
5.	Profit before interest	-	379	508	634	621	610
A	**Total Sources**	**1405**	**434**	**563**	**689**	**676**	**665**
6.	Increase in Capital Investment	609	-	-	-	-	-
7.	Increase in Current Assets	796	-	-	-	-	-
8.	Interests	-	108	89	62	39	16
9.	Repayment of Loan	-	160	186	213	213	212
B.	**Total Disposals**	**1405**	**268**	**275**	**275**	**252**	**228**
C.	**Opening balance**	**-**	**-**	**166**	**454**	**868**	**1292**
D.	**Net Surplus**	**-**	**166**	**288**	**414**	**424**	**437**
E.	**Closing Balance**	**-**	**166**	**454**	**868**	**1292**	**1729**

Projected Balance Sheets:

Sl. No.	**Description**	**Amount in Rs Thousand as at the end of**				
		1st Yr.	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**
1.	Capital Account of Promoters	70	341	760	1332	1914
2.	Surplus from operations	271	419	572	582	594
	Net Worth	341	760	1332	1914	2508
3.	Subsidy	351	351	351	351	351
4.	Loan	824	638	425	212	-
A.	**Total Liabilities**	**1516**	**1749**	**2108**	**2477**	**2859**
1.	Gross Fixed Assets	609	609	609	609	609
	Less Depreciation	55	110	165	220	275
	Net Block	554	499	444	389	334
2.	Current Assets	796	796	796	796	796
3.	Cash & Bank balance	166	454	868	1292	1729
B.	**Total Assets**	**1516**	**1749**	**2108**	**2477**	**2859**

Suppliers of Machinery:

1. S.Singh & Co., Gandhinagar, G.T.Rd., Ludhiana.
2. Bumra Industial Corporation, G.T.Road, Putlighat, Amritsar.
3. H.P.Singh & Co, 75, G.C.Avenue, Kolkata- 700 013.

ALUMINIUM FURNITURE

Introduction: Due to their light, weight, corrosion resistance, easy portability compactness and elegant appearance Aluminium furniture is finding larger markets in spite of comparatively higher prices. With increased costs of wood and steel, Aluminium furniture is finding markets in Banks, Hotels, Offices and residences. It is more popular in economically well-off groups in Urban Societies.

Markets: due to its inherent advantages Aluminium furniture is gaining in popularity. In some products like Baby-Walker, Baby trolleys, Garden Chair, etc. Aluminium furniture has hardly any competition. With steep increase in prices of Wood and Steel, Alum9inium furniture has found much wider markets. In Tripura Aluminium and Bamboo /Rubber-wood combination furniture where Aluminium is used in frames can have good expert potential. In the State Chairs, Baby trolleys & Tea-poy/stool have good market.

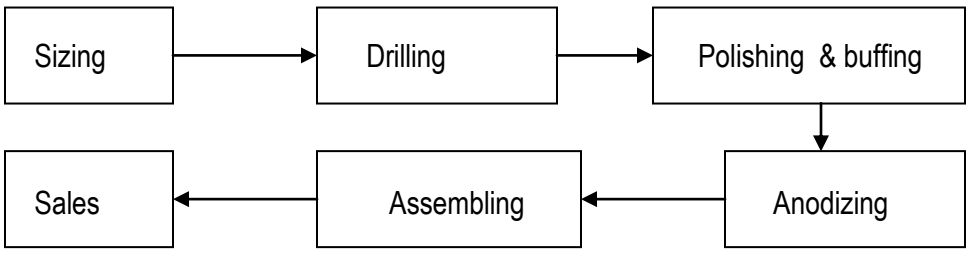
Installed Capacity: The Unit is assumed to work for Single shift of 8 hours per day for 300 working days per annum. It is also assumed that the product-mix shall be as shown in estimated annual installed capacity below:

Sl. No.	Product	Quantity per annum	Sales Value per annum
1.	Armed Aluminium Chairs with plastic seat & back seat; folding type	2000 Nos.	Rs. 9,20,000/-
2.	Baby Trollies	500 Nos.	Rs. 3,75,000/-
3.	Tea-poy/stool	100 Nos.	Rs. 25,000/-
	Total		**Rs. 13,20,000/-**

Process of Manufacture: The process of manufacture of Aluminium furniture include the following major steps:

1. Cutting of tubes and sheets to required sizes
2. Bending of tubes in Hydraulic Pipe bending machine
3. 3. Drilling, counter sinking, making holes for riveting, milling, etc.
4. Removal of burs by files, emery paper and finishing
5. Polishing, buffing and cleaning
6. Anodizing and Dyeing components
7. Assembling

Flow Chart



Raw Materials: Aluminium Tubes/pipes are the principal raw material of the Unit. Small quantities of Aluminium Flats are also required. These are available in Kulutola of Kolkata at comparatively cheaper rates. The same market sells quality plastic straps at cheaper rates. Rubber wood Boards & Bamboo mats are available at Agartala. Miscellaneous fittings, polishing materials, etc. are also locally available at Agartala. The annual consumption at the installed capacity and costs are shown below:

Sl. No.	Raw Materials	Costs
1.	Aluminium pipes	Rs. 9,91,000
2.	Aluminium flats & sheets	Rs. 7,60,000
3.	Wood & Bamboo components	Rs. 4,24,000
4.	Plastic straps for seat & backrest	Rs. 11,25,000
5.	Fittings, polishing materials, etc.	Rs. 5,50,000/-
	Total:	**Rs. 38,50,000/-**

Power: At 200/200 volts, 50 Hz, AC Single phase & 3 wire. The unit will need a total connected Load of 5 KW. The annual consumption of power is estimated at 11476 KWHrs costing Rs. 20,657/-.

Water: The unit will need 500 Liters of water cost of drawing of water is shown in power cost.

Manpower: Apart from two machine operators all the manpower is available locally. The requirement of manpower and annual costs are shown below:

Sl. No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	1	Self
2.	Administrative & Sales Clerk	3	Rs. 1,08,000/-
3.	Skilled Workers	2	Rs. 84,000/-
4.	Unskilled Workers	2	Rs. 90,000
	Total:	**9**	**Rs. 2,82,000/-**

CAPITAL COST ESTIMATE

1. **Land & Building** with covered area of 186 Sq. M.	On rent
2. **Plant & Machinery**	
(a) Two handled operated hydraulic pipe bending Machine with standard dies 42"nip rollers, Air Computers or, water pump, etc. with 12 HP Motors.	Rs. 36,000/-
(b) One 24" Metal Bandsaw Machine	Rs. 45,000/-
© One ½" Capacity Bench Drilling Machine	Rs. 18,000/-
(d) One double body heavy-duty land press No. 6	Rs. 10,000/-
(f) One hand operated multi-purpose bender	Rs. 6,000/-
(g) One double ended 8" Bench grinder	Rs. 7,500/-
(h) One Air Compressor with 3 HP Motor	Rs. 15,000/-
(i) Hand tools, Jigs & fixtures	Rs. 20,000/-
	Rs. 2,70,000/-

3. **Miscellaneous Fixed Assets**

(a) Electrification	Rs. 50,000/-
(b) Water Installation	Rs. 10,000/-
© Miscellaneous others	Rs. 40,000/-
	Rs. 1,00,000/-
4. **Provision for contingencies**	**Rs. 20,000**/-
5. Preliminary & Pre-operative expenses	**Rs. 20,000/-**
	Total fixed Costs: Rs.4, 10,000/-

6. **Working Capital (for 3 months)**

a)	Raw Materials	3,20,833/-
b)	Power	1,721/-
c)	Salary & Wages	23,500/-
d)	Miscellaneous expenses	3,946/-
	Total::	**Rs. 3,50,000/-**
	Total Project Cost:	**Rs. 7,60,000/-**

Means of Finance:	**Urban**	**Rural**
a. Composite loan under PMEGP	Rs.5,32,000/-	Rs. 4,56,000/-
b. Subsidy	Rs.1,90,000/-	Rs. 2,66,000/-
c. Promoters contribution	Rs. 38,000/-	Rs. 38,000/-
d. Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3,456**	**4,032**	**4,608**	**4,608**	**4,608**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	2,310	2,695	3,080	3,080	3,080
(b)	Power	12	14	17	17	17
(c)	Wages & Salaries	282	289	296	304	311
(d)	Repair & Maintenance	16	16	16	16	16
(e)	Administrative overheads	75	79	83	87	91
(f)	Selling expenses	518	605	691	691	691
(g)	Depreciation	40	40	40	40	40
(h)	Interest	61	49	36	22	7
	Total:	**3,314**	**3,787**	**4,259**	**4,257**	**4,253**
	Total Variable Cost	2,840	3,314	3,788	3,788	3,788
4.	**Annual profit**	**142**	**245**	**349**	**351**	**355**
5.	Return on investment	18.68%	32.24%	45.92%	46.18%	46.71%
6.	Return on sales	4.11%	6.08%	7.57%	7.62%	7.70%
7.	Cash accrual	**182**	**285**	**389**	**391**	**395**
8.	Annual Contribution	**616**	**-**	**-**	**-**	**-**
9.	Break Even Point in percent	**46.17%**	**-**	**-**	**-**	**-**
10.	**Debt servicing capacity**	243	334	425	413	402
11.	Repayment of Loan	**87**	**100**	**115**	**115**	**115**
12.	**Debt serviced**	148	149	151	137	122
13.	**Pay Back Period**	**2 years 2 months 1 day**				
14.	**D S C Ratio (DSCR)**	**2.57:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	38	-	-	-	-	-
2.	Increase in subsidy	190	-	-	-	-	-
3	Increase in loan	532	-	-	-	-	-
4.	Depreciation	-	40	40	40	40	40
5.	Profit before interests	-	203	294	385	373	362
A.	**TOTAL SOURCES**	**760**	**243**	**334**	**425**	**413**	**402**
6.	Increase in capital investment	**410**	-	-	-	-	-
7.	Increase in Current Assets	350	-	-	-	-	-
8.	Interests	-	61	49	36	22	7
9.	Repayment of loan	-	87	100	115	115	115
B.	**TOTAL DISPOSALS**	**760**	**148**	**149**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**95**	**280**	**554**	**830**
D.	**NET SURPLUS**	**-**	**95**	**185**	**274**	**276**	**280**
E.	**CLOSING BALANCE**	**-**	**95**	**280**	**554**	**830**	**1,110**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	38	180	425	774	1,125
2.	Surplus from operations	**142**	**245**	**349**	**351**	**355**
	NET WORTH:	**180**	**425**	**774**	**1,125**	**1,480**
3.	Subsidy	190	190	190	190	190
4.	Loan Account	445	345	230	115	-
A.	**TOTAL LIABILITIES**	**815**	**960**	**1,194**	**1,430**	**1,670**
1.	Gross Fixed Assets	410	410	410	410	410
	Less Depreciation	40	80	120	160	200
	NET BLOCK	**370**	**330**	**290**	**250**	**210**
2	Closing stocks	350	350	350	350	350
3.	Cash & Bank Balance	**95**	**280**	**554**	**830**	**1,110**
B.	**TOTAL ASSETS**	**815**	**960**	**1,194**	**1,430**	**1,670**

Suppliers of Machinery:

1. Perfect Machine Tools Co. Pvt. Ltd., Bell Building, Sir P.M. Road, MUMBAI-400 001.
2. Industrial Engineers & Traders, Tokoubari Road, GUWAHATI – 781001.
3. Archana Machinery Stores, M.S. Road, Fancy Bazar, GUWAHATI – 781 001.
4. H.P. Singh & Co., 75, G.C. Avenue, KOLKATA- 700 013.

PAPER PIN & GEM CLIPS

Introduction: Paper Pin also called Alpin and Gem Clips are essential office stationery. These are used to keep paper sheets together. These are used en-bulk in Offices, Colleges, Schools, etc. Paper pins are also consumed in large quantities in Ready-made Garment industry for packaging. These are made of 20-22 SWG wires and often platted to make them resistant to rusting. Normally Paper Pins & Clips are available in IS-4224 of Bureau of Indian Standards.

Market: Paper Pins and clips are consumed by every Office, Colleges, Schools, Industrial & Commercial establishments. Normally Stationery item dealers supply paper Pins & Gem Clips to such establishments. Demand for these items are highest in the State Capital followed by District Headquarters. The demand for Paper Clips in Tripura is estimated at 400 MT per annum. The demand for Gem clips in the State is of the order of 200 MT per year. Against these demands there is no local manufacturer of these items in the State.

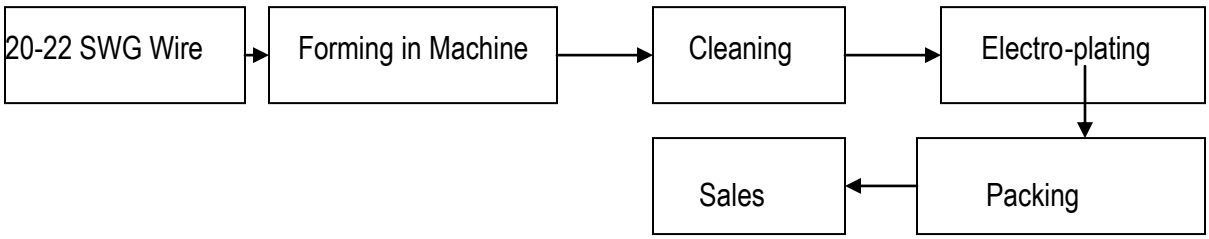
Installed Capacity: Assuming that the Unit will operate for single shift of 8 hours per day for 300 working days per annum, the annual installed capacity is estimated at 2,97,000 packets of Paper Pins of gross weight of 70gms each and 2,97,000 packets of Gem Clips of gross weight of 20gms each. The annual sales realization at the installed capacity is estimated as below:

1. By sales of 2,97,000 packets of Paper Pin Of Gross weight of 70 gms @ Rs. 8/- each — Rs. 26,13,600/-
2. By sales of 2,97,000 packets of paper clips Of gross weight of 20 gms @ Rs. 6/- each — Rs. 19,60,200/-

Total:Rs. 45,73,800/-

Process of Manufacture: Hard-drawn bright wire of 20-22 SWG is fed into Paper Pin making Machine and Gem Clip making Machine where Paper-Pin and Gem Clips are formed. these are then cleaned in water and sent to Electro-plating machine. Paper pins and Gem clips are then Nickel Plated. Nickel Plated Paper-Pin/Gem-Clips are then packed in Cardboard boxes manually.

Process Flow Sheet:



Raw Materials: Hard-drawn bright wires of 20 – 22 SWG and electroplating chemicals are the principal raw materials of the Unit. M/s Eastern Wire Products, 233, Maniktola Main Road, Kolkata – 700 011 and M/C Jajodia Electro-plates, Golbuilding, A.T. Road, Athgaon, Guwahati- 781 001 are selling both these inputs. The annual requirements at the installed capacity and costs are as below:

1. 20,790 Kilograms of Hard drawn bright wires — Rs. 12,57,795
2. 1,500 Kilograms of Nickel plating chemicals — Rs. 2,47,500
3. Packing Materials — Rs. 9,35,000

Total: Rs. 24,40,295

Power: The Unit shall need 10KW of total connected Load at 400/440 Volts, 50Hz,AC, 3 Phase & 4 Wire. The power is available from the State Electric Supply Corporation Grid. Annual consumption of power at the installed capacity is estimated at 18,000 KW Hrs. Costing Rs. 36,630/-

Water: The Unit will need 1000 Ltrs. of clean and Soft Water per day, which may be locally available.

Manpower: The manpower required by the Unit is locally available. Only the two skilled persons may need training in Machine operations. The requirement at the installed capacity and annual costs are shown below:

Sl. No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	1	Self
2.	Administrative & Sales Clerk	1	Rs 59,400
3.	Skilled Workers	3	Rs. 1,98,000
4.	Unskilled Workers	2	Rs. 66,000
	Total:	**7**	**Rs. 3,23,400**

CAPITAL COST ESTIMATE

1. **Land & Building** with covered area of 92.9 Sq. M.	**On rent**
2. **Plant & Machinery**	
(a) One Automatic Paper Pin-Making Machine with all Accessories: Capacity 200 to 250 Pins/minute	Rs. 1,98,000
(b) One Gem Clips Making Machine with all accessories : Capacity 100 to 125 Pins/Minute	Rs. 1,80,000
© One Electro-Plating barrel with 12 V. Dynamo set and other accessories	Rs. 1,98,000
(d) One drier drum with motor	Rs. 78,000
(e) One 200 mm wheel D.E. Grinder	Rs. 24,000
(f) Dies, Tools & measuring equipments	Rs. 18,000
	Rs. 6,96,000
3. **Miscellaneous Fixed Assets**	
(a) Electrification	Rs. 82,500
(b) Water Installations	Rs. 44,000
© Miscellaneous others	Rs. 38,500
	Rs. 1,65,000
4. Provision for contingencies	Rs. 44,000
5. Preliminary & Pre-operative expenses	Rs. 88,000
Total fixed Costs: Rs.9, 93,000	
6. Working Capital:	
(a) Raw Materials for three months	Rs. 26,10,073
(b) Power cost for three months	Rs. 9,157
© Wages & Salaries for three months	Rs. 80,850
(d) Other expenses for three months	Rs. 2,01,593
Total Working Capital: Rs. 9,02,673	
TOTAL PROJECT COST: Rs. 18,95,673	
(Say Rs.18,96,000)	

Means of Finance:	**Urban**	**Rural**
1. Loan:	Rs.13,27,200	Rs. 11,37,600
2. Subsidy:	Rs. 4,74,000	Rs. 6,63,600
3. Promoters' Capital:	Rs. 94,800	Rs. 94,800
4. Debt. : Equity Ratio:	1.86:1	1.22: 1

Profitability:

(Rs in Thousands)

Sl. No.	Description	1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capacity Utilization	60%	70%	80%	80%	80%
2.	Annual sales Realization	2745	3202	3659	3659	3659
3.	**Annual Costs in**					
	(a) Raw Materials	1464	1708	1953	1953	1953
	(b) Power	28	32	36	36	36
	(c)Wages & Salaries	323	331	340	349	358
	(d) Repair & Maintenance	35	35	35	35	35
	(e) Administrative overheads	165	174	182	191	200
	(f) Selling expenses	411	481	549	549	549
	(g) Depreciation	95	95	95	95	95
	(h) Interest	125	101	74	44	15
	Total costs	**2646**	**2957**	**3264**	**3252**	**3241**
	Total Variable Costs	**1903**	**-**	**-**	**-**	**-**
4.	**Annual Operating Profit**	**99**	**245**	**395**	**407**	**418**
5.	Annual Contribution	842	-	-	-	-
6.	**Break Even Point**	**52.94%**	-	-	-	-
7.	Return on Investment	5.22%	12.92%	20.83%	21.47%	22.05%
8.	Return on sales	3.61%	7.65%	10.79%	11.12%	11.42%
9.	**Cash Accrual**	**194**	**340**	**490**	**502**	**513**
10.	**Debt Servicing Capacity**	**319**	**441**	**564**	**546**	**528**
11.	Repayment of Loan	215	251	287	287	287
12.	**Debt Serviced**	**340**	**352**	**361**	**331**	**302**
13.	**Pay Back Period**	**3 Years 3 Months 20 Days**				
14.	**Debt Service Coverage Ratio**	**1.56 : 1**				

Cash Flow Statement:

(Rs. in Thousands)

Sl. No.	Description	Pre-operative period	Operating years				
			1st	2nd	3rd	4th	5th
1.	Increase in Promoters' Capital	95	-	-	-	-	-
2.	Increase in Subsidy	474	-	-	-	-	-
3.	Increase in Loan	1327	-	-	-	-	-
4.	Depreciation	-	95	95	95	95	95
5.	Profit before interest	-	224	346	469	451	433
A	**Total Sources**	**1896**	**319**	**441**	**564**	**546**	**528**
6.	Increase in Capital Investment	993	-	-	-	-	-
7.	Increase in Current Assets	903	-	-	-	-	-
8.	Interests	-	125	101	74	44	15
9.	Repayment of Loan	-	215	251	287	287	287
B.	**Total Assets**	**1896**	**340**	**352**	**361**	**331**	**302**
C.	**Opening balance**	**-**	**-**	**4**	**68**	**271**	**486**
D.	**Net Surplus**	**-**	**4**	**64**	**203**	**215**	**266**
E.	**Closing Balance**	**-**	**4**	**68**	**271**	**486**	**712**

Projected Balance Sheets:

Sl. No.	Description	Amount in Rupees Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoters	95	194	439	834	1241
2.	Surplus from operations	99	245	395	407	418
	Net Worth	**194**	**439**	**834**	**1241**	**1659**
3.	Subsidy	474	474	474	474	474
4.	Loan Account	1112	861	574	287	-
A.	**Total Liabilities**	**1780**	**1774**	**1882**	**2002**	**2133**
1.	Gross Fixed Assets	993	993	993	993	993
	Less Depreciation	95	190	285	380	475
	Net Block	**898**	**803**	**708**	**613**	**518**
2.	Current Assets	903	903	903	903	903
3.	Cash & Bank balance	4	68	271	486	714
B.	**Total Assets**	**1780**	**1774**	**1882**	**2002**	**2133**

Suppliers of Machinery:

1. Bumra Industrial Corporation, G. T. Road, Putlighat, Amrisar.
2. S. Singh & Co., Gandhinagar, G. T. Road, Ludhiana.

Wire Nails

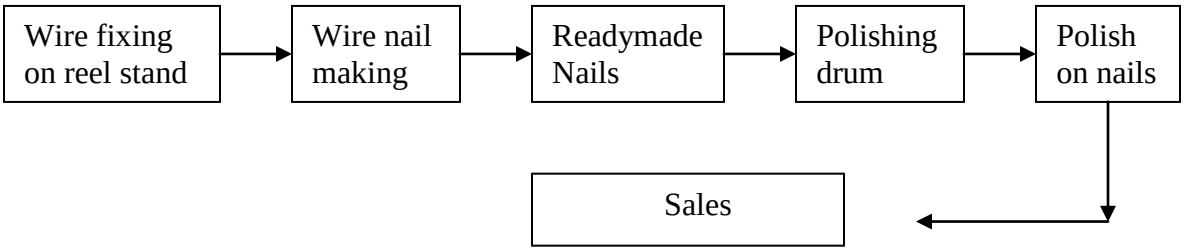
Introduction: Iron nail is one hardware that is used mainly in Building construction work, manufacturing boxes for packing etc. due to the increasing population and the necessities attached to it, they are always in demand in the market. The most important aspect about the manufacturing of this product is that the brand is not important as far as iron nails are concerned hence entrepreneurs can go for the manufacturing at district or tehsil level. Keeping the quality standards in mind, and they could be on the road to success. For the purpose of marketing one can contact hardware store and the stores that keep stuff related to building construction.

Manufacturing process of nails: Two types of machines are required to manufacture nails (i) Crank type (ii) Spring type. Out of these maintenance cost and are automatic. Cold drawn, bright wire is used to make nails, and this wire is available in various gauges (20 S.W.G. to 65 W.G.). These wires are found in round bundles, one end of the wire is fixed in tool stand and then the other is put in wire straightening rollers and the wire automatically reaches the machine. To pull the wire further ahead, there is a grip after the rollers and this grip pulls only as much wire as is needed for the specific of the nail. The head of the nail is put into the mould's "rem", that can be pushed back & front through the crank shot. The front end of the wire is hit hard by the punch attached to the head-making mould. To make the other end and then cutting of the nail is done automatically. Here the moulds press the wire and nail gets bifurcated & cut from the wire. In this way, some part of the nail is still attached to the wire and an automatic trigger separates the nail from the wire. When the nails come out of the machine, then the tiny bits of iron & grease/lubricant deposited on the nails are remoulded by putting them into a polishing drum in which iron balls and dust are also put and after the polish, they are sent to the markets in jute bags. The details of the gauges of the wire, etc. required to manufacture various sizes of the nails are mentioned below:

iv) Nails of the length ranging from ½ inch to 2 inches wire gauge:- 20 to 12 S.W.G; capacity of machines, etc. 400 nails per minute; electric motor of 2 H.P.

v) Nails of length ranging from ¾ to 3 inches wire gauge:- 14 to 9 S.W.G.; capacity of the machines:- 300 nails/minute and 350 kg. nails per day. Electric motor of 3 H.P.

vi) Nails of length ranging from 1 to 4 inches wire gauge:- 12 to 6 S.W.G.; capacity of the machine; 200 nails/minute and 650 kg nail/day. Electric motor of 5 H.P.



Production Capacity: The production target has been kept as **345600** kg per annum (size : ¾ - 3 Inches) . The total sales realization would be around Rs. 25, 92,000/-

Capital Cost Estimate:			
(a)	Land & Building	800 sq.ft	Rented
(b)	**Plant & Machinery**		
(i)	Wire nail making machine along with	3 H.P. Motor	1,88,300/-
(ii)	Polishing barrel/ drum		55,200/-
(iii)	Wire stand/ spool		9,000/-
(iv)	Grinder & cutter		22,500/-
(v)	Other equipments & hand tools etc.		25,000/-
	Total		**3,00,000/-**
(c)	**Misc. fixed assets**		
(i)	Electrification & water installation		5,000/-
(ii)	Furniture & fixture		20,000/-
	Total		**25,000/-**
Total Fixed Capital			**Rs.3,25,000/-**
Working Capital			
(a)	**Raw Material**		
1.	M.S. Wire (cold drawn 5050 kg. bright wire) 20-9 gauge wire		1,59,500/-
2.	Old sacs/ bags for packing		2,000/-
3.	Other consumables		1,500/-
	Total : Rs.		**1,63,000/-**

3) **WORKING CAPITAL (P.M.) :-**

2) **STAFF SALARY & WAGES :-**

a) Manager cum Supervisor - Self
b) Sales man cum accountant 2 nos. @ Rs. 1,500/- - Rs. 8,000/-
c) Skilled workers 3 nos.@ Rs. 1,000/- - Rs. 12,000/-

Sub total = Rs. 20,000/-

3) **OTHER CHARGES** :-

a) House Rent - Rs. 3,000/-
b) Electricity charge - Rs. 1,000/-
c) Transport/Traveling charge - Rs. 1,500/-
d) Royality charge - Rs. 600/-
e) Printing & stationery charge - Rs. 1,000/-
f) Misc. expenses - Rs. 500/-

Sub-total = Rs. 7,600/-

4) **UTILITY :-**

a) Water - Rs. 100/-

TOTAL WORKING CAPITAL (P.M.) :-

a)	Raw Materials	-	Rs. 1,63,900/-
b)	Staff salary	-	Rs. 20,000/-
c)	Other charges	-	Rs. 7,600/-
		Total =	**Rs. 1,91,500/**
1)	FIXED CAPITAL	-	Rs, 3,25,000/-
2)	WORKING CAPITAL	-	Rs. 1,91,500/-
		TOTAL PROJECT COST-	**Rs. 5,16,500/-**

MEANS OF FINANCE :-	**Urban**	**Rural**
1) Bank Loan 70%	3,61,550/-	3,09,900/-
2) Margin Money 5%	25,825/-	25,825/-
3) Subsidy 25%	1,29,125/-	1,80,775/-
4) Debt equity ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	Annual Sales Realization in Rs.	15,55,200	18,14,40	20,73,600	20,73,600	20,73,600
3.	**Annual Costs in Rs.**					
a)	Raw Materials	11,80,080	13,76,760	15,73,440	15,73,440	15,73,440
b)	Utilities	7,920	9,240	10,560	10,560	10,560
c)	Selling expenses	36,000	42,000	48,000	48,000	48,000
	Variable Cost	**12,24,000**	**14,28,000**	**16,32,000**	**16,32,000**	**16,32,000**
d)	Wages & Salaries	1,15,200	1,34,400	1,53,600	1,53,600	1,53,600
e)	Administrative expenses	40,320	47,040	53,760	53,760	53,760
f)	Depreciation	32,500	32,500	32,500	32,500	32,500
g)	Interest on Composite Loan	41,529	33,590	24,429	14,657	4,886
	Fixed & Semi Variable Cost	2,29,549	2,47,530	2,64,289	2,54,517	2,44,746
4.	**Total Cost**	**14,53,549**	**16,75,530**	**18,96,289**	**18,86,517**	**18,76,746**
5.	Annual Profit	1,01,651	1,38,870	1,77,311	1,87,083	1,96,854
6.	Return on Investment	19.68%	26.88%	34.32%	36.22%	38.11%
7.	Return on sales	6.53%	7.65%	8.55%	9.02%	9.49%
8.	Annual contribution	3,31,200	-	-	-	-
9.	Break Even Point as percent of capacity	41.58%				
10.	Cash accrual	1,34,151	1,71,370	2,09,811	2,19,583	2,29,354
11.	Debt Servicing Capacity	1,75,680	2,04,960	2,34,240	2,34,240	2,34,240
12.	Repayment of Composite Loan	58,630	68,401	78,173	78,173	78,173
13.	Debt Serviced	1,00,159	1,01,991	1,02,602	92,830	83,059
14.	Pay Back Period	1 year 9 months				
15.	Debt Service Coverage Ratio	1.75:1				

Cash Flow Statement **(Rs. in Thousands)**

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth

1.	Increase in Promoter's contribution	25,825	-	-	-	-	-
2.	Increase in Term loan	3,61,550	-	-	-	-	-
3.	Subsidy	1,29,125	1,91,500	-	-	-	-
4.	Depreciation	-	32,500	32,500	32,500	32,500	32,500
5.	Profit before interests	-	1,43,180	1,72,460	2,01,740	2,01,740	2,01,740
A.	**TOTAL SOURCES**	**5,16,500**	**3,67,180**	**2,04,960**	**2,34,240**	**2,34,240**	**2,34,240**
6.	Increase in capital investment	5,16,500	-	-	-	-	-
7.	Increase in working capital	-	1,91,500	-	-	-	-
8.	Interest	-	41,529	33,590	24,429	14,657	4,886
9.	Repayment of Term Loan	-	58,630	68,401	78,173	78,173	78,173
B.	**TOTAL DISPOSALS**	**5,16,500**	**2,91,659**	**1,01,991**	**1,02,602**	**92,830**	**83,059**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**75,521**	**1,78,490**	**3,10,128**	**45,15,38**
D.	**NET SURPLUS**	**NIL**	**75,521**	**1,02,969**	**1,31,638**	**1,41,410**	**1,51,181**
E.	**CLOSING BALANCE**	**NIL**	**75,521**	**1,78,490**	**3,10,128**	**4,51,538**	**6,02,719**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	25,825	1,27,476	2,66,346	4,43,657	6,30,740
2.	Surplus from operation	1,01,651	1,38,870	1,77,311	1,87,083	1,96,854
	NET WORTH:	1,27,476	2,66,346	4,43,657	6,30,740	**8,27,594**
3.	**Subsidy**	**1,29,125**	**1,29,125**	**1,29,125**	**1,29,125**	**1,29,125**
4.	Term loan outstanding	3,02,920	2,34,519	1,56,346	78,173	-
	TOTAL LIABILITIES	**5,59,521**	**6,29,990**	**7,29,128**	**8,38,038**	**9,56,719**
1.	Gross Block	3,25,000	3,25,000	3,25,000	3,25,000	3,25,000
	Less Depreciation	32,500	65,000	97,500	1,30,000	1,62,500
	NET BLOCK	**2,92,500**	**2,60,000**	**2,27,500**	**1,95,000**	**1,62,500**
2.	Working capital	1,91,500	1,91,500	1,91,500	1,91,500	1,91,500
3.	Cash & Bank Balance	**75,521**	**1,78,490**	**3,10,128**	**4,51,538**	**6,02,719**
	TOTAL ASSETS	**5,59,521**	**6,29,990**	**7,29,128**	**8,38,038**	**9,56,719**

Suppliers of Machinery:

1. New Burma Machines Co., 97, East Mohannagar, Amritsar.
2. Singh's Industries, 203, East Mohannagar, Amritsar- 143 001.
3. Ultra Engineering, 172,B,Madhusudan Pal Choudhury Lane, HOWRAH.

PROJECT PROFILE ON STEEL FABRICATION UNIT

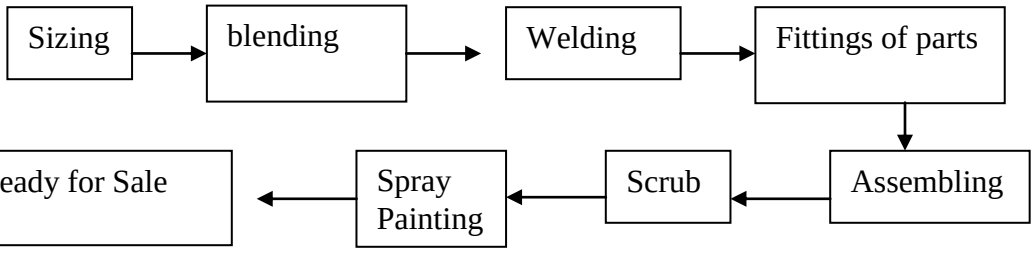
INTRODUCTION: Now a days various types of steel furniture like Almirah, Table, Chair, Racks, etc are the normal requirements of a household. Steel almirah is practically used almost in every house, office, shop, educational- institution, library etc. These have become essential in all these places because they are used to keep clothes, paper, documents etc. safe and intact.

MARKET: The market for steel furniture is on rise. Steel furniture is not only in demand for household but also in government office, bank etc. They are purchased in bulk by commercial houses every year. Considering their increasing demand, the manufacturing units of these products are being established successfully not only in big cities but also in small townships.

PRODUCTION CAPACITY: Operating single shift of 8 hours per day for 300 working days the Unit will have an annual installed capacity as shown in sales realization below.

PROCESS OF MANUFACTURE: The goods manufacture in the unit involve a process that is simple and proven and mainly depends on the standard of the manufactured products. For example, while making an almirah the B.P/C.R.C.A. sheets are cut and bent and then handles and hinges and fitted into it. Then it is painted, similarly while making chairs, the piper are welded binding them as per the set size and design and the painting of the material is done after blending & welding. Thereafter, the seat is fitted on the chair. Many other products are manufactured in the similar manner.

Process Flow:



CAPITAL COST

A. **LAND & BUILDING:** A Built up area about 1000 sq.ft : **On rent** .

B. **PLANT & MACHINERY:**

Sl. no.	Particulars	Nos.	Amount
1	Press break 7 ft	2	62,000/-
2	Gas welding set	2	10,000/-
3.	Pillar type drilling m/c	1	10,000/-
4	Span compressor set	2	30,000/-
5	Welding transformer	1	18,000/-
6.	Bench Grinder	2	14,000/-
7.	Head tools & others equipment		16,000/-
	Total		**1,60,000/-**

C MISC. FIXED ASSETS:

Sl. No.	Description	Rate	Amount (Rs.)
1	Electrification & water installation		5,500/-
2	Furniture's & fixtures	LS	30,000/-
	Total		**35,000/-**

D.Preliminary & pre-operative expenses		**18,000/-**
E. Contingency		**12,675/-**
	Total Fixed Costs:	**2,26,175/-**
Working Capital		
(a)	**Raw Material**	
1.	M.S. Wire (cold drawn 5050 kg. bright wire) 20-9 gauge wire	1,76,750/-
2.	Old sacs/ bags for packing	1,800/-
3.	Other consumables	1,050/-
	Total : Rs.	**1,79,600/-**
(b)	Salary & Wages	**9,000/-**
(c)	Misc. expenses	**10,000/-**
(d)	Electricity/Utilities	**1,500/-**
	Total Working Capital:	**2,00,100/-**
	Total Project Cost	**4,26,275/-** **Say 4,26,000/-**

	Means of Finance	**Urban**	**Rural**
(1)	Composite loan	2,98,200/-	2,55,600/-
(2)	Promoters contribution	21,300/-	21,300/-
(3)	Subsidy	1,06,500/-	1,49,100/-
(4)	Debt Equity Ratio	2.33:1	1.5:1

Profitability: (Rs. in Thousands)

Sl.No.	**Description**	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	Annual Sales Realization in Rs.	18,03,000	21,03,500	24,04,000	24,04,000	24,04,000
3.	Annual Costs in Rs.					
a)	Raw Materials	12,93,120	15,08,640	17,24,160	17,24,160	17,24,160
b)	Utilities	10,800	12,600	14,400	14,400	14,400
c)	Interest on working capital	15,008	17,508	20,010	20,010	20,010
d)	Selling expenses	7,200	8,400	9,600	9,600	9,600
	Variable Cost	13,26,128	15,47,148	17,68,170	17,68,170	17,68,170
e)	Wages & Salaries	64,800	75,600	86,400	86,400	86,400
f)	Administrative expenses	72,000	84,000	96,000	96,000	96,000
g)	Depreciation	22,618	22,618	22,618	22,618	22,618
h)	Interest on Composite Loan	34,252	27,704	27,200	11,082	3,022
	Fixed & Semi Variable Cost	1,93,670	2,09,922	2,32,218	2,16,100,	2,08,040
3.	Total Cost	15,19,798	17,57,070	20,00,388	19,84,270	19,76,210
4.	Annual Profit	2,83,202	3,46,430	4,03,612	4,19,730	4,27,790
5.	Return on Investment	18.63%	19.71%	20.17%	21.15%	21.65%
6.	Return on sales	15.70%	16.47%	16.79%	17.46%	17.79%
7.	Annual contribution	4,76,872	5,56,352	6,35,830	6,35,830	6,35,830
8.	Break Even Point as percent of capacity	40.61%	37.73%	36.52%	33.99%	32.72%
9.	Cash accrual	3,05,820	3,69,048	4,26,230	4,42,348	4,50,408
10.	Debt Servicing Capacity	3,40,077	3,96,752	4,53,430	4,53,430	4,53,430

11.	Repayment of Composite Loan	48,357	56,416	64,476	64,476	64,476
12.	Debt Serviced	82,609	84,120	91,676	75,558	67,498
13.	Pay Back Period	4 yr.	1 month	9 days		
14.	Debt Service Coverage Ratio	4.11:1				

Cash Flow Statement (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	21,300	-	-	-	-	-
2.	Increase in composite loan	2,98,200	2,00,000	-	-	-	-
3.	Subsidy	1,06,500	-	-	-	-	-
4.	Depreciation	-	22,618	22,618	22,618	22,618	22,618
5.	Profit before interests	-	3,17,454	3,74,134	4,30,812	4,30,812	4,30,812
A.	**TOTAL SOURCES**	**4,26,000**	**5,40,172**	**3,96,752**	**4,53,430**	**4,53,430**	**4,53,430**
6.	Increase in capital investment	4,26,000	-	-	-	-	-
7.	Increase in working capital	-	2,00,000	-	-	-	-
8.	Interest	-	34,252	27,704	27,200	11,082	3,022
9.	Repayment of Loan	-	48,357	56,416	64,476	64,476	64,475
B.	**TOTAL DISPOSALS**	**4,26,000**	**2,82709**	**84,120**	**91,676**	**75,558**	**67,498**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**
D.	**NET SURPLUS**	**NIL**	**2,57,463**	**3,12,632**	**3,61,754**	**3,77,872**	**3,85,933**
E.	**CLOSING BALANCE**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**	**16,95,654**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	21,300	3,04,502	6,50,932	10,54,544	14,74,274
2.	Surplus from operation	2,83,202	3,46,430	4,03,612	4,19,730	4,27,790
	NET WORTH:	**3,04,502**	**6,50,932**	**10,54,544**	**14,74,274**	**19,02,064**
3.	**Subsidy**	**1,06,500**	**1,06,500**	**1,06,500**	**1,06,500**	**1,06,500**
4.	Composite loan	2,49,843	1,93,427	1,28,951	64,478	-
	TOTAL LIABILITIES	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,249**	**20,08,564**
1.	Gross Block	2,25,900	2,25,900	2,25,900	2,25,900	2,25,900
	Less Depreciation	22,618	45,236	67,854	90,472	1,13,090
	NET BLOCK	**2,03,282**	**1,80,664**	**1,58,046**	**1,35,428**	**1,12,810**
2.	Current Assets	2,00,100	2,00,100	2,00,100	2,00,100	2,00,100
3.	Cash & Bank Balance	2,57,463	5,70,095	9,31,849	13,09,721	16,95,654
	TOTAL ASSETS	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,219**	**20,08,564**

Suppliers of Machinery:

1. SKL(INDIA) ARC, 13,Girish Ghosh Lane HOWRAH- 711 107.
2. K.C.Trunk Factory, Fancy Bazar, Guwahati.
3. Oriental Machinery Ltd, Lake Road, Agartala- 799 001.
4. Bengal Machinery Corporation, 135, Canning Street, Kolkata- 700 001

FOOD PROCESSING INDUSTRIES

MACARONI AND VERMICELLI

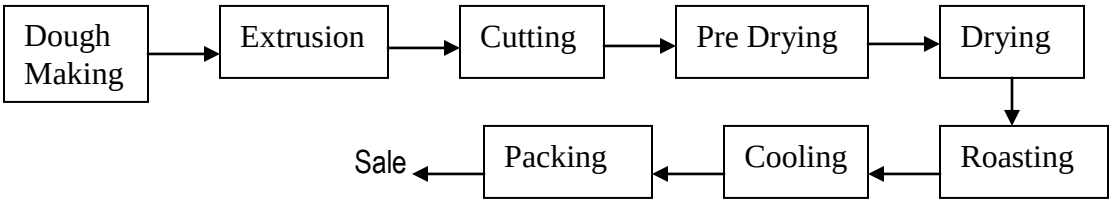
Introduction: Macaroni and Vermicelli are extruded wheat products. Vermicelli popularly known as 'Semai' in Tripura is a very popular snack. It is often considered as specialty of Muslim festivals. Macaroni is a similar Italian snack getting increasingly popular. Vermicelli and Macaroni need to conform to Bureau of Indian Standard IS: 1485-1976.

Market: Vermicelli is popular snack in both Urban and Rural areas. Macaroni is also gaining popularity. Both are comparatively low cost nutritions food with increasing demand. With more than 6,70,000 families Tripura has a demand for about 50,000 kilograms of vermicelli and about 15,000 kilograms of macaroni. Thus the state shows good marketing scope for macaroni and vermicelli manufacturing unit. There is good potential to export vermicelli to Bangladesh.

Installed Capacity: Assuming that the unit will operate single shift of 8 hours per day for 300 working days per annum the annual installed capacity is estimated at 52,500 kgs. of vermicelli and 7,500 kilograms of macaroni.

Process of Manufacture: Flour or samoline is mixed with water and kneaded in motorized mixer. The dough is then fed to the extrusion press with proper die. For vermicelli the extruded dough comes out in the shape of long rods. These are cut at pre-specified length and received on wooden sticks. These are cut at pre-specified length and received on wooden sticks. These are dried for 4 to 6 hours at 60°C temperature in cabinet drier. For macaroni also dough is extruded through dies cut at pre-specified length. The raw macaroni so obtained are received on sieves on which a Hot Air blower partially drives the macaroni to prevent formation of clumps. These partially dried macaroni are dried in a cabinet drier for 4 hours. Dried macaroni are dried in a cabinet drier for 4 hours. Dried macaroni is roasted & cooled. Vermicelli and Macaroni so produced are tested weighed and packed in Food –Grade polythene bags. These are then repacked in Corrugated Cardboard Boxes for sales.

Process Flow:



Raw Material: Vermicelli is produced from wheat flour (Maida). For Macaroni samoling (suji) is the principal raw material. Both these are readily available in the local market. Polythene Bags and Cartoons are also locally available. The annual requirements of raw materials at the installed capacity and costs are shown below:

Sl.No.	Raw/ Packing Material	Annual Requirement	Cost
1.	Wheat flour (Maida)	55000 kilograms	12,10,000/-
2.	Samolina (Suji)	78000 kilograms	2,14,500/-
3.	Packing Material	L.S.	1,70,500/-
		Total:	15,95,000/-

Power: The unit will need a connected load of 5 KW at 400/440 volts, 50 Hz, AC, 3 phase & wire. The annual consumption of power is estimated at 9600 KWHrs costing Rs. 18,144/-.

Water: The unit will need to use very clean water for the process as it is producing food items. It will need 200 Liters of water per day. The cost of water is included in the power cost.

Manpower: The unit will need the following manpower, all of whom are locally available:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	66,000/-
2.	Administrative & Sales Staff	2	92,400/-
3.	Skilled Worker	3	1,78,200/-
4.	Unskilled Worker	3	99,000/-
	Total:	9	4,35,600/-

Capital Cost Estimate:

1.	**Land & Building** : Covered area 56 sq.M.	**On Rent**
2.	**Plant & Machinery**	
a)	Platform Weighing Balance	Rs. 18,000/-
b)	50 kg. Capacity mixer with accessories	Rs. 42,000/-
c)	Two 50 kg capacity extrusion press	Rs. 1,20,000/-
d)	One Host Air Blower	Rs. 42,000/-
e)	One thermostatically controlled cabinet drier	Rs. 1,20,000/-
f)	Trays, bins, etc miscellaneous tools & equipments	Rs. 60,000/-
		Rs. **4,02,000/-**
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 33,000/-
b)	Water Installation	Rs. 22,000/-
c)	Furniture & Miscellaneous others	Rs. 55,000/-
		Rs. 1,10,000/-
4.	Provision for contingencies	**Rs. 22,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 33,000/-**
	Total Fixed Investment	**Rs. 5,67,000/-**
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 3,98,750/-
b)	Power	Rs. 4,752/-
c)	Salary & Wages	Rs. 1,08,900/-
d)	Miscellaneous expenses	Rs. 15,598/-
	Total:	**Rs. 5,28,000/-**
	Total Project Cost:	**Rs.10,95,000/-**

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 7,66,500/-	Rs. 6,57,000/-
b.	Subsidy	Rs. 2,73,750/-	Rs. 3,83,250/-
c.	Promoters contribution	Rs. 54,750/-	Rs. 54,750/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**1980**	**2310**	**2640**	**2640**	**2640**
3.	**Annual Costs in**					
(a)	Raw Materials	957	1116	1276	1276	1276
(b)	Power	11	13	15	15	15
(c)	Wages & Salaries	396	415	432	443	454
(d)	Repair & Maintenance	21	21	21	21	21
(e)	Administrative overheads	83	87	91	96	100
(f)	Selling expenses	297	347	396	396	396
(g)	Depreciation	52	52	52	52	52
(h)	Interest	87	74	54	32	10
	Total:	1904	2125	2337	2331	2324
	Total Variable Cost	**1265**	**1476**	**1687**	**1687**	**1687**
4.	**Annual profit**	**76**	**185**	**303**	**309**	**316**
5.	Return on investment	6.94%	16.89%	27.67%	28.21%	28.85%
6.	Return on sales	3.83%	8.29%	11.63%	11.83%	12.04%
7.	Annual Contribution	715	-	-	-	-
8.	Break Even Point as percent of capacity	53.26%	-	-	-	-
9.	Cash accrual	128	237	355	361	368
10.	**Debt servicing capacity**	**215**	**311**	**409**	**393**	**378**
11.	Repayment of Composite Loan	124	145	166	166	165
12.	**Debt serviced**	**211**	**219**	**220**	**98**	**175**
13.	**Pay Back Period**	**3 years 14 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**1.72:1**				

Cash Flow Statement: (Rs. in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	55	-	-	-	-	-
2.	Increase in subsidy	274	-	-	-	-	-
3	Increase in loan	766	-	-	-	-	-
4.	Depreciation	-	52	52	52	52	52
5.	Profit before interests	-	163	259	357	341	326
A.	**TOTAL SOURCES**	**1095**	**215**	**311**	**409**	**393**	**378**
6.	Increase in capital investment	**567**	-	-	-	-	-
7.	Increase in Current Assets	508	-	-	-	-	-
8.	Interests	-	87	74	54	32	10
9.	Repayment of loan	-	124	145	166	166	165
B.	**TOTAL DISPOSALS**	**1095**	**211**	**219**	**220**	**198**	**175**
C.	**OPENING BALANCE**	**-**	**-**	**4**	**96**	**285**	**480**
D.	**NET SURPLUS**	**-**	**4**	**92**	**189**	**195**	**203**
E.	**CLOSING BALANCE**	**-**	**4**	**96**	**285**	**480**	**683**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	55	121	316	619	928
2.	Surplus from operations	**76**	**185**	**303**	**309**	**316**
	NET WORTH:	**131**	**316**	**619**	**928**	**1244**
3.	Subsidy	274	274	274	274	274
4.	Loan Account	642	497	331	165	-
A.	**TOTAL LIABILITIES**	**1047**	**1087**	**1224**	**1367**	**1518**
1.	Gross Fixed Assets	567	567	567	567	567
	Less Depreciation	52	104	156	208	260
	NET BLOCK	**515**	**463**	**411**	**359**	**307**
2	Closing stocks	528	528	528	528	528
3.	Cash & Bank Balance	**4**	**96**	**285**	**480**	**683**
B.	**TOTAL ASSETS**	**1047**	**1087**	**1224**	**1367**	**1518**

Suppliers of Machinery:

1. Gardners Corporation, 6 Doctor's Lane, P.B. No. 299, New Delhi-110001.
2. B. Sen Barry & Co., 65/11, Rohtak Road, New Delhi-110005.
3. Marvel Machineries Pvt. Ltd, 140, Anna Solai, Saidapet, Chennai-600015.

HONEY PROCESSING

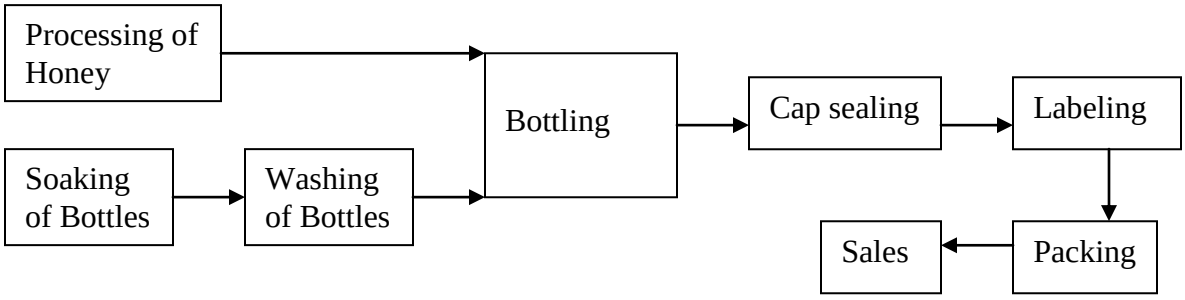
Introduction: Since Late eighties commercial Bee-keeping is propagated by various State Government Agencies and the Khadi and Village Industries Commission. Recently the Tripura Khadi & Village Industries Board is implementing a Bee-keeping Cluster in and around Hezamara Block. Due to efforts of the State Government clusters of Beekeepers have evolved in Mohanpur, Salema and Jolaibari area. These Bee-keepers are producing sizable quantities of Honey. Thus this resource can be utilized for Honey processing Plants.

Market: Honey is considered as a healthy food for all sections of population. It is also considered as a medicine by Ayurved. It is popularly used as a household cure for cough and hence used as vehicle for medicines in many popular brands of Cough Syrup. Honey is also used for making lozenges. However, it is mostly sold in glass Jars as pure honey. In bottled honey normally moisture content of honey is reduced. Compared to demand supply of honey is less and hence its prices have gone substantially up. Honey of Tripura is considered to be natural and hence pure. Tripura khadi & Village Industries Board is selling honey through its outlet. Besides, large Bee-keepers' Societies are also selling Honey. Due to traces of oxytatracycline, an antibiotic, found in most larger Brands, consumer prefer honey from smaller Brands and interior areas. This also create advantages in marketing for new Honey processors.

Installed Capacity: Operating single shift of 8 hours per day for 300 working days per annum the unit will have an annual installed capacity to produce 30,000 kgs. Of processed Honey in 200ml Bottles.

Process of Manufacture: Honey collected from Bee-keepers are tested and fed into Honey Processing plant. The plant remove excess moisture and wax in Honey to yield thick honey. The processed honey is immediately bottled in clean wide mouthed bottles. It is then sealed by PP Caps. Bottles are wiped dry and labeled. Filled, sealed & bebelled bottles are then packed in labeled cardboard boxes.

Process Flow:



Raw Materials: Honey will be the principal raw-material of the unit, which shall be locally available. For packing the unit shall need Wide Mouthed 200 ml Glass Bottles, Printed PP Caps Labels and Corrugated Cardboard Boxes. As new Glass Bottles may be costly, used Glass Bottles may be used by it. Used & washed Glass Bottles are available from M/S Phatik Bhattacharya & Sons, Gorlipandu, Guwahati and M/S Bharat Treading Corporation, Fatashil Ambari, Guwahati. Caps and Corrugated Cardboard Boxes are available in Guwahati & Kolkata. One such manufacturer of Aluminium Caps is Hindustan Sale Company, Salua, Gopalpur – 700 136. the same for Corrugated Cardboard Box is Cardboard Box Manufacturing Co. 38, Colootola Street, Kolkata-700073. The annual requirement and cost of Raw materials & packing materials at the installed capacity is shown below:

Sl.No.	Raw/ Packing Material	Quantity	Annual cost
1.	Natural Honey	33000 kilograms	65,34,000/-
2.	Wide Mouthed 200 ml Glass Bottle	1,50,000 Nos.	4,12,500/-
3.	Printed PP Caps for 2 above	1,50,000 Nos.	1,03,950/-
4.	Labels and Corrugated Cardboard Boxes	L.S.	1,15,500/-
		Total:	71,65,950/-

Power: The Unit will need 5KW of total connected load, at 400/440 Volts, 50 Hz, AC, 3 Phase and 4 Wire. The annual consumption of power is estimated at 9000 KWHrs costing Rs. 17,010/=.

Water: The Unit will need 2500 Liters of water per day, the cost of which is shown with power coat.

Manpower: The Manpower required by the unit and its cost is shown below. All these people shall be locally available.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	66,000/-
2.	Administrative & Sales Staff	2	92,400/-
3.	Skilled Worker	2	1,05,600/-
4.	Unskilled Worker	2	66,000/-
	Total:	7	3,30,000/-

Capital Cost Estimate:

1.	Land & Building : Covered area 56 sq.M.	On Rent
2.	**Plant & Machinery**	
a)	One 100 kg capacity Honey Processing Plant	Rs. 7,20,000/-
b)	One Manually operated volumetric Liquid filling machine of	Rs. 9,000/-
c)	One Manual treadle operated PP Cap seating machine	Rs. 6,000/-
d)	Testing equipments	Rs. 15,500/-
		Rs. 7,50,000/
3.	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 44,000/-
b)	Water Installation	Rs. 22,000/-
c)	Furniture & Miscellaneous others	Rs. 44,000/-
		Rs. 1,10,000/-
4.	Provision for contingencies	**Rs. 44,000/-**
5.	Preliminary & pre-operative expenses	**Rs. 38,500/-**
	Total Fixed Investment	**Rs. 8,80,000/-**
6.	**Working Capital (for 3 months)**	
a)	Raw Materials	Rs. 5,97,162/-
b)	Power	Rs. 1,485/-
c)	Salary & Wages	Rs. 27,500/-
d)	Miscellaneous expenses	Rs. 6,353/-
	Total:	**Rs. 6,32,500/-**
	Total Project Cost:	**Rs.15,12,500/-**

Means of Finance		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 10,58,750/-	Rs. 9,07,500/-
b.	Subsidy	Rs. 3,78,125/-	Rs. 5,29,375/-
c.	Promoters contribution	Rs. 75,625/-	Rs. 75,625/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl. No.	**Description**	**1st Year**	**2nd Year**	**3rd year**	**4th Year**	**5th Year**
1.	Capacity utilized	60%	70%	80%	80%	80%
2.	**Annual Sales Realization**	**6138**	**7161**	**8184**	**8184**	**8184**
3.	**Annual Costs in**					
(a)	Raw Materials	4300	5016	5733	5733	5733
(b)	Power	11	12	14	14	14
©	Wages & Salaries	330	339	347	355	364
(d)	Repair & Maintenance	36	36	36	36	36
(e)	Administrative overheads	110	116	121	128	134
(f)	Selling expenses	921	1075	1227	1227	1227
(g)	Depreciation	88	88	88	88	88
(h)	Interest	127	103	76	45	15
	Total:	**5923**	**6785**	**7642**	**7626**	**7611**
	Total Variable Cost	5232	6103	6974	6974	6974
4.	**Annual profit**	**215**	**376**	**542**	**558**	**573**
5.	**Return on investment**	**14.55%**	**25.16%**	**35.78%**	**36.95%**	**37.82%**
6.	**Return on sales**	**3.58%**	**5.31%**	**6.61%**	**6.83%**	**6.99%**
7.	Annual Contribution	906	-	-	-	-
8.	**Break Even Point as percent of capacity**	**45.44%**	-	-	-	-
9.	Cash accrual	303	464	630	646	661
10.	Debt servicing capacity	442	567	706	691	676
11.	Repayment of Composite Loan	172	200	229	229	229
12.	Debt serviced	299	303	305	274	244
13.	**Pay Back Period**	**2 years 5 months 10 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.17:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	76	-	-	-	-	-
2.	Increase in subsidy	378	-	-	-	-	-
3	Increase in loan	1059`	-	-	-	-	-
4.	Depreciation	-	88	88	88	88	88
5.	Profit before interests	-	342	479	618	603	588
A.	**TOTAL SOURCES**	**1513**					
6.	Increase in capital investment	880	-	-	-	-	-
7.	Increase in Current Assets	633	-	-	-	-	-
8.	Interests	-	127	103	76	45	15
9.	Repayment of loan	-	172	200	229	229	229
B.	**TOTAL DISPOSALS**	**1513**	**299**	**303**	**305**	**274**	**244**
C.	**OPENING BALANCE**	**-**	**-**	**131**	**395**	**796**	**1213**
D.	**NET SURPLUS**	**-**	**131**	**264**	**401**	**417**	**432**
E.	**CLOSING BALANCE**	**-**	**131**	**395**	**796**	**1213**	**1645**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousands as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	76	291	667	1209	1767
2.	Surplus from operations	215	376	542	558	573
	NET WORTH:	**291**	**667**	**1209**	**1767**	**2340**
3.	Subsidy	378	378	378	378	378
4.	Loan Account	887	687	458	229	-
A.	**TOTAL LIABILITIES**	**1556**	**1732**	**2045**	**2374**	**2718**
1.	Gross Fixed Assets	880	880	880	880	880
	Less Depreciation	88	176	264	352	440
	NET BLOCK	**792**	**704**	**616**	**528**	**440**
2	Closing stocks	633	633	633	633	633
3.	Cash & Bank Balance	**131**	**395**	**796**	**1213**	**1645**
B.	**TOTAL ASSETS**	**1556**	**1732**	**2045**	**2374**	**2718**

MUSHROOM PRESERVATION AND PROCESSING

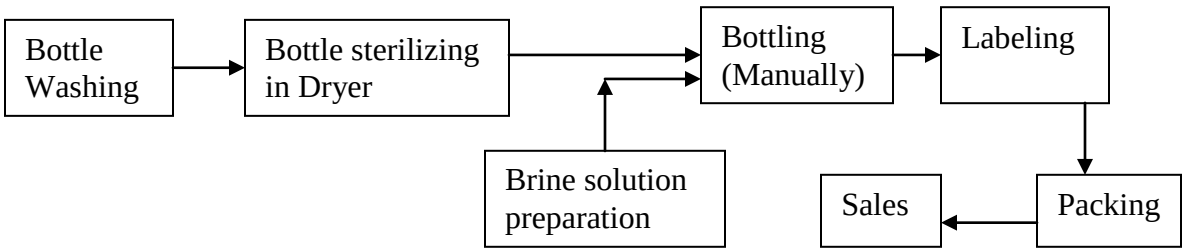
Introduction: Since time immemorial tribes of North east consume Mushroom as a delicacy. It is a simple life form known as fungus whose fruit part is normally edible. However, many mushroom are poisonous. Edible Mushrooms contain more protein, vitamins and Minerals than normally consumed Cereals, Pulses and vegetables. These are, however, highly perishable fungus needing processing and packaging. Though it is a delicacy consumed by tribes since time immemorial, it is now considered as a special food of riches. Since last part of the last century cultivation of Mushroom became popular. European White Button Mushroom (agricus bisporus) became very popular for cultivation and consumption in Tripura also. While spawns for Button Mushroom ultivation is now produced by the State Government and private laboratories, processing of it is yet to be done. Most of the Mushroom produced is now consumed fresh.

Market: Fresh Button Mushroom is highly perishable food needing storage at 5°C temperature or below it. Bulk pasteurization, Dehydration and proper packing are required for enhancing food quality of Mushroom. Pickling is another preservation process suited to Mushroom. On preservation Mushroom fetches much better process. The world market for Mushroom was worth 15 Billion Dollars in the beginning of this century. Germany, USA, Canada, Japan and Australia import large quantities of Mushrooms. India exports about Rs. 36 Crore worth of Mushroom every year. Japan and Australia are bulk-importers of Mushroom from India. At present in Tripura only fresh Mushrooms are consumed. If properly processed, packed and marketed local Mushroom cultivation may get a substantial boost to its efforts.

Installed Capacity: Assuming that the unit will operate for single shift of 8 hours per day for 300 working days per annum the annual installed capacity is estimated at 7200 kilograms of Bottled Mushrooms.

Process of Manufacture: Healthy, white and tight buttons of Mushrooms are separated from deseased, damaged, bruised, shriveled and browned mushrooms and separated into 2.5 cm compact head as grade A and larger ones as grade B. these are then manually washed in cold running water wilkant rubbing so that buttons do not get damaged. Clean Mushrooms are then collected in Galvanized Wire Mesh baskets. The filled up baskets are placed inside a vessel of boiling water so that Mushrooms do not touch boiling water. The steam of boiling water blanch the Mushroom. Blanched Mushroom is spread on trays of Dryer and dehydrated. These are filled in wide-Mouthed clean Glass Bottles. Over the Mushroom hot brine solution containing 2 percent Common Salt, 1 percent Sugar and 0.05 percent Citric Acid is poured upto the brim of the Bottle and immediately Capped. These bottles are then placed in ice Cold water, wiped dry and kept at ambient temperature for one week. Then bottles are labeled and packed inside corrugated cardboard boxes for sales.

Process Flow:



Raw Materials: 9600 kilograms Button (agaricus bisporus) Mushroom is the principal raw material of the unit. It will be available from local Mushroom growers. It will also need 140 kilograms of Common Salt, 70 kilograms of Sugar and 35 Liters of Citric Acid as Raw Material, which are reasily available in the local market. Wide-Method 100 ml second-hand Glass Bottles, which are available from M/S Phatic Bhattacharya & sons, Gorhpandu, Guwahati & M/s Bharat Trading Corporation, Fatashil Ambari, Guwahati, PP Caps, which are available from India cap Industry, Baghorbori, Guwahati & Navy Cap stores, 167/7 Lenin Sarani, Shop No.3, Chandni Chawk Market, Kolkata – 700 072, Labels & corrugated cardboard boxes, which are available locally shall be the packing Materials required. The requirement at the installed capacity and annual costs of Raw Materials are shown below:

Sl.No.	Raw/ packing Materials	Annual Requirement	Cost
1.	Button Mushroom	9600 kilograms	33,79,200/-
2.	Salt, Sugar & Citric acid	245 kilograms	13,860/-
3.	100 ml Wide Mouthed Glass Bottles	72,000 Numbers	3,16,800/-
4.	P.P. Caps	72,000 Numbers	1,18,800/-
5.	Labels, boxes, etc.	3,000 sets	66,000/-
		Total:	38,94,660/-

Fuel: The unit need to generate steam for blanching clean Mushroom and to prepare brine solution. For these purposes one Commercial Gas connection shall be required. Annually 100 commercial LP Gas Cylinders costing Rs. 55,000/- may be required.

Power: The unit shall need 10 KW of total connected Load at 400/440 volts, 50 Ha, AC, 3 phase, 4 wires which is available from State Power Supply Corporation Grid. The annual consumption of power is estimated at 22,050 KW Hrs. costing Rs. 41,675/- at the installed capacity.

Water: The water used by the unit need to be free from Iron, Arsenic, etc. Quality of water shall be one of the most important criteria for FPO License. The daily requirement of water is estimated at 250 Liters which may be drawn from ground water sources at the site.

Manpower: The manpower required by the unit are locally available. The requirement and annual costs of manpower is shown below:

Sl.No.	**Category of Manpower**	**No. of Persons**	**Annual Cost**
1.	Manager	1	72,600/-
2.	Sales & administrative staff	3	1,38,600/-
3.	Skilled worker	2	1,18,800/-
4.	Unskilled Worker	3	99,000/-
	Total:	7	4,29,000/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 93 sq. Mtrs.		**On Rent**
2)	**Plant & Machinery**		
a)	Four rinser washing basin type structure of plumbing and concrete works		Rs. 11,000/-
b)	Two Brush, Eight rinser, Double Tank Bottle washing machine with 0.5 HP Motor		Rs. 22,000/-
c)	Two wire Mesh Racks for holding Bottles up-side down		Rs. 16,500/-
d)	Stainless steel Triming knives & Trays		Rs. 11,000/-
e)	One Brine preparation vessel with LP Gas stove & commercial connection		Rs. 7,700/-
f)	One long water tank with lid and Galvanized wire Mesh baskets		Rs. 19,800/-
g)	One Four Tray Dryer		Rs. 82,500/-
h)	One PP Cap Sealing Machine with 1 HP Motor		Rs. 55,000/-
i)	Testing equipments		Rs. 8,250/-
			Rs. 2,36,500/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 55,000/-
b)	Water Installation		Rs 27,500/-
c)	Furniture & Miscellaneous others		Rs. 27,500/-
			Rs. 1,10,000/-
4.	Provision for contingencies		**Rs. 16,500/-**
5.	Preliminary & pre-operative expenses		**Rs. 16,500/-**
		Total Fixed Investment	**Rs. 3,79,500/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		Rs. 3,24,555/-
b)	Fuel		Rs. 4,584/-
c)	Power		Rs. 3,638/-
d)	Salary & Wages		Rs. 35,750/-
d)	Miscellaneous expenses		Rs. 5,473/-
		Total:	**Rs. 3,74,000/-**
		Total Project Cost:	**Rs. 7,53,500/-**

Means of Finance

		Urban	**Rural**
a.	Composite loan under PMEGP	Rs. 5,27,100/-	Rs. 4,51,800/-
b.	Subsidy	Rs. 1,88,250/-	Rs. 2,63,550/-
c.	Promoters contribution	Rs. 37,650/-	Rs. 37,650/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**3707**	**4324**	**4942**	**4942**	**4942**
3.	**Annual Costs in**					
(a)	Raw Materials	2336	2726	3115	3115	3115
(b)	Fuel	33	38	44	44	44
(c)	Power	26	31	35	35	35
(d)	Wages & Salaries	389	408	426	437	448
(e)	Repair & Maintenance	14	14	14	14	14
(f)	Administrative overheads	110	115	121	128	134
(g)	Selling expenses	557	649	741	741	741
(h)	Depreciation	37	37	37	37	37
(i)	Interest	61	50	36	22	8
	Total:	3563	4068	4569	4573	4576
	Total Variable Cost	**2926**	**3413**	**3900**	**3900**	**3900**
4.	**Annual profit**	**144**	**256**	**373**	**369**	**366**
5.	Return on investment	**18.83%**	**33.72%**	**49.20%**	**48.76%**	**48.32%**
6.	Return on sales	**3.83%**	**5.88%**	**7.50%**	**7.43%**	**7.37%**
7.	Annual Contribution	**781**	**-**	**-**	**-**	**-**
8.	Break Even Point	**48.93%**	**-**	**-**	**-**	**-**
9.	Cash accrual	181	293	410	406	403
10.	**Debt servicing capacity**	**242**	**343**	**446**	**428**	**411**
11.	Repayment of Composite Loan	85	98	115	115	114
12.	**Debt serviced**	**146**	**148**	**151**	**137**	**122**
13.	**Pay Back Period**	**2 years 1 month 16 days**				
14.	**Debt Service Coverage Ratio (DSCR)**	**2.65:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	38	-	-	-	-	-
2.	Increase in subsidy	188	-	-	-	-	-
3	Increase in loan	527	-	-	-	-	-
4.	Depreciation	-	37	37	37	37	37
5.	Profit before interests	-	205	306	409	391	374
A.	**TOTAL SOURCES**	**753**	**242**	**343**	**446**	**428**	**411**
6.	Increase in capital investment	**379**	-	-	-	-	-
7.	Increase in Current Assets	374	-	-	-	-	-
8.	Interests	-	61	50	36	22	8
9.	Repayment of loan	-	85	98	115	115	114
B.	**TOTAL DISPOSALS**	**753**	**146**	**148**	**151**	**137**	**122**
C.	**OPENING BALANCE**	**-**	**-**	**96**	**291**	**586**	**877**
D.	**NET SURPLUS**	**-**	**96**	**195**	**295**	**291**	**289**
E.	**CLOSING BALANCE**	**-**	**96**	**291**	**586**	**877**	**1166**

Projected Balance sheet:

Sl.No.	Description	Amount in Rupees Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	38	**182**	**438**	**811**	**1180**
2.	Surplus from operations	**144**	**256**	**373**	**367**	**366**
	NET WORTH:	**182**	**438**	**811**	**1180**	**1546**
3.	Subsidy	188	188	188	188	188
4.	Loan Account	442	344	220	114	
A.	**TOTAL LIABILITIES**	**812**	**970**	**1228**	**1482**	**1734**
1.	Gross Fixed Assets	379	379	379	379	379
	Less Depreciation	37	74	111	148	185
	NET BLOCK	**342**	**305**	**268**	**231**	**194**
2	Current Assets	374	374	374	374	374
3.	Cash & Bank Balance	**96**	**291**	**586**	**877**	**1166**
B.	**TOTAL ASSETS**	**812**	**970**	**1228**	**1482**	**1734**

Suppliers of Machinery:

1. United Engineering (Eastern) Corporation, Shantiniketan Building, 8 Camac Street, Kolkata – 700017
2. N.V. Industries Pvt. Ltd. 1, Raja S.C. Mullick Road, Kolkata – 700086.

PICKLES

Introduction: Pickles as per part-XV, XVI & XVII of Food Products Order (FPO) and IS-3501-1966 and Chutney are the processed Fruit and Vegetable products having the best indigeneous market. Pickles also have excellent export potential. Pickles are produced in Brine, in oil and in Vinegar. Fruits like Lime, Mango, Gooseberry and Bamboo soot suit pickling by brining. Pickles in oils from Mango, olive, chilly, vegetables, etc are very popular in India. Sweetened Pickles of Onion, vegetables, Jackfruit etc. have very good export potential. Every region has its own skills in pickle making in the country, as local system of preserving fruits and vegetables. Pickles are perhaps the most popular preserved food in the century.

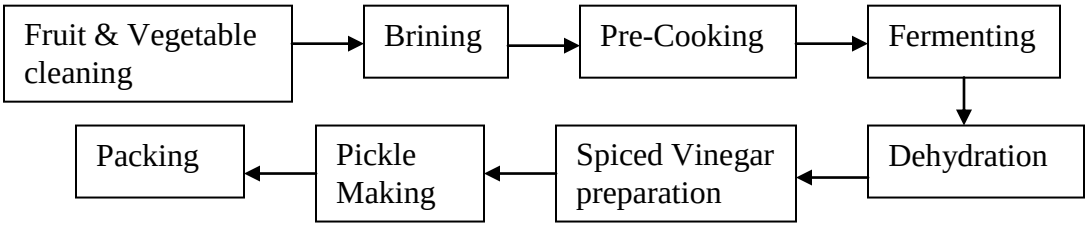
Market: Pickles have the best marketing potential among preserved foods in the country. Apart from household consumption it is consumed in hotels, restaurants and security establishments. Pickles have become so popular in the country that serving of certain dishes like chhole Bhatura, Alu/ Gobi Paratha, etc without pickles are deemed to be inadequate. The demand for pickles in Tripura is in 100 ml., 200 ml and 5 kg capacity containers. Annual demand for pickles in the state is of the order of 300 MT. most of the demand is catered to by Brands outside the state.

Installed Capacity: It is assumed that the Unit will operate for single shift of 8 hours per day for 300 working days per annum. The annual installed capacity is estimated at 12,000 kgs. or 60,000 Bottles of 200 ml. each.

Process of Manufacture: After cleaning fruits and vegetables are pickled by the one or a combination of the following:

(a) Curing on fermentation done with either dry sating or fermentation in Brine or sating without fermentation in Brine or salting without fermentation and Brine.
(b) Spiced vinegar preparation
(c) Dehydration of cured/ fermented fruits &/ or vegetables
(d) Finishing by addition of vinegar, oil, etc. and mixing
(e) Packing in 20 ml wide mouthed Glass jars and sealing by pilfer-proof Aluminium Caps.

Process flow:



Raw Materials: Pickles of Jackfruit, local sour Mango, Lime, Amra, Gooseberry, Olive, Chilly, etc are very popular in Tripura and hence pickles of these are envisaged to be manufactured by the unit. These are locally available in the local markets. The requirement and cost per annum at the installed capacity is shown below:

Sl.No.	Raw Materials/ packing Material	Quantity	Cost
1.	Fruits & Vegetables	9,600 Kilograms	70,000/-
2.	Spices	480 Kilograms	60,000/-
3.	Mustard oil	395 Liters	27,650/-
4.	Salt	960 Kilograms	9,600/-
5.	Miscellaneous others	L.S.	15,000/-

6.	Used 200 ml Glass jars	63000 No.s	55,000/-
7.	P.P. Caps	63000 No.s	45,000/-
8.	Corrugated Cardboard Boxes & Labels	5250 sets	35,000/-
		Total:	1,79,600/-

Power: The unit shall need 2 KW of total connected Load at 200/220 volts, 50 Ha, AC, single phase, 3 wire. The power is available from State Power Supply Corporation. The annual consumption of power is estimated at 4350 KW Hrs. costing Rs. 1,500/- per month.

Water: The daily requirement of water is estimated at 500 Liters per day which may be readily available at the site.

Manpower: The manpower required by the unit are locally available. The requirement and annual costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled worker	2	72,000/-
3.	Unskilled Worker	2	36,000/--
	Total:	6	1,08,000/-

Capital Cost Estimate:

1)	**Land & Building :** Covered area 100 sq. Mtrs.		**On Rent**
2)	**Plant & Machinery**		
a)	One Rectangular concrete Tank with false metallic bottom for fruit/ vegetable washing	Rs.	55,000/-
b)	One SS Top wooden Table for fruit/ vegetable preparation	Rs.	25,000/-
c)	Eight Brining & Pickling Vats	Rs.	20,000/-
d)	Two spiced vinegar making & pre-cooking vessels	Rs.	9,500/-
e)	One pickle Mixing SS Tank	Rs.	8,500/-
f)	One Manual cap sealing machine	Rs.	12,500/-
g)	One commercial gas connection	Rs.	12,000/-
h)	Testing equipments	Rs.	17,500/-
		Total:	**Rs.1,60,000/-**
3)	**Miscellaneous Fixed Asset**		
a)	Electrification	Rs.	9,500/-
b)	Water Installation	Rs.	5,000/-
c)	Furniture & Miscellaneous others	Rs.	20,500/-
		Total:	**Rs. 35,000/-**
4.	**Provision for contingencies**	**Rs.**	**12,675/-**
5.	**Preliminary & pre-operative expenses**	**Rs.**	**18,500/-**
		Total Fixed Capital: Rs.	**2,26,175/-**

Working Capital:

(a)	Raw Material	Amount
1.	M.S. Wire (cold drawn 5050 kg. bright wire) 20-9 gauge wire	Rs.1,76,750/-
2.	Old sacs/ bags for packing	Rs. 1,800/-
3.	Other consumables	Rs. 1,050/-
	Total :	Rs.1,79,600/-
(b)	Salary & Wages	Rs. 9,000/-
(c)	Misc. expenses	Rs. 10,000/-
(d)	Electricity/Utilities	Rs. 1,500/-
	Total Working Capital:	**Rs.2,00,100/-**
	Total Project Cost	**Rs.4,26,275/-** **Say Rs. 4,26,000/-**

Means of Finance

	Means of Finance	**Urban**	**Rural**
(1)	Composite loan under PMEGP	Rs. 2,98,200/-	Rs. 2,55,600/-
(2)	Promoters contribution	Rs. 21,300/-	Rs. 21,300/-
(3)	Subsidy	Rs. 1,06,500/-	Rs. 1,49,100/-
(4)	Debt Equity Ratio	2.33:1	1.50:1

Profitability:

Sl.No.	**Description**	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	**Annual Sales Realization in Rs.**	**18,03,000**	**21,03,500**	**24,04,000**	**24,04,000**	**24,04,000**
3.	**Annual Costs in Rs.**					
a)	Raw Materials	12,93,120	15,08,640	17,24,160	17,24,160	17,24,160
b)	Utilities	10,800	12,600	14,400	14,400	14,400
c)	Interest on working capital	15,008	17,508	20,010	20,010	20,010
d)	Selling expenses	7,200	8,400	9,600	9,600	9,600
	Variable Cost	13,26,128	15,47,148	17,68,170	17,68,170	17,68,170
e)	Wages & Salaries	64,800	75,600	86,400	86,400	86,400
f)	Administrative expenses	72,000	84,000	96,000	96,000	96,000
g)	Depreciation	22,618	22,618	22,618	22,618	22,618
h)	Interest on Composite Loan	34,252	27,704	27,200	11,082	3,022
	Fixed & Semi Variable Cost	1,93,670	2,09,922	2,32,218	2,16,100,	2,08,040
3.	**Total Cost**	**15,19,798**	**17,57,070**	**20,00,388**	**19,84,270**	**19,76,210**
4.	**Annual Profit**	**2,83,202**	**3,46,430**	**4,03,612**	**4,19,730**	**4,27,790**
5.	**Return on Investment**	**18.63%**	**19.71%**	**20.17%**	**21.15%**	**21.65%**
6.	**Return on sales**	**15.70%**	**16.47%**	**16.79%**	**17.46%**	**17.79%**
7.	Annual contribution	4,76,872	5,56,352	6,35,830	6,35,830	6,35,830
8.	Break Even Point as percent of capacity	**40.61%**	37.73%	36.52%	33.99%	32.72%
9.	Cash accrual	3,05,820	3,69,048	4,26,230	4,42,348	4,50,408
10.	Debt Servicing Capacity	3,40,077	3,96,752	4,53,430	4,53,430	4,53,430
11.	Repayment of Composite Loan	48,357	56,416	64,476	64,476	64,476
12.	Debt Serviced	82,609	84,120	91,676	75,558	67,498
13.	**Pay Back Period**	**11 month 18 days**				
14.	**Debt Service Coverage Ratio**	**5.22:1**				

Cash Flow Statement (Amount in Rs.)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	21,300	-	-	-	-	-
2.	Increase in composite loan	2,98,200	2,00,000	-	-	-	-
3.	Subsidy	1,06,500	-	-	-	-	-
4.	Depreciation	-	22,618	22,618	22,618	22,618	22,618
5.	Profit before interests	-	3,17,454	3,74,134	4,30,812	4,30,812	4,30,812
A.	**TOTAL SOURCES**	**4,26,000**	**5,40,172**	**3,96,752**	**4,53,430**	**4,53,430**	**4,53,430**
6.	Increase in capital investment	4,26,000	-	-	-	-	-
7.	Increase in working capital	-	2,00,000	-	-	-	-
8.	Interest	-	34,252	27,704	27,200	11,082	3,022
9.	Repayment of Loan	-	48,357	56,416	64,476	64,476	64,475
B.	**TOTAL DISPOSALS**	**4,26,000**	**2,82709**	**84,120**	**91,676**	**75,558**	**67,498**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**
D.	**NET SURPLUS**	**NIL**	**2,57,463**	**3,12,632**	**3,61,754**	**3,77,872**	**3,85,933**
E.	**CLOSING BALANCE**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**	**16,95,654**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	21,300	3,04,502	6,50,932	10,54,544	14,74,274
2.	Surplus from operation	2,83,202	3,46,430	4,03,612	4,19,730	4,27,790
	NET WORTH:	**3,04,502**	**6,50,932**	**10,54,544**	**14,74,274**	**19,02,064**
3.	Subsidy	1,06,500	1,06,500	1,06,500	1,06,500	1,06,500
4.	Composite loan	2,49,843	1,93,427	1,28,951	64,478	-
	TOTAL LIABILITIES	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,249**	**20,08,564**
1.	Gross Block	2,25,900	2,25,900	2,25,900	2,25,900	2,25,900
	Less Depreciation	22,618	45,236	67,854	90,472	1,13,090
	NET BLOCK	**2,03,282**	**1,80,664**	**1,58,046**	**1,35,428**	**1,12,810**
2.	Current Assets	2,00,100	2,00,100	2,00,100	2,00,100	2,00,100
3.	Cash & Bank Balance	2,57,463	5,70,095	9,31,849	13,09,721	16,95,654
	TOTAL ASSETS	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,219**	**20,08,564**

JAM. JELLY, JUICE & SQUASH

Introduction: Jam, Jelly, Juice & squash are made from fruits and these are food items. This food processing industry has thus far developed as a demand – based industry and hence only about 1.5 percent of fruits of the country is processed so far. If promoted as a local resource based industry its growth may be much larger especially because of fast increase in export. India is second to only Brazil in fruit production. In fruit and vegetable production India can boast of not only the quantity but also variety. Besides, the country is get to exploit large part of horticultural land in the form of hill slopes. Transport, storage and processing are the needs for fruit and vegetable, production in the country. At present about 40 percent of Indian horticultural produces go waste due to lack of these facilities. Tripura produce Pineapple. Orange, Indian Plum, Tamarind, Jackfruit, Mango, Banana, olive, Gooseberry, Guava, Lime and Lemon etc. fruits out of which only pineapple has attracted processors. These fruits can be processed to produce juice squash Jam, Jelly and Marmalades, besides others. Bureau of Indian Standard specifications IS: 3547-1966, IS:5800-1970 & IS-4936-1968 for Juice & squashes and IS:5861-070 for Jam, Jelly & Marmalade specify testing procedure and quality of these products, part-III of Food Products Order specify quality of Juice & squashes Part-VI & VII of FPO specify quality of Jam, Jelly & Marmalade.

Market: Apart from Pickles & Chatneys, preserved fruits are consumed primarily by urban and tourist oriented markets in India. The limited domestic market for preserved fruits has been the primary cause of slow progress of fruit preservation industry. However, preserved fruits have excellent export market. Export from India has increased more than ten-folds since 1991. in Tripura preserved fruit products, other than Chatney and pickle, are consumed by Hotels, Urban consumers and security establishments. In the North East the demand for Juice, squash, Jam, Jelly & Marmalade is of the order of 2500 Tonnes out of which Tripura alone consume 300 Tonnes per annum. The state has shown fast growth in demand for Ready-to-Drink especially those of Fruity and Pran Brands. These products also have good potential to export to Bangladesh.

Installed Capacity: Assuming that the unit will operate for single shift of eight hours per day for 300 working days per annum the annual installed capacity is estimated as below:

	Quantity	Sales Value
1. Squash of star-Fruit, Pineapple, Orange, Lime & Litchi	30,000 Liters	Rs.36,30,000/=
2. Jams of Guava, Pineapple, Banana, etc	9,000 Kgs	Rs.32,17,500/=
3. Jelly & Marmalades of Orange	6,000 Kgs.	Rs.24,75,000/=
	Total: 45,000Kgs.	Rs.89,92,500/=

Process of Manufacture: Fruits are washed manually. Bottles are washed by using Brushing, Rinsing, Washing Machine. Washed Bottles are kept in Wire-Mesh Racks and Dried in 4 Tray Capacity sterilizing Dryer. Fruits are then manually packed, sliced, Trained and Cored by using knives and kept in stainless Steel Trays. Citrous fruits are halved and juices are extracted by using screw-type juice extractor.. juices are allowed to settle, filtered and Pasteurised. Juices are than mixed with preservatives juices are the principal inputs for squashes cordial and jelly. For squashes Sugar & Citric Acid are heated with water. After Sugar Syrup is made, it is cooled and filtered. Clear Syrup is mixed with fruit juice, essence and permitted colours. In case of cordial Lime juice is first clarified by using gelatin and Tanin. After testing Juice and Squashes are filled in clean sterilized bottles by using filling machine. Bottles are capped by

using P.P. cap sealing machine. Bottles are then wiped dry, Labelled and filled in Corrugated Cardboard boxes.

Jams are prepared by open pan boiling of fruit pulp with sugar so that Gelatinous set of fruit & sugar is obtained by invating about 40 percent of sugar. Pectin is added towards the end of the boiling process. Some fruits like Orange & plum need pre-cooking to soften fruit tissues. Jelly is prepared by boiling clear fruit juice with sugar, colour, pectin and citric acid so that a clear, sparkling, transluscent fluid is obtained. Jam & Jelly are packed hot in glass jars and sealed when Jam or Jelly is hot. Marmalades are Jam or Jelly with pieces of fruits & peels with slightly higher percentages of pectin & Citric Acid.

Raw Materials: The unit shall use locally available fruits like pineapple, orange, (Champa) Banana, Star Fruit (Kamranga), Lime & Lemon, Lichi and Guava, Nalchar, Kumarghat, Pecharthal, Agartala, etc. are major markets of fruits in Tripura. Besides, it will need Sugar, Citric Acid, Polasium-Meta-Bi-Sulphate, Benzoic Acid, Sodium Benzoate, Bottles & Crown/ PP Caps. These are available in Agartala market. Bottles & Caps could be purchased either in Ezra street in Kolkata or in Trisngular Park, Pandu Guwahati. M/s Phatic Bhattacharya & Sons, Gorhpandu, Guwahati and Bharat Trading Corporation, Fatesil Ambari, Guwahati are leading dealers of used but cleaned Bottles in the Region. India Cap Industry, Baghorbori, Guwahati is the only local manufacturer of caps in the Region. For Corrugated Cardboard Boxes Asom Packers, Bamunimaidam Industrial Estate, Guwahati is one of the leading manufacturers. The annual requirement and costs of raw-materials at the installed capacity is shown below:

Sl.No.	Raw Material/ Packing Material	Quantity	Cost
1.	Fruits like Pineapple, Orange, Star-Fruit, Lime & Lemon, Banana, Litchi, Guava	38,000 kilograms	16,72,000/-
2.	Sugar	50,000 kilograms	19,25,000/-
3.	Citric Acid	60 Kilograms	1,65,000/-
4.	Potasium Meta-Bi-Sulphate	95 kilograms	21,945/-
5.	Sodium Benzoate	110 kilograms	24,200/-
6.	Miscellaneous others	L.S.	15,455/-
7.	750 Glass Bottles	42,000 No.s	3,23,400/-
8.	200 ml Glass Jars	78,000 Nos.	4,29,000/-
9.	Printed Caps & Crown Corks	1,20,000 Nos.	2,64,000/-
10.	Labels & Corrugated Cardboard boxes	10,000 sets	2,75,000/-
		Total:	51,15,000/-

Fuel: For generation of steam and cooking the unit will need 6,000 Ltrs. of Liquid Petroleum Gas which may cost Rs. 1,65,000/- per annum. This may be obtained through a Commercial Gas connection.

Water: The unit will need 2,000 Ltrs of water per day for steam generation, Bottle washing and other purposes. The water need to be free from Iron besides others. It is available at the site.

Power: The unit will need 10 KW of power at 400/440m volts, AC, 3 phase and 4 wire. The power is available from the State Power Supply Corporation Grid. The annual consumption of power is estimated at 13,040 KWHrs costing Rs. 53,460/- at the installed capacity.

Manpower: The requirement and annual costs of manpower is shown below: All these manpower is locally available.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager cum Chemist	1	85,800/-
2.	Sales executive	1	72,600/-
3.	Procurement & Sales Asstt.	2	1,05,600/-
4.	Other administrative manpower	2	1,05,600/-
5.	Skilled Worker	3	1,78,200/-
6.	Unskilled Worker	11	3,63,000/-
	Total:	20	9,10,800/-

Capital Cost Estimate:

1)	**Land & Building : Covered area 190 sq. Mtrs.**	**On Rent**
2)	**Plant & Machinery**	
a)	Two Rectangular Concrete Tanks with false metallic bottom of 1Mx0.85Mx0.75M size with water connections	Rs. 24,000/-
b)	Double Brush, Eight Rinser, Double tank Bottle washing machine with 0.25 HP Motor	Rs. 30,000/-
c)	Two wire Mash Racks for holding washed Bottles up-side down	Rs. 30,000/-
d)	One 4-Tray Bottle Drier	Rs. 1,20,000/-
e)	Two 1.75Mx0.85M SS Top Tables	Rs. 24,000/-
f)	SS Peeling, slicing, Trimming and Coring knives	Rs. 12,000/-
g)	36 Nos. of SS Trays	Rs. 42,000/-
h)	One 50 kg/hour capacity Baby boiler	Rs. 1,80,000/-
i)	80/kfhour capacity SS contact parts Pulper with 0.5 HP motor	Rs. 36,000/-
j)	Pineapple centrifuge Juicer with 0.5 HP Motor	Rs. 18,000/-
k)	4 Roses Rosing Machine with 1 HP Motor	Rs. 30,000/-
l)	Screw type Juice Extractor of 800 oranges/ hour capacity	Rs. 24,000/-
m)	60 to 90/ Minute orange/Lemon halving machine with 0.5 HP Motor	Rs. 18,000/-
n)	Two Nos. of 200 Litrs/ hour Juice Pasteuriser	Rs. 60,000/-
o)	One steam sterilization Tank	Rs. 18,000/-
p)	Juice Fitter	Rs. 12,000/-
q)	Two Nos. of 25 Gallon capacity steam Jacketed Vessel	Rs. 1,08,000/-
r)	One 10 kg capacity & one 50 kg capacity plat form scales	Rs. 24,000/-
s)	Double head filling machine with 2 HP Motors	Rs. 36,000/-
t)	PP Cap sealing machine	Rs. 60,000/-
u)	Table Top model Gown Corking machine	Rs. 6,000/-
v)	Testing equipments including Brix Hydrometers, Brine Meter, pocket Refract meter, Abbe Refract meter, Incubator Glassware, Reagents, etc.	Rs. 36,000/-
		Rs. 9,48,000/-
3.	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 82,500/-
b)	Water Installation	Rs 38,500/-
c)	Furniture & Miscellaneous others	Rs. 71,500/-
		Rs. 1,92,500/-
4.	**Provision for contingencies**	**Rs. 18,500/-**

5. **Preliminary & pre-operative expenses** **Rs. 20,000/-**

Total Fixed Capital: **Rs. 11,79,000/-**

6. **Working Capital (for 3 months)**

a)	Raw Materials	Rs. 4,26,250/-
b)	Fuel	Rs. 13,750/-
c)	Power	Rs. 4,455/-
d)	Salary & Wages	Rs. 75,900/-
e)	Miscellaneous expenses	Rs. 13,145/-

Total: **Rs. 5,33,500/-**

Total Project Cost: Rs. 17,12,500/-

Means of Finance:	**Urban**	**Rural**
a. Composite loan under PMEGP	Rs. 11,99,100/-	Rs. 10,27,800/-
b. Subsidy	Rs. 4,28,250/-	Rs. 5,99,550/-
c. Promoters contribution	Rs. 85,625/-	Rs. 85,625/-
d. Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl. No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales Realization**	**5396**	**6295**	**7194**	**7194**	**7194**
3.	**Annual Costs in**					
(a)	Raw Materials	3069	3581	4092	4092	4092
(b)	Fuel	99	116	132	132	132
(c)	Power	32	37	43	43	43
(d)	Wages & Salaries	766	815	866	888	910
(e)	Repair & Maintenance	47	47	47	47	47
(f)	Administrative overheads	110	115	121	128	134
(g)	Selling expenses	810	944	1079	1079	1079
(h)	Depreciation	110	110	110	110	110
(i)	Interest	143	116	84	51	17
	Total:	5186	5881	6574	6570	6564
	Total Variable Cost	**3978**	**4641**	**5303**	**5303**	**5303**
4.	**Annual profit**	**210**	**414**	**620**	**624**	**630**
5.	**Return on investment**	**12.83%**	**24.82%**	**36.94%**	**37.13%**	**37.33%**
6.	**Return on sales**	**3.89%**	**6.66%**	**8.67%**	**8.72%**	**8.76%**
7.	Annual Contribution	1418	-	-	-	-
8.	Break Even Point as percent of capacity	**51.11%**	-	-	-	-
9.	Cash accrual	320	524	730	734	740
10.	Debt servicing capacity	463	640	814	785	757
11.	Repayment of Composite Loan	194	227	259	259	260
12.	Debt serviced	337	343	343	310	277
13.	**Pay Back Period**	**2 years 5 months 9 days**				
14.	**Debt Service Coverage Ratio**	**2.20:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	86	-	-	-	-	-
2.	Increase in subsidy	428	-	-	-	-	-
3	Increase in loan	1199	-	-	-	-	-
4.	Depreciation	-	110	110	110	110	110
5.	Profit before interests	-	353	530	704	675	647
A.	**TOTAL SOURCES**	**1713**	**463**	**640**	**814**	**785**	**757**
6.	Increase in capital investment	**1179**	-	-	-	-	-
7.	Increase in Current Assets	534	-	-	-	-	-
8.	Interests	NIL	143	116	84	51	17
9.	Repayment of loan	NIL	194	227	269	259	260
B.	**TOTAL DISPOSALS**	**1713**	**337**	**343**	**343**	**310**	**277**
C.	**OPENING BALANCE**	**-**	**-**	**126**	**423**	**894**	**1369**
D.	**NET SURPLUS**	**-**	**126**	**297**	**471**	**475**	**480**
E.	**CLOSING BALANCE**	**-**	**126**	**423**	**894**	**1369**	**1849**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	86	296	710	1330	1954
2.	Surplus from operations	**210**	**414**	**620**	**624**	**630**
	NET WORTH:	**296**	**710**	**1330**	**1954**	**2584**
3.	Subsidy	428	428	428	428	428
4.	Loan Account	1005	778	519	260	-
A.	**TOTAL LIABILITIES**	**1729**	**1916**	**2277**	**2642**	**3012**
1.	Gross Fixed Assets	1179	1179	1179	1179	1179
	Less Depreciation	110	220	330	440	550
	NET BLOCK	**1069**	**959**	**849**	**739**	**629**
2	Current Assets	534	534	534	534	534
3.	Cash & Bank Balance	**126**	**423**	**894**	**1369**	**1849**
B.	**TOTAL ASSETS**	**1729**	**1916**	**2277**	**2642**	**3012**

Sources of Machinery:

1. Suan Scientific Instruments & Equipments, 28/1, Haradhan Bardhan Lane, Kolkata – 700012.
2. United Engineering (Eastern) corporation, Shantiniketan Building, 8, Camac Street, 10th floor, Kolkata – 700 017.
3. Marvel Associates, 140 Anna Salai, Saidapet, Chennai – 600 015.

KATTHA AND CUTCH

Introduction: Kattha or Khair is derived from the Core of Acacia catechu, Acacia catechuoides and Acacia Sundra (Khair) trees. These species of Acacia are found throughout the Northern Parts of India. Uttar Pradesh, Madhya Pradesh, Himachal Pradesh, Bihar, Rajasthan, Gujarat, Himachal Pradesh, Haryana, West Bengal, Arunachal Pradesh and Assam produce large quantities of these trees. Tripura also produced large quantities of Khair trees in the past as evident from name of places like Khairpur. Katha is used mainly in Betel- vine preparations normally referred to as Paan. It is used in Ayurvedic medicines as cure for internal Ulcers & Cuts. It is a bitter, Acrid, Cooling Astringent of Bowel, Cure for itching, bronchitis, indigestion, ulcers, leprosy, throat diseases, Piles, etc. Cutch is a by- product of Kattha industry. It is one of the important vegetable tanning material. It is also used in drilling, Boiler cleaning, preservation of Fishing Nets, Sailing Rods, etc. Kattha and Cutch manufacturing is an important forest-based industry. However there is no Bureau of Indian Standard specification for Kattha and Cutch.

Market: As Paan, a preparation of Betel nut, Vine, Lime, Kattha and other ingredients, is extremely popular in North Eastern Region in particular; there is an ever increasing demand for Kattha. Besides it is used in Ayurvedic medicine preparations. Though Tripura now have very little number of Khair trees, the resource is available from nearby states including Assam and Arunachal Pradesh. The State on the other hand has high demands for Kattha. The annual demand for Kattha in the State is of the order of 45 Tonnes in the State out of which dealers in Golbazar in Agartala procure about 36 Tonnes per annum from North Indian States. Therefore there is good marketing potential of Kattha in the State.

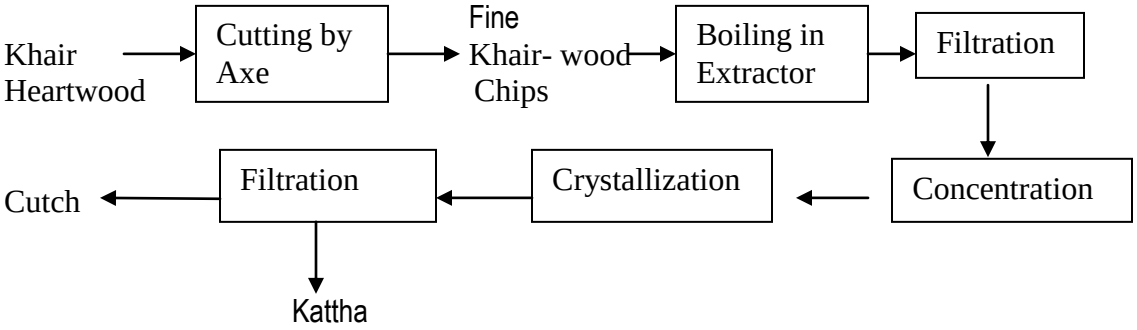
Installed Capacity: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum, the annual sales realization at the installed capacity is estimated below:

Sl.No.	Product	Quantity per annum	Sales value per annum.
1.	Kattha	1500 Kilograms	8,15,000/-
2.	Cutch	4800 Kilograms	7,00,000/-
	Total	6300 Kilograms	15,15,000/-

Process of Manufacture: The improved process developed by the Central Forest Research Institute, Dehradun is proposed to be used here. IN the process the Core (Heart-wood) of Khair Tree is manually converted into fine Chips by use of Axes. Eight to Nine Kilograms of Heart-wood Chips are taken in a wire-net cage to avoid direct contact of the chips with heated surface of the extractor. These cages are placed in extractors along with 25 to 27 liters of water (wood, water ratio 1:3) for each extraction. Two extractions of 3 hours each are made by boiling the chips with water. The second extract can be used for the first extraction of the fresh chips. The extracts are mixed after filtration through muslin cloth and concentrated to a density of 1.07 to 1.08 (Ca 1.1) in an open pan Karachi on fire and then allowed to stand aside in shade for the crystallization of kattha for a couple of days. Crystallization may be induced by adding a small quantity of catechin crystals. After complete crystallization, the curd like mass is passed through filter press (Frame and plate type) operated by hand, a wash with fresh cold water improves the quality of kattha. The aqueous solution containing cutch is collected in buckets. The kattha is then taken out from the press and is pressed again using a screw press (book-binder type) in a wooden frame provided with canvas cloth, the last traces of cutch in solution are thus expelled out. Kattha is then cut into uniform tables by means of a wire cutter or a knife and dried in sheds. The average overall yield of kattha is about 3 to 4 percent. The yield is maximum when shavings of the wood are employed.

Cutch: The mother-liquor after the removal of kattha is further concentrated in an open pan till it becomes viscous. This viscous mass is poured into wooden frame of suitable size. Cutch takes comparatively longer time to dry in shade (yield, Ca. 6-8 percent).

Process flow:



Raw Material: The main raw material for the unit is Khair wood tree. The unit shall need 3600 Kilograms of Khair wood per month at the installed capacity costing Rs.5,45,004/-. The raw Material can be obtained from local market.

Power: The power is available from the state Electric supply corporation Grid. The annual consumption of power is estimated at 4800 KWHrs costing Rs. 20,160/-.

Water: The unit will need 1000 Ltrs. Of water per day which is readily available at the location. The annual cost of water is estimated at Rs. 365/=.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Type of Manpower	No. of Persons	Annual Costs
1.	Manager	1	Rs. 96,000
2.	Receptionist cum Clerk	1	Rs. 84,000
3.	Skilled worker	3	Rs. 1,08,000
4.	Unskilled worker	2	Rs. 48,000
	Total:	**7**	**Rs. 3,36,000**

CAPITAL COST ESTIMATE:

1)	**Land & Building**: Covered area 92 Sq. Mtrs.	**On Rent**
2)	**Plant & Machinery**	
i)	Extractor	12 Nos.
ii)	Concentration pan with handle	12 Nos.
iii)	Basket and the buckets (wire net cage)	24 Nos.
iv)	Wooden frames with perforated wooden pieces	12 No.s
v)	Cutter made of Aluminium wire	2 No.s
vi)	Filter press	1 No.
vii)	Screw press	1 No.
viii)	Furnaces	1 No.
ix)	Misc. tools such as rigs, axes & laboratory equipments	
x)	Erraction & installation	

Total Rs. 2,80,000/-

3)	**Miscellaneous Fixed Asset**	Rs. 1,00,000/-
4)	**Provision for contingencies**	Rs. 20,000/-
5)	**Preliminary & pre-operative expenses**	Rs. 20,000/-
		Total Fixed Investment: Rs. 4,20,000/-
6)	**Working Capital**	
a)	Raw Material	Rs. 45,417/-
b)	Cost of Power & Manpower for 1 month	Rs. 29,680/-
(c)	Misc. others for 1 month	Rs. 4,903/-
		Total Working Capital: Rs. 5,00,000/-

Means of Finance		**Urban**	**Rural**
1.	Composite Loan	Rs. 3,50,000/-	Rs. 3,00,000/-
2.	Promoter's contribution	Rs. 25,000/-	Rs. 25,000/-
3.	Subsidy	Rs. 1,25,000/-	Rs. 1,75,000/-
4.	Debt equity Ratio	2.33:1	1.50:1

Profitability:

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	**Annual Sales Realization in Rs.**	**10,15,000**	**11,60,000**	**11,60,000**	**11,60,000**	**11,60,000**
3.	**Annual Costs in Rs.**					
a)	Raw Materials	3,27,002	3,81,503	4,36,003	4,36,003	4,36,003
b)	Utilities	12,096	14,112	16,128	16,128	16,128
c)	Selling expenses	1,26,000	1,47,000	1,63,000	1,68,000	1,68,000
	Variable Cost	**4,65,098**	**5,42,615**	**6,20,131**	**6,20,131**	**6,20,131**
d)	Wages & Salaries	2,01,600	2,35,200	2,68,800	2,68,800	2,68,800
e)	Administrative expenses	35,302	41,185	47,069	47,069	47,069
f)	Depreciation	42,000	42,,000	42,,000	42,,000	42,,000
g)	Interest on Composite Loan	40,203	32,517	22,466	13,007	3,547
	Fixed & Semi Variable Cost	3,19,105	3,50,902	3,80,335	3,70,876	3,61,416
4.	**Total Cost**	**7,84,203**	**8,93,517**	**10,00,466**	**9,91,007**	**9,81,547**
5.	**Annual Profit**	**85,797**	**1,21,483**	**1,59,534**	**1,68,993**	**1,78,453**
6.	**Return on Investment**	**17.15%**	**24.29%**	**31.90%**	**33.79%**	**35.69%**
7.	**Return on sales**	**9.86%**	**11.96%**	**13.75%**	**14.56%**	**15.38%**
8.	Annual contribution	4,04,902				
9.	Break Even Point as percent of capacity	**47.28%**				
10.	Cash accrual	1,27,797	1,63,483	2,01,534	2,10,993	2,20,453
11.	Debt Servicing Capacity	1,68,000	1,96,000	2,24,000	2,24,000	2,24,000
12.	Repayment of Composite Loan	56,757	66,216	75,676	75,676	75,675
13.	Debt Serviced	96,960	98,733	98,142	88,683	79,222
14.	**Pay Back Period**	**1 year 8 month 22 days**				
15.	**Debt Service Coverage Ratio**	**1.73:1**				

Cash Flow Statement (Amount in Rs.)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	25,000	-	-	-	-	-
2.	Increase in Term loan	3,50,000	80,000	-	-	-	-
3.	Subsidy	1,25,000	-	-	-	-	-
4.	Depreciation	-	42,000	42,000	42,000	42,000	42,000
5.	Profit before interests	-	1,26,000	1,54,000	1,82,000	1,82,000	1,82,000
A.	**TOTAL SOURCES**	**5,00,000**	**2,48,000**	**1,96,000**	**2,24,000**	**2,24,000**	**2,24,000**
6.	Increase in capital investment	5,00,000	-	-	-	-	-
7.	Increase in working capital	-	80,000	-	-	-	-
8.	Interest	-	40,203	32,517	22,466	13,007	3,547
9.	Repayment of Term Loan	-	56,757	66,216	75,676	75,676	75,676
B.	**TOTAL DISPOSALS**	**5,00,000**	**1,76,960**	**98,733**	**98,142**	**88,683**	**79,222**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**71,040**	**1,68,307**	**2,94,165**	**4,29,482**
D.	**NET SURPLUS**	**NIL**	**71,040**	**97,267**	**1,25,858**	**1,35,317**	**1,44,778**
E.	**CLOSING BALANCE**	**NIL**	**71,040**	**1,68,307**	**2,94,165**	**4,29,482**	**5,74,260**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	25,000	1,10,797	2,32,280	3,91,814	8,60,807
2.	Surplus from operation	85,797	1,21,483	1,59,354	1,68,993	1,78,453
	NET WORTH:	1,10,797	2,32,280	3,91,814	5,60,807	7,39,260
3.	**Subsidy**	**1,25,000**	**1,25,000**	**1,25,000**	**1,25,000**	**1,25,000**
4.	Term loan outstanding	2,93,243	2,27,027	1,51,351	75,675	-
	TOTAL LIABILITIES	**5,29,040**	**5,84,307**	**6,68,165**	**7,61,482**	**8,64,260**
1.	Gross Block	4,20,000	4,20,000	4,20,000	4,20,000	4,20,000
	Less Depreciation	42,000	84,000	1,26,000	1,68,000	2,10,000
	NET BLOCK	**3,78,000**	**3,36,000**	**2,94,000**	**2,52,000**	**2,10,000**
2.	Working capital	80,000	80,000	80,000	80,000	80,000
3.	Cash & Bank Balance	**71,040**	**1,68,307**	**2,94,165**	**4,29,482**	**5,74,260**
	TOTAL ASSETS	**5,29,040**	**5,84,307**	**6,68,165**	**7,61,482**	**8,64,260**

Machinery Suppliers

1) Kusum Engineering Co. Ltd., 25 Swallow Lane, Kolkata – 1.
2) Punjab Engineering Co. Ltd., G.T. Road, Meller Ganj, Ludhiana.

TOMATO PRODUCTS

Introduction: Tomato is the common man's fruit. They have bright colour, tempting flavour and are rich in vitamins. It is one of the most important crops used for preparing a variety of processed products. They are grown extensively throughout the country and are available in abundance in Andhra Pradesh, Maharastra, Karnataka, Bihar, and Madhya Pradesh besides other states. In India, the total area under its cultivation is about one lakh acres with a total production of more than 5 lakh tones per annum. Tomato is valuable raw material used for processed products such as tomato juice, ketchup, sauce, canned fruit, puree, paste, etc. the recent scientific advances have revolutionized the tomato processing industry and today in the developed countries, nearly 80 percent of the fresh tomatoes are processed into various products. In India though production of tomatoes is increasing, the growth of tomato processing industry is slow.

Market: In view of the importance of tomato either fresh or processed in the daily diet due to its high nutritive value, there are good potentials to develop this industry in the country in the small scale sector. During the glut season, when the tomatoes are cheap, a number of tomato products such as juice, soup, paste, ketchup, sauces can be prepared commercially to meet the increasing demand of the hoteliers, restaurants, clubs, railways, airlines, Defence canteens, super bazaars, etc. In the off season, when the tomatoes are either too costly or not available in plenty, other products like vegetable/ chilli/ soya sauce can be manufactured to keep the unit running around the year. In recent years, there have been encouraging enquiries from the socialist and the Middle-Cast countries for the export of tomato-based products like tomato paste, puree etc.

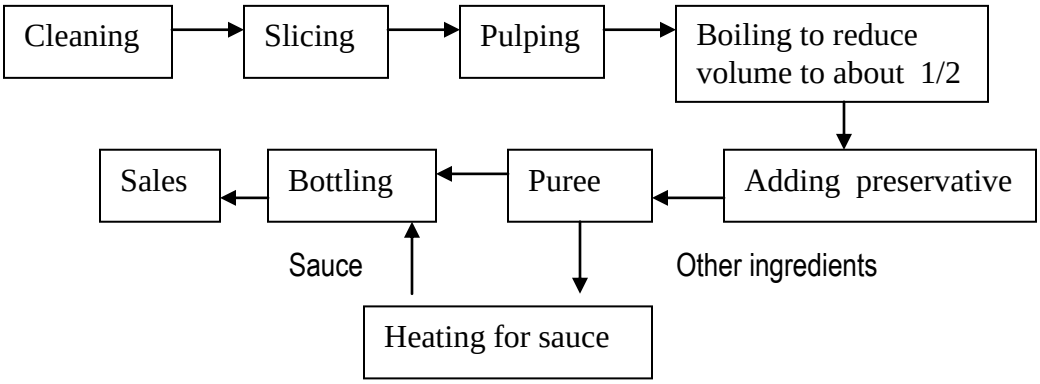
Installed Capacity: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum the annual installed capacity is estimated at

(a) Quantity: 15 MT tomato puree out of which only 3 MT shall be sold in the market as 12 Mt shall be used for the ketchup manufacturing 16 MT bottled tomato ketchup.
(b) Value: Rs. 1,96,10,195/-.

Process of Manufacture: Fully ripe tomatoes of varieties like HS-110, HS-101, Pusa Ruby & Sweet-72, suitable for the preparation of preserved products. Tomatoes are washed, trimmed- stemened, crushed in a crusher or cut into pieces are heated in the steam- jacketted kettle till tomatoes quite soften. The heated tomatoes are passed through the pulping machine using a fine mesh sieve to separate the juice from the seeds and the skin. Tomato pulp is heated to reduce the volume to about half. Preservatives are added to it to obtain Tomato Puree.

Tomato Katchup/ Sauce: Heat the juice extracted as above with ground spices, loosely tight in a musline bag, along with chopped onions and garlic as per the formulation. Sugar, salt, vinegar or acetic acid are added directly and the juice is further concentrated with constant stirring till the desired consistency of the mass is obtained as per the F.P.O. The muslin bag containing the spices is squeezed and is removed from the pan. To prevent spoilage during storage, sodium benzoate is added as per the permitted limits. The products is filled into washed bottles, sealed and subsequently cooled, labeled and packed into cartons or wooden boxes.

Process Flow:



Raw Material: The requirement at installed capacity and cost of Raw Materials are shown below:

Sl.No.	Particulars	Quantity	Amount
1)	Tomatoes	33 MT	Rs. 7,26,000/-
2)	Sugar	2.3 MT	Rs. 88,000/-
3)	Salt	460 kg.	Rs. 5,060/-
4)	Used empty glass bottles	32,000	Rs. 1,65,000/-
5)	Crown corks	32,000	Rs. 16,500/-
6)	Plastic Caps	32,000	Rs. 16,500/-
7)	Labels	32,000	Rs. 19,800/-
8)	Chemicals, vinegar, spices etc.	L.S.	Rs. 88,000/-
9)	Cardboard boxes	2,700	Rs. 16,500/-
			Total: Rs.11,41,360/-

Power: The power is available from the state Electric supply corporation Grid. The consumption of power is estimated 13200 KWHrs p.m.. Annual estimated cost Rs. 2,99,376/-.

Water: The unit will need 3KL of clean and soft water per day. It is available from both ground water sources and public supply. The unit need to use very clean water for the process as it is producing food items.

Fuel: For Generation of steam and cooking the unit will need 200 nos. cylinders of liquid petroleum gas which may cost Rs. 13,20,000/- per annum. This may be obtained through a commercial Gas connection

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled worker	3	1,58,400/-
3.	Unskilled worker	3	1,58,400/-
4.	Salesman	1	52,800/-
	Total	8	3,69,600/-

Financial Aspects of the unit:

1)	**Land & Building**	**Rented**
2)	**Plant & Machinery**	
a)	Two rectangular concrete tanks with false metallic bottom of 1Mx0.85Mx0.75M size	Rs. 24,000/-
b)	Two brush, eight Rinser, Double tank bottle washing machine with 0.25 HP Motor	Rs. 24,000/-
c)	Two wire mesh racks for holding bottles upside down	Rs. 18,000/-
d)	One driver of 4 tray capacity of sterilize washed bottles	Rs. 85,800/-
e)	2 nos. of 1.75Mx0.85 M SS Top tables	Rs. 18,000/-
f)	12 Nos. of stainless steel trays	Rs. 12,000/-
g)	Boiler of 50 kg/ hour capacity and suitable to use firewood/ coat with Chimney, piping etc.	Rs. 1,68,000/-
h)	80 kg. per hour capacity SS contact parts pulper with 0.5 HP Motor	Rs. 30,000/-
i)	Steam jacketed 25 Gallon capacity tilting type vessels	Rs. 36,000/-
j)	One 10 kg capacity and one 50 kg. capacity platform weighing scales	Rs. 18,000/-
k)	Blending SS Tank on castor wheels & gate valve of 200 ltr. Capacity	Rs. 26,400/-
l)	Manual crown corking machine	Rs. 4,800/-
m)	Double head vacuum filling machine	Rs. 30,000/-
n)	Label overprinting equipment to print batch no. price, etc. on printed labels, Box etc.	Rs. 1,800/-
o)	Testing equipments	Rs. 30,000/-
		Total: Rs. 5,34,600/-
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 38,500/-
b)	Water Installation	Rs. 22,000/-
c)	Furniture & Miscellaneous others	Rs. 27,500/-
4).	Provision for contingencies	Rs. 28,903/-
5.	Preliminary & pre-operative expenses	Rs. 71,197/-
		Total: Rs. 7,22,700/-
6.	**Working Capital**	
a)	Raw Material	Rs.11,41,360/-
b)	Utilities	Rs. 1,34,948/-
c)	Salary & Wages	Rs. 30,800/-
d)	Other expenses	Rs. 27,500/-
		Total Working Capital: Rs. 13,34,608/-
		Total Project Cost: Rs. 20,57,308/-
		Say Rs. 20,57,000/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	14,39,900/-	12,34,200/-
2.	Promoter's contribution	1,02,850/-	1,02,850/-
3.	Subsidy	5,14,250/-	7,19,950/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs. in Thousand)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized in percent	60%	70%	80%	80%	80%
2.	**Annual Sales Realization**	**11766**	**13727**	**15688**	**15688**	**15688**
3.	**Annual Costs in**					
a)	Raw Materials	8217	9587	10957	10957	10957
b)	Utilities	971	1133	1295	1295	1295
c)	Selling expenses	1474	1720	1966	1966	1966
	Variable Cost	**10662**	**12440**	**14218**	**14218**	**14218**
d)	Wages & Salaries	221	259	296	296	296
e)	Administrative expenses	198	231	264	264	264
f)	Depreciation	70	70	70	70	70
g)	Interest on Composite Loan	169	137	99	60	20
	Fixed & Semi Variable Cost	658	697	729	690	650
4.	**Total Cost**	**11320**	**13137**	**14947**	**14908**	**14868**
5.	**Annual Profit**	**446**	**590**	**741**	**780**	**820**
6.	**Return on Investment**	**22.48%**	**29.67%**	**37.09%**	**38.98%**	**40.87%**
7.	**Return on sales**	**3.79%**	**4.29%**	**4.72%**	**4.97%**	**5.22%**
8.	Annual contribution	1104	-	-	-	-
9.	Break Even Point as percent of capacity	**35.76%**				
10.	Cash accrual	516	660	811	850	890
11.	Debt Servicing Capacity	685	797	910	910	910
12.	Repayment of Loan	234	272	311	311	312
13.	Debt Serviced	403	409	410	371	332
14.	**Pay Back Period**	**1 year 8 months 26 days**				
15.	**Debt Service Coverage Ratio**	**1.75:1**				

Cash Flow Statement (Rs. in thousand)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	103	-	-	-	-	-
2.	Increase in Term loan	1440		-	-	-	-
3.	Subsidy	514	-	-	-	-	-
4.	Depreciation	-	70	70	70	70	70
5.	Profit before interests	-	615	727	840	840	840
A.	**TOTAL SOURCES**	**2057**	**685**	**797**	**910**	**910**	**910**
6.	Increase in capital investment	723	-	-	-	-	-
7.	Increase in working capital	-	1334	-	-	-	-
8.	Interest	-	169	137	99	60	20
9.	Repayment of Term Loan	-	234	272	311	311	311
B.	**TOTAL DISPOSALS**	**2057**	**403**	**409**	**410**	**371**	**332**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**282**	**670**	**1170**	**1709**
D.	**NET SURPLUS**	**NIL**	**282**	**388**	**500**	**539**	**578**
E.	**CLOSING BALANCE**	**NIL**	**282**	**670**	**1170**	**1709**	**2287**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	103	549	1139	1880	2660
2.	Surplus from operation	446	590	741	780	820
	NET WORTH:	549	1139	1880	2660	3480
3.	**Subsidy**	**514**	**514**	**514**	**514**	**514**
4.	Term loan outstanding	1206	934	623	312	-
	TOTAL LIABILITIES	**2269**	**2587**	**3017**	**3486**	**3994**
1.	Gross Block	723	723	723	723	723
	Less Depreciation	70	140	210	280	350
	NET BLOCK	**653**	**583**	**513**	**443**	**373**
2.	Working capital	1334	1334	1334	1334	1334
3.	Cash & Bank Balance	**282**	**670**	**1170**	**1709**	**2287**
	TOTAL ASSETS	**2269**	**2587**	**3017**	**3486**	**3994**

Machinery Suppliers:

1) Suan Scientific, Haladhar Bardhan Lane, Kolkata – 700012
2) Datum Engineers Pvt. Ltd., 34, Armenian Street, Kolkata – 1.

RICE FLAKES

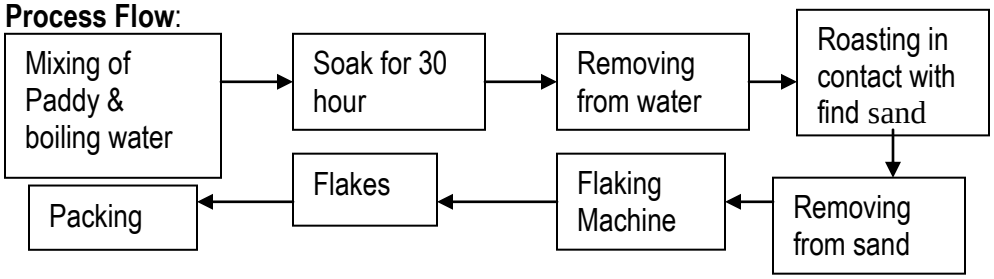
Introduction: Paddy is the major cereal crop of India, covering an area of 40.195 million hectares. India is one of the biggest producers of paddy in the world, next only to China. With the introduction of high yielding varieties and improved agronomic practices, the production of paddy has increased to 55 million tones during 1981-82. it is a staple food of the people in the Southern States, North eastern States, Coastal areas and Hilly areas. The crop is grown almost in all the States of the country, but its cultivation is mostly concentrated in the State of Andhra Pradesh, West Bengal. Tamilnadu, Uttar Pradesh, Bihar, Orisa, Madhya Pradesh, Punjab, Karnataka and Assam. Besides, its commercial importance, it is used as a food crop or consumed in different forms. It is also taken in the form of flakes commonly known as "POHA" or break-fast or snack food mainly in the Western region which include Maharashtra, Gujarat and some States of the Northern region. It is consumed as such or fried with protein rich cereals like Ground-nut, Grams etc. besides, it is cooked with milk and taken by infants, aged people & patients.

Market: it is an important industry. Being cheap convenient food, it is consumed by all sections of the society irrespective of their ages. It is a mass consumption item. With the development of this industry, even the inferior type of rice can be utilized to produce value added, fast moving convenient food especially in the rice producing States. It will help not only the growers to get the remunerative price of their produce, but generate employment opportunities in the areas. There are good possibilities to introduce poha based nutritive products as mid-day the children in Government Schools.

Installed Capacity: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum. It is also assumed that the annual sales realization at the installed capacity is estimated at 105 MT with a sales value of Rs. 23,87,000/=.

Process of Manufacture: Graded, sorted paddy is stored in wooden drums or tanks. Boiling water is poured on the paddy. It is allowed to soak for about 30 hours. The paddy is removed from water a couple of hours before the commencement of work. Every time about 25 kg. of paddy, duly roasted in contact with fine sand till two or three grains burst, is fed into the flaking machine after removing sand. The rollers of the flaking machine are adjusted according to the fineness of the flakes desired. In a short time the paddy is pressed into fine flakes. By pressing scrapers against the rim all flakes are collected near the centre of the drum and are removed by hand. The sorted and graded flakes thus obtained are packed in suitable polythene lined jute bags.

Process Flow:



Raw Material: The requirement at installed capacity and cost of Raw Materials are shown below:

Sl.No.	Particulars	Cost
1)	15 M.T. Paddy	2,31,000/-
2)	Packing Material	16,500/-

The required Raw materials for this unit can be obtained from local wholesale market.

Power: The power is available from the state Electric supply corporation Grid. The annual cost of power is estimated Rs. 13,200/-

Water: The unit need to use very clean water for the process as it is producing food items. The unit will need 2000 liters of clean and soft water per day. It is available from both ground water sources and public supply.

Fuel: Total amount required for fuel is estimated Rs. 3,850/-.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled worker	2	8,800/-
3.	Unskilled worker	1	3,300/-
	Total	4	12,100/-

Financial Aspect of the unit:

1)	Land & Building	**Rented**
2)	**Plant & Machinery**	
i)	Complete flakes manufacturing plant comprising of soaking tank, roasting pan, furnance with burner Compressor & flaking machine.	Rs. 90,000/-
ii)	Erection and installation charge	Rs. 9,000/-
		Total: **Rs. 99,000/**
3)	**Miscellaneous Fixed Asset**	
a)	Electrification	Rs. 11,000/-
b)	Water Installation	Rs. 5,500/-
c)	Furniture & Miscellaneous others	Rs. 16,500/-
		Rs. 33,000/-
4.	Provision for contingencies	**Rs. 6,188/-**
5.	Preliminary & pre-operative expenses	**Rs. 15,469/-**
		Total Fixed Investment Rs.1,53,657/
6.	**Working Capital**	
a)	Raw Material	Rs. 1,37,500/-
b)	Utilities	Rs. 5,500/-
c)	Salary & Wages	Rs. 12,100/-
d)	Other expenses	Rs. 13,200/-
		Total: **Rs. 1,68,300/-**
		Total working capital for 3 months: Rs. 5,04,900/-
		Total Project Cost: Rs. 6,58,557/-
		Say Rs. 6,59,000/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	4,61,300	3,95,400
2.	Promoter's contribution	32,950	32,950
3.	Subsidy	1,64,750	2,30,650
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	Annual Sales Realization	1433	1671	1910	1910	1910
3.	**Annual Costs in**					
a)	Raw Materials	990	1155	1320	1320	1320
b)	Utilities	40	46	53	53	53
c)	Selling expenses	13	15	18	18	18
	Variable Cost	**1043**	**1216**	**1391**	**1391**	**1391**
d)	Wages & Salaries	87	101	116	116	116
e)	Administrative expenses	95	100	126	126	126
f)	Depreciation	15	15	15	15	15
g)	Interest on Composite Loan	55	44	32	19	6
	Fixed & Semi Variable Cost	252	260	289	276	263
4.	**Total Cost**	**1295**	**1476**	**1680**	**1667**	**1654**
5.	**Annual Profit**					
6.	**Return on Investment**	**21.59%**	**28.44%**	**35.52%**	**37.41%**	**39.29%**
7.	**Return on sales**	**9.80%**	**11.06%**	**12.09%**	**12.74%**	**13.38%**
8.	Annual contribution	390	-	-	-	-
9.	Break Even Point as percent of capacity	**38.76%**				
10.	Cash accrual	153	210	245	258	271
11.	Debt Servicing Capacity	208	254	277	277	277
12.	Repayment of Composite Loan	75	87	100	100	99
13.	Debt Serviced	130	131	132	119	105
14.	**Pay Back Period**	**1 year 7 months 20 days**				
15.	**Debt Service Coverage Ratio**	**1.64:1**				

Cash Flow Statement (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	33	-	-	-	-	-
2.	Increase in Term loan	461	-	-	-	-	-
3.	Subsidy	165	-	-	-	-	-
4.	Depreciation	-	15	15	15	15	15
5.	Profit before interests	-	193	239	262	262	262
A.	**TOTAL SOURCES**	**659**	**208**	**254**	**277**	**277**	**277**
6.	Increase in capital investment	154	-	-	-	-	-
7.	Increase in working capital	505	-	-	-	-	-
8.	Interest	-	55	44	32	19	6
9.	Repayment of Term Loan	-	75	87	100	100	99
B.	**TOTAL DISPOSALS**	**659**	**130**	**131**	**132**	**119**	**105**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**78**	**201**	**346**	**504**
D.	**NET SURPLUS**	**NIL**	**78**	**123**	**145**	**158**	**172**
E.	**CLOSING BALANCE**	**NIL**	**78**	**201**	**346**	**504**	**676**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	33	171	366	596	839
2.	Surplus from operation	138	195	230	243	256
	NET WORTH:	171	366	596	839	1095
3.	**Subsidy**	**165**	**165**	**165**	**165**	**165**
4.	Term loan outstanding	386	299	199	99	-
	TOTAL LIABILITIES	**722**	**830**	**960**	**1103**	**1260**
1.	Gross Block	154	154	154	154	154
	Less Depreciation	15	30	45	60	75
	NET BLOCK	**139**	**124**	**109**	**94**	**79**
2.	Working capital	505	505	505	505	505
3.	Cash & Bank Balance	**78**	**201**	**346**	**504**	**676**
	TOTAL ASSETS	**722**	**830**	**960**	**1103**	**1260**

Suppliers of Machinery:

1) Hindustan Engineering Co. Rawpat Road, Fort Mumbai – 1.
2) General Engineering Co. Ltd. Kubhar Weda, 5th Lane, Mumbai – 1.

TEA BLENDING & PACKAGING

Introduction: Depending on the Agro-climatic conditions tea last different in different location of plantations. For example, Darjeeling Tea has strong flavour while Assam Tea yields strong liquor. The consumer preference on the other hand may be for good flavour with average strength of liquor. Also some locations yield Tea of low flavour and strength. Such Tea can be made of better quality by blending with better tea. Tea of Barak Valley of Assam and Tripura are primarily used as low quality tea suitable for bending with higher quality tea. With preferences for spiced tea the domestic market of India provide for opportunities of blending. Also domestic market of Tea suit lower quality CTC Tea.

Market : Tripura is a traditional tea-growing area producing comparatively low quality black tea suitable for blending . As now domestic consumption of tea has overtaken export and as domestic market prefer tea with strong liquor and reasonable flavour there is good scope for blending local tea with Assam Tea. Also there is good scope for blending Darjeeling tea with local and Assam Tea for urban consumers. The increasing popularity of wall packed blended tea indicate good scope for Tea blending Units.

Capacity: By operating single shift of eight hours per day for three hundred working days per annum, the Unit shall produce 2,70,000 packets of blended tea per year. Each packet shall contain one hundred grams on tea. Thus the annual installed capacity shall be 27000 Kilograms of blended tea.

Process of Manufacture: High quality tea and lower quality tea are mixed in a Double cane Blender. The blended tea is loaded in the pouch fill pack-seal machine. Printed pouches are also loaded in the filling machine. The filling and sealing of pouches are done by the machine. Filled up pouches are then repacked in corrugated cardboard boxes for shipping.

Process Flow:

Blending → Filling & Sealing → Repacking of Pouches → Sales

Raw Materials : Various qualities of Tea, Printed Pouches and Corrugated cardboard Boxes are the raw-materials of the Unit. Though all these are locally available, well designed & printed pouch material is of utmost importance for the unit. Therefore pouch material shall be purchased en-bulk from M/s P&S packaging, 405, Narayanic Building, 4th Floor, 27, Brabourne Road, Kolkata-700001 besides others. M/s Purushottam Agencies in the same address may be the source of Corrugated Cardboard Boxes. The annual requirement of raw-materials at the installed capacity and costs are shown below:

Sl.No.	Raw Materials	Quantity	Cost
1.	High Quality tea	7000 kilograms	Rs. 6,16,000/-
2.	Ordinary Tea	21000 kilograms	Rs. 11,55,000/-
3.	Printed Pouch Materials	150 Sq.Mtrs.	Rs. 66,000/-
4.	Printed Corrugated Cardboard	6000 Boxes	Rs. 99,000/-
	Total:		**Rs. 19,36,000/-**

Power: The unit shall need 8 KW of total connected load. The annual consumption of power is estimated at 14,165 KW Hrs. costing Rs. 48,303/-.

Water: The unit shall not need any water for the process. The daily requirement of water is estimated at 500 liters, cost of which is sown with power cost.

Manpower: Manpower required by the unit and its annual costs are shown below. The entire requirement of manpower is available locally.

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Rs. 79,200/-
2.	Administrative & sales staff	3	Rs. 1,38,600 /-
3.	Skilled worker	1	Rs. 66,000/-
4.	Unskilled worker	2	Rs. 66,000/-
	Total:	7	Rs. 3,49,800/-

Capital Cost Estimate:

1.	**Land & Building** : Covered Area : 93 Sq.Mtrs.		**On Rent**
2.	**Plant & Machinery**:		
(a)	One Double Cone Blender with Motor		Rs. 84,000/-
(b)	One Form Fill & Seal Machine with Motor		Rs. 3,24,000/-
(c)	Misc. hand tools		Rs. 12,000/-.
			Rs. 4,20,000/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 38,500/-
b)	Water Installation		Rs. 5,500/-
c)	Furniture & Miscellaneous others		Rs. 66,000/-
			Rs. 1,10,000/-
4.	**Provision for contingencies**		**Rs. 27,500/-**
5.	**Preliminary & pre-operative expenses**		**Rs. 33,000/-**
		Total Fixed Investment	**Rs. 5,55,500/-**
6.	**Working Capital (for 3 months)**		
a)	Raw Materials		Rs. 4,84,000/-
b)	Power		Rs. 12,076/-
c)	Salary & Wages		Rs. 87,450/-
d)	Miscellaneous expenses		Rs. 15,974/-
		Total:	**Rs. 5,99,500/-**
		Total Project Cost:	**Rs.11,55,000/-**

Means of Finance:		**Urban**	**Rural**
a.	Composite loan under PMEGP	Rs. 8,08,500/-	Rs. 6,93,000/-
b.	Subsidy	Rs. 2,88,750/-	Rs. 4,04,250/-
c.	Promoters contribution	Rs. 57,750/-	Rs. 57,750/-
d.	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	**Annual Sales Realization**	**1935**	**2258**	**2280**	**2280**	**2280**
3.	**Annual Costs in**					
a)	Raw Materials	1162	1355	1549	1549	1549
b)	Utilities	29	34	39	39	39

c)	Selling expenses	99	116	132	132	132
	Variable Cost	**1290**	**1505**	**1720**	**1720**	**1720**
d)	Wages & Salaries	210	145	280	280	280
e)	Administrative expenses	38	45	51	51	51
f)	Depreciation	55	55	55	55	55
g)	Interest on Composite Loan	97	78	54	31	9
	Fixed & Semi Variable Cost	400	423	440	417	395
4.	**Total Cost**	**1690**	**1928**	**2160**	**2137**	**2115**
5.	**Annual Profit**	**245**	**330**	**420**	**443**	**465**
6.	**Return on Investment**	**21.21%**	**28.57%**	**36.36%**	**38.35%**	**40.25%**
7.	**Return on sales**	**12.66%**	**14.61%**	**16.27%**	**17.17%**	**18.02%**
8.	Annual contribution	645	-	-	-	-
9.	Break Even Point	**37.20%**				
10.	Cash accrual	300	385	475	498	474
11.	Debt Servicing Capacity	397	463	529	529	529
12.	Repayment of Composite Loan	131	153	175	175	174
13.	Debt Serviced	228	231	229	206	183
14.	**Pay Back Period**	**1 year 9 months 7 days**				
15.	**Debt Service Coverage Ratio**	**1.77:1**				

Cash Flow Statement: (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	58	-	-	-	-	-
2.	Increase in Term loan	808	-	-	-	-	-
3.	Subsidy	289	-	-	-	-	-
4.	Depreciation	-	55	55	55	55	55
5.	Profit before interests	-	342	408	474	474	474
A.	**TOTAL SOURCES**	**1155**	**397**	**463**	**529**	**529**	**529**
6.	Increase in capital investment	**555**	-	-	-	-	-
7.	Increase in working capital	600	-	-	-	-	-
8.	Interest	-	97	78	54	31	9
9.	Repayment of Term Loan	-	131	153	175	175	174
B.	**TOTAL DISPOSALS**	1155	228	231	229	206	183
C.	**OPENING BALANCE**	NIL	NIL	169	401	701	1024
D.	**NET SURPLUS**	NIL	169	332	300	323	346
E.	**CLOSING BALANCE**	NIL	169	401	701	1024	1370

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	58	303	633	1053	1496
2.	Surplus from operation	245	330	420	443	465
	NET WORTH:	303	633	1053	1496	1961
3.	**Subsidy**	**289**	**289**	**289**	**289**	**289**
4.	Term loan outstanding	677	524	349	174	-
	TOTAL LIABILITIES	**1269**	**1446**	**1691**	**1959**	**2250**

1.	Gross Block	555	555	555	555	555
	Less Depreciation	55	110	165	220	275
	NET BLOCK	**500**	**445**	**390**	**335**	280
2.	Working capital	600	600	600	600	600
3.	Cash & Bank Balance	**169**	**401**	**701**	**1024**	**1370**
4.	**TOTAL ASSETS**	**1269**	**1446**	**1691**	**1959**	**2250**

Machinery Suppliers:

1) Modern Packaging System, 3A, Garstin Place, 7th Floor, Kolkata-700001.

ROASTED AND SALTED CASHEW NUTS

Introduction: The Cashew ranks second only to Almond among the nine tree-nuts of importance in the world trade. A native of Brazil, Cashew was brought to India and East Africa by the early portuguse settlers more than 400 years ago. The main cashew growing States in India today are Kerala, Tamilnadu, Karnataka, Andhra Pradesh, Orissa, Goa and Maharashtra. It is estimated that the total indigeneous production of raw cashew nuts in India is about 1,50,000 M.T. The country also imported 20,000 M.T. raw cashew nuts from African countries for processing during the year 1981-82.

Market: Cashew nut is one of the largest export earning crops of our country. India holds a monopoly on the International cashew nut market, since the major share of the world demand is met by Indian Industry. It is estimated that the cashew kernels and shell liquid oil from small scale sector worth Rs. 124.85 crores were exported during the year 1981-82. though cashew kernels are mainly being exported in raw form, there is a good demand for roasted and salted nuts in consumer paks all over the world. Considering the scope for setting up more small scale units in this line, Govt. of India has reserved this item exclusively in small scale sector.

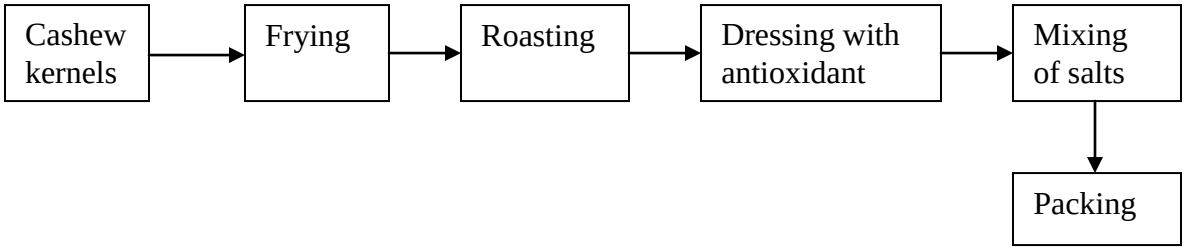
Target: Assuming that the Unit shall operate for single shift of eight hours per day for three hundred days per annum.

(a) Quantity - 24 tonnes
(b) Value - Rs. 83,98,500/-

Process: Only best quality of cashew mostly 210 and 240 counts are selected for roasting and consumer size packaging. Cashew kernels are deep-fried in thermostat controlled pans in vegetable oil. Frying at controlled steady temperature (3000F) helps to get the desired roasted colour for cashews. After 10 to 20 minutes roasting, the fired cashews are removed from the heating and dressed with a solution of an antioxidant and an acid syncergist to prevent rancidity and any cation of bacteria. The antioxidant used is butylated hydroxi anisole or gunm guaise, while the acid synergist employed is ascorbie acid, citric acid or phosphoric acid. The dressed cashews are passed through a centrifugal chamber, which ensures uniform coating of the dressing on the surface of cashews. This may also remove traces of oil sticking on to the cashews.

Salt is mixed with cashews before they are packed in tins. Some units also make 'Spiced' cashews as per requirement of consumers. The broken and split kernels if available after frying and salting may be removed by hand. They are then filled in tins of appropriate sizes. The tins are seamed, then vaccumised and an inert gas (Nitrogen) is introduced. The tins thus packed will have a storage life of over 11/2 years.

Process Flow:



Raw Material: The requirement at installed capacity and cost of Raw Materials are shown below:

Sl.No.	Particulars	Value (Rs.)
1.	Cashew kernels	5,50,000/-
2.	Hydrogenated vegetable oil	8,250/-
3.	Salt, spices, chemicals etc.	2,200/-
4.	Packing materials	16,500/-
	Total:	5,76,950/-

Power: The power is available from the state Electric supply corporation Grid. The annual consumption of power is estimated Rs. 25,080/-

Water: The unit need to use very clean water for the process as it is producing food items. The unit will need 2000 liters of clean and soft water per day. It is available from both ground water sources and public supply.

Manpower: manpower required by the unit are locally available. The annual needs and costs of manpower is shown below:

Sl.No.	Category of Manpower	No. of persons	Annual Costs
1	Manager	1	Self
2	Skilled worker	2	Rs, 1,05,600/-
3.	Unskilled worker	2	Rs. 79,000/-
	Total:	5	Rs. 1,84,800/-

Financial Aspect:

1) **Land & Building** - **Rented**

2) **Plant & Machinery**

Sl.No.	Description	Price (Rs.)
1.	Electric roasted with thermostalie control arrangement	54,000/-
2.	Centrifugal chamber	12,000/-
3.	Hand operated can seamer	12,600/-
4.	Tin vacuumiser	14,400/-
5.	Working tables with Aluminium top	4,800/-
6.	Aluminium vessels, wooden ladles, trays etc.	3,000/-
7.	Weighting balance	6,000/-
8.	Laboratory testing equipments	4,200/-
	Total:	**1,11,000/-**

3) **Miscellaneous Fixed Asset**

a) Electrification Rs. 16,500/-

b) Furniture & Miscellaneous others Rs. 22,000/-

Rs. 38,500/-

4. **Provision for contingencies** **Rs. 7,012/-**

5. **Preliminary & pre-operative expenses** **Rs. 18,288/-**

Total Fixed Investment Rs. 1,65,550/-

6. **Working Capital (P.M.)**

a)	Raw Material	Rs. 5,76,950/-
b)	Utilities	Rs. 2,750/-
c)	Salary & Wages	Rs. 15,400/-
d)	Other expenses	Rs. 22,000/-

Total working capital Rs. 6,17,100/-

Total Project Cost: Rs. 7,82,650/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	5,47,855/-	4,69,590/-
2.	Promoter's contribution	39,132/-	39,132/-
3.	Subsidy	1,95,663/-	2,73,928/-
4.	Debt equity ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	**Annual Sales Realization**	**5039**	**5879**	**6719**	**6719**	**6719**
3.	**Annual Costs in**					
a)	Raw Materials	4154	4846	5539	5539	5539
b)	Utilities	20	23	26	26	26
c)	Selling expenses	406	474	542	542	542
	Variable Cost	**4580**	**5343**	**6107**	**6107**	**6107**
d)	Wages & Salaries	111	129	148	148	148
e)	Administrative expenses	158	185	211	211	211
f)	Depreciation	16	16	16	16	16
g)	Interest on Composite Loan	66	53	39	23	8
	Fixed & Semi Variable Cost	351	382	414	398	383
4.	**Total Cost**	**4931**	**5726**	**6521**	**6505**	**6490**
5.	**Annual Profit**	**108**	**153**	**198**	**214**	**229**
6.	**Return on Investment**	**13.79%**	**19.54%**	**25.28%**	**27.33%**	**29.25%**
7.	**Return on sales**	**2.14%**	**2.60%**	**2.95%**	**3.18%**	**3.41%**
8.	Annual contribution	459	-	-	-	-
9.	Break Even Point	**45.88%**				
10.	Cash accrual	124	169	214	230	245
11.	Debt Servicing Capacity	190	222	253	253	253
12.	Repayment of Composite Loan	89	104	119	118	118
13.	Debt Serviced	155	157	158	141	126
14.	**Pay Back Period**	**1 year 2 month 26 days**				
15.	**Debt Service Coverage Ratio**	**1.25:1**				

Cash Flow Statement (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	39	-	-	-	-	-
2.	Increase in Term loan	548	-	-	-	-	-
3.	Subsidy	196	-	-	-	-	-
4.	Depreciation	-	16	16	16	16	16
5.	Profit before interests	-	174	206	237	237	237
A.	**TOTAL SOURCES**	**783**	**190**	**222**	**253**	**253**	**253**
6.	Increase in capital investment	**166**	-	-	-	-	-
7.	Increase in working capital	617		-	-	-	-
8.	Interest	-	66	53	39	23	8
9.	Repayment of Term Loan	-	89	104	119	118	118
B.	**TOTAL DISPOSALS**	**783**	**155**	**157**	**158**	**141**	**126**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**35**	**100**	**125**	**507**
D.	**NET SURPLUS**	**NIL**	**35**	**65**	**95**	**112**	**127**
E.	**CLOSING BALANCE**	**NIL**	**35**	**100**	**195**	**307**	**434**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs. Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	39	147	300	498	712
2.	Surplus from operation	108	153	198	214	229
	NET WORTH:	147	300	498	712	941
3.	**Subsidy**	**196**	**196**	**196**	**196**	**196**
4.	Term loan outstanding	459	355	236	118	-
	TOTAL LIABILITIES	**802**	**851**	**930**	**1026**	**1137**
1.	Gross Block	166	166	166	166	166
	Less Depreciation	16	32	48	64	80
	NET BLOCK	**150**	**134**	**118**	**102**	**86**
2.	Working capital	617	617	617	617	617
3.	Cash & Bank Balance	**35**	**100**	**195**	**307**	**434**
4.	**TOTAL ASSETS**	**802**	**851**	**930**	**1026**	**1137**

Machinery Suppliers:

1. M/s. Gardeners Corporation, Doctors Lane, P.B. No. 299, New Delhi -110 001.
2. M/s. A.P.V. Engg. Co. Ltd., 2, Jossore Road, Dum Dum, Kolkata-28.

ICE CREAM

Introduction: Ice Cream is a popular food product. It was considered as a luxury food for summer season only. However, with the development of Dairy and Milk processing industry it has also found use as a Dessert. The Bureau of Indian Standards have formulated IS2802:1964 for performed Ice Cream and IS5839:1970 for hygienic conditions for manufacture, storage and sale of Perfumed Ice Cream. Average Ice Cream and Premium Ice Cream differ in solid content as below:

Sl.No.	Ingredient	Content as percent in	
		Average Ice Cream	Premium Ice Cream
1.	Milk Fat	10.5%	16.0%
2.	Non Fat Milk solids	11.0%	9,0%
3.	Sucrose	12.5%	16.0%
4.	Corn syrup	5.5%	-
5.	Stabilizers	0.3%	0.1%
6.	Emulsifier	0.1%	-
	Total solids	**39.9%**	**41.1%**

One hundred grams of Ice Cream contain more than 200 calories and 4% protein, besides Minerals and Vitamins.

Market: Ice Cream is consumed as Dessert as well as anytime snacks. Its demand peak in Summer months. Railways are the most important bulk consumer of Ice Cream. Hotels, Restaurants, Resorts and flight kitchens are other bulk consumers. Sales through vendors and shops attract other consumers the most. Street vendors find good market for Ice Creams among school children.

Tripura with a population of 3,199,203 as per 2001 census consume Ice cream both as Dessert and as anytime snacks, street vendors find excellent market for Ice Cream among school children. Brand consciousness in Tripura is comparatively less and hence local Brands sells well. Bulk consumption of Ice Cream in hotels, Restaurants, etc. is by far less than national average. National Brand leaders such as Kwality Walls and Amul have negligible sales in the state. The total demand for Ice cream in the state is estimated at 4,50,000 kilograms out of which only about 22,500 kilograms are consumed by bulk buyers like Hotels & Restaurants. Bulk buyers are also Brand conscious. Therefore the proposed unit shall cater to a total demand of 4,27,500 kilograms of Ice Cream.

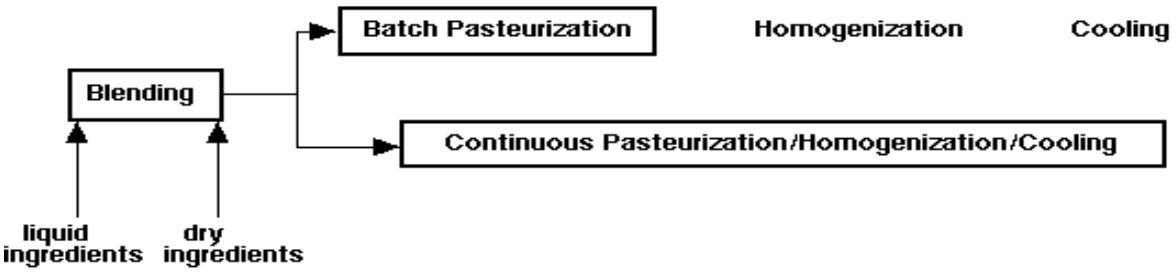
Capacity: The Unit shall single shift of eight hours per day for three hundred working days per annum. Accordingly it will have an annual installed capacity to produce 75,000 kgs of Ice Cream per annum.

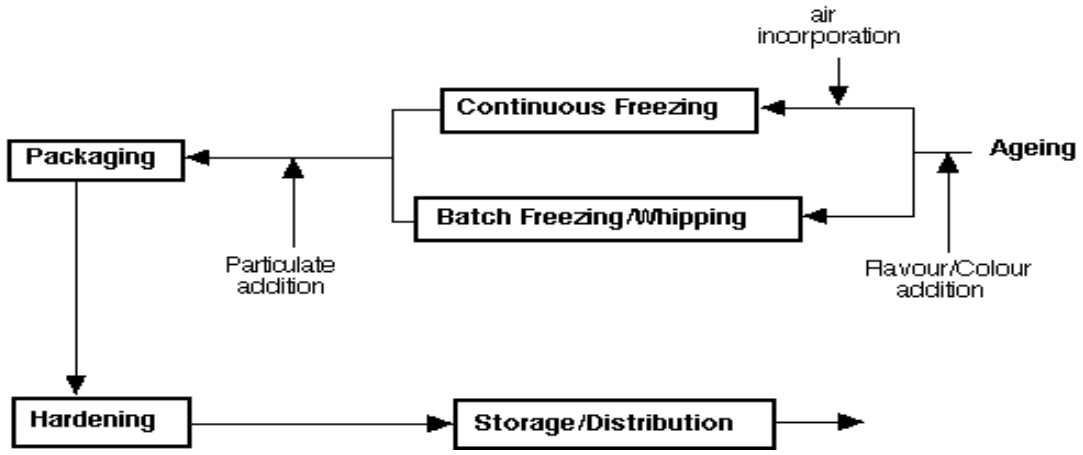
Process of Manufacture: the process suggested here is the one tested and practiced all over India. Milk shall be pasteurized in Steam- Jacketed SS Vessel. Milk, Cream, Butter and Sugar in exact quantities shall be mixed in a SS Homogenizer. The Mix shall be Pasteurized again. Emulsifiers and Stabilizers shall be added to the mix and blended. This mix is further homogenized so that the globule sizes are 4 microns or less. The mixture is cooled again and kept cool for at least 24 hours at 4°C to 0°C. Flavors and colours are added prior to cooling. The mixture is cooled again below 0°C for hardening in a Batch Freezer. Ice Cream is packed in small cups and as cones with Wooden/Bamboo handles. For cups and cubes the above process suffice. For cones the Ice Cream is placed inside moulds with the handle for

deep freezing. Such cones are packed in Plastic/Paper packets. Ice Cream in Cups and Cones shall be vended in Cooled Hand Carts by authorized vendors in and around Agartala town. Vendors are given 35% of sales realization as Commission and they work for the Commission only. Basic steps in the manufacturing of ice cream are generally as follows:

- Blending of the mix ingredients
- Pasteurization
- Homogenization
- Aging the mix
- Freezing
- Packaging
- Hardening

Process Flow:





Raw Materials: The Unit shall need the following raw- materials per annum at the installed capacity:

Sl.No.	Raw/Packing Materials	Quantity	Cost
1.	Milk	54000 Liters	14,25,600/-
2.	Cream	6,300 Kilograms	4,15,800/-
3.	Butter	2,200 Kilograms	4,35,600/-
4.	Sugar	10,900 Kilograms	2,63,780/-
5.	Stabilizers & Emulsifiers & flavour	3,225 Klograms	5,32,125/-
6.	Corn syrup	4,200 Kilograms	92,400/-
7.	Printed Ice Cream cups	7,50,000 No.s	5,36,250/-
8.	Ice cream sticks	7,50,000 No.s	8,250/-
9.	Printed paper cover	7,50,000 No.s	2,88,750/-
		Total	**Rs. 39,98,555/-**

Printed Ice Cream cups, paper cover and sticks shall be bulk purchased from outside the state and these packing materials shall be stored for 3 months. Milk shall be stored for one day only. Other raw-materials shall be stored for a week.

Utilities: The unit shall need a total connected load of 20 KVA or 16 KW at 400/440 volts, 50 Hz, AC, 3 phase, 4 wire. The power shall be drawn from the Tripura Electric Supply Company grid. The annual cost of power is estimated at 30,720 KWHrs costing **Rs. 1,12,896**/- at the installed capacity.

Water: The Unit shall need 3 Kiloliters of water per day which shall be drawn from ground water sources at the site. The cost of drawing water is shown in the power cost.

Manpower: The Unit shall need the following manpower of the costs shown alongside at the installed capacity.

Sl.No.	Category of Manpower	No. of persons	Annual Costs
1.	Manager	1	85,800/-
2.	Production supervisor	1	79,200/-
3.	Skilled workers	3	1,78,200/-
4.	Unskilled workers	7	2,31,000/-
		Total	**5,74,200/-**

CAPITAL COST ESTIMATE:

1. Land & Building: Covered Area 105 Sq. Mtrs. **On Rent**

2. Plant & Machinery

(a) 2 No.s of 300 Ltr. Capacity SS Milk Storage Tanks
(b) One 400 Ltrs capacity SS steam Jacketed Pan
(c) One ss steam Jacketted Pasteuriser of 320 Ltrs. Capacity with 6 HP Motor for Agitator
(d) One SS Two stage Homogeniser of 350 Liter capacity with water cooling system operating at 300 PSI with 4.5 H.P. Motor, pressure gauge etc.
(e) One SS Surface Cooler (4.4°C to 0°C) in two sections: water cooled and gas cooled.
(f) One SS Agency vat/storage Tank of 300 Liters capacity with copper coil of 50 ft. length and condensation unit.
(g) One 35 Liter capacity Batch freezer with 9.0 TR and 6HP Compressor
(h) One Deep Freeze
(i) One volumetric filling machine
(j) One Baby Boiler (Non-IBR) Rs. 6,44,400/-
K. Freight, Packing & forwarding, CST, local handling, etc. costs of above machinery Rs. 43,200/-

Total: Rs. 6,87,600/-

4. Miscellaneous Fixed Assets

(a) Electrification Rs. 1,10,000/-
(b) Water installation Rs. 55,000/-
(c) 20 No.s. of Ice Cream Vendoring hand costs Rs. 1,10,000/-
(d) Furniture, Fixture, etc. Rs. 33,000/-

Total: Rs. 3,08,000/-

Fixed Capital: Rs. 9,95,600/-

5. Working Capital:

1.	Raw Materials	Rs. 9,99,639/-
2.	Salary & Wages	Rs. 1,43,550/-
3.	Administrative expenses	Rs. 19,250/-
4.	Selling & distribution	Rs. 38,500/-
5.	Utilities	Rs. 29,568/-
	Total	**Rs. 12,30,507/-**
	Total Cost of the Project:	**Rs. 22,26,107/-**

Means of Finance:			**Urban**		**Rural**	
a.	Composite loan under PMEGP	70%	Rs. 15,58,200/-	60%	Rs. 13,35,600/-	
b.	Subsidy	25%	Rs. 5,56,500/-	35%	Rs. 7,79,100/-	
c.	Margin Money	5%	Rs. 1,11,300/-	5%	Rs. 1,11,300/-	
		Total	Rs. 22,26,107/-		Rs. 22,26,107/-	
d.	Debt Equity Ratio		2.33:1		1.50:1	

Profitability: (Rs in Thousands)

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60%**	**70%**	**80%**	**80%**	**80%**
2.	**Annual Sales**	**4257**	**4967**	**5676**	**5676**	**5676**
3.	**Annual Costs in**					
(a)	Raw Materials	2399	2799	3199	3199	3199
(b)	Utilities	71	83	95	95	95
(c)	Selling expenses	92	108	123	123	123
4	**Variable Cost**	**2562**	**2990**	**3417**	**3417**	**3417**
(a)	Wages & Salaries	345	402	459	459	459
(b)	Administrative expenses		46	54	62	62
62(c)	Depreciation	135	135	135	135	135
(d)	Interest on Composite Loan	539	436	317	190	127
5	Fixed & Semi Variable Cost	1065	1027	973	846	783
6	**Total Cost**	**3627**	**4017**	**4390**	**4263**	**4200**
7.	**Annual profit**	**630**	**950**	**128**	**1413**	**1476**
8	**Return on investment**	**28.30%**	**42.67%**	**57.77%**	**63.47%**	**66.30%**
9.	**Return on sales**	**14.79%**	**19.12%**	**22.65%**	**24.89%**	**26.00%**
10.	Annual Contribution	1695	**-**	**-**	**-**	**-**
11	Break Even Point as percent of capacity	**37.69%**	**-**	**-**	**-**	**-**
12	Cash accrual	765	1085	1421	1548	1611
13.	Debt servicing capacity	1304	1521	1738	1738	1738
14	Repayment of Composite Loan	253	295	537	337	336
15.	Debt serviced	792	731	654	527	463
16	**Pay Back Period**	**1 years 3month 3 days**				
17.	**Debt Service Coverage Ratio**	**1.33:1**				

Cash Flow Statement (Rs in Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			60%	70%	80%	80%	80%
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's capital	**111**	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	**1558**	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	**557**	NIL	NIL	NIL	NIL	NIL
4.	Depreciation	**Nil**	135	135	135	135	135
5.	Profit before interests	**Nil**	1169	1386	1603	1603	1603
A.	**TOTAL SOURCES**	**2226**	**1304**	**1521**	**1738**	**1738**	**1738**
6.	Increase in capital investment	**996**	NIL	NIL	NIL	NIL	NIL
7.	Increase in working capital	**1230**	NIL	NIL	NIL	NIL	NIL
8.	Interests	**NIL**	539	436	317	190	127
9.	Repayment of loan	**NIL**	253	295	337	337	336
B.	**TOTAL DISPOSALS**	**2226**	**792**	**731**	**654**	**527**	**463**
C.	**OPENING BALANCE**	**NIL**	**Nil**	**512**	**1302**	**2386**	**3597**
D.	**NET SURPLUS**	**NIL**	**512**	**790**	**1084**	**1211**	**1275**
E.	**CLOSING BALANCE**	**NIL**	**512**	**1302**	**2386**	**3997**	**4872**

Projected Balance sheet:

Sl. No.	Description	Amount in Rs Thousand as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of the Promoter	111	741	1691	2977	4390
2.	Surplus from operations	630	950	1281	1413	1476
	NET WORTH:	**741**	**1691**	**2977**	**4390**	**5866**
3.	Composite loan	**1305**	**1010**	**673**	**336**	**nil**
4.	Subsidy	557	557	557	557	557
A.	**TOTAL LIABILITIES**	**2603**	**3258**	**4207**	**5283**	**6423**
1.	Gross Block	996	996	996	996	996
	Less Depreciation	135	270	405	540	575
2	**NET BLOCK**	**861**	**726**	**591**	**456**	**321**
3	Current Assets	**1230**	**1230**	**1230**	**1230**	**1230**
4.	Cash & Bank Balance	**512**	**1302**	**2386**	**3040**	**4872**
B.	**TOTAL ASSETS**	**2603**	**3258**	**4207**	**5283**	**6423**

Supplies of Machinery & Equipments :

1.Light Foot refrigation Co India Pvt ltd, Karinji House, 59, Sir P.M. Road, Mumbai

2. Parkash & Co. Coudrey Chowk, Kolkata 13,

BAKERY PRODUCT(BISCUITS)

Introduction & Market: Biscuits, rusk, pastry etc. are certain products that are liked almost by everyone. It is consumed in big quantity in every home especially wherever children. The linking for biscuits, Rusk and such bakery products is increasing day-by-day as a ready-to-eat food or snacks.

Although, in this field there are certain big companies, the products of which are quite popular through their extensive adverting and wide distributor network, yet in a certain context, we would see that the bakery products of the local cases might prove more profitability for instance, (1) Raw materials to be used in these products such wheat flour, Maida and milk can be obtained from the local markets in sufficient quantity and good quality as well and (2) This fact can prove beneficial for those local businessmen who preference to freshness of these products, it has also been seen that bakery shops are often named as 'fresh' and "ever fresh" proteins. Hence, there are high chances of this unit being a success if locally established but keeping purity and quality of these products on utmost priority. Although with the help raw materials and machinery of the unit these can be used for making biscuits, rusk, cake, pastries etc. but this project would concentrate only on the details/ related assumptions of biscuits production. Other bakery products can also be made if demanded by markets or if convenient.

Raw Material:

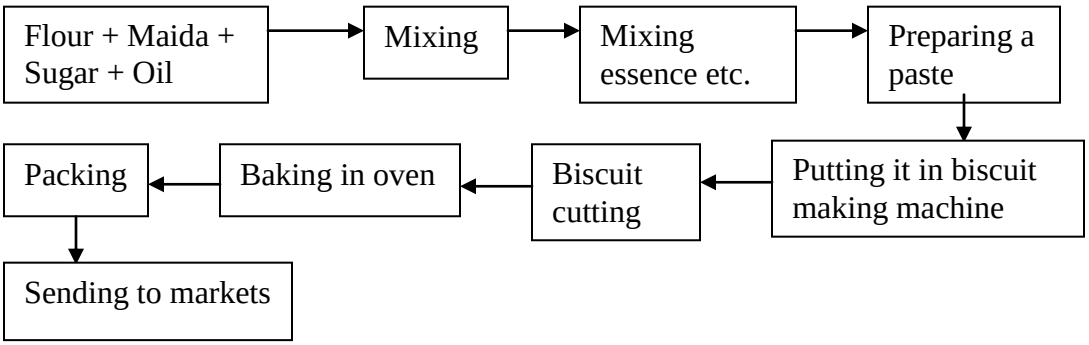
Biscuits can be different types such as soft biscuits, hard biscuits, cookies, crackers, fancy biscuits, pastries etc. The proportion of the ingredients and the receipt to be followed would depend over the type of biscuit to be made. On the average the following monthly requirements and costs of raw- materials are estimated:

a)	Wheat flour & maida	700 kgs.	16,910/-
b)	Sugar	170 kgs.	8,640/-
c)	Shortning Agent (vegetable oil)	300 kgs.	16,125/-
d)	Milk	300 kgs.	15,000/-
e)	liquid glucose		1,575/-
f)	Baker's yeast, baking powder, sodium, calcium, Tri phosphate & other chemicals		2,000/-
g)	Other requirements like that of edible starch, coco powder, sodium sulphate, flabouring agents tartic, citric acid etc.		5,000/-
h)	Packing material		5,000/-
		Total Rs.	**70,250/-**

Installed Capacity: Assuming that the Unit will Work for 8 hrs. per day, for 300 days in year the unit will have 19 quintals of monthly production. These biscuits would be differing in quality to taste and would fetch an income of Rs15,00,000/- (at the rate of Rs. 66/- per kg.).

Production process of Biscuits: First and foremost step is to put flour/ maida, sugar and oil in definite quantities in a mixer. When it is mixed properly, other ingredients such as essence is mixed. When it assumes a form of paste, it is cut in biscuit making machines and is then baked in baking oven for a definite time period at a fixed temperature finally, it is packed and sent to markets.

Process Flow:



Power: The power is available from the state Electric supply corporation Grid. The annual consumption of power is estimated Rs. 14,400/-.

Water: The unit will need 5000 liters of clean and soft water per day. It is available from both ground water sources and public supply.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Amount
1.	Manager	1	Self
2.	Trained worker	2	8,000/-
3.	Helper	1	3,500/-
4.	Sales Assistant	1	2,000/-
	Total	4	13,500/-

Financial aspects of the Unit:

A.	**Fixed Capital**		
1)	**Land & Building**	1200 sq.ft.	**Rented**
2)	**Plant & Machinery**		
i)	Dough mixer machine	1 No.	Rs. 36,000/-
ii)	Baking oven	1 No.	Rs. 20,000/-
iii)	Baking pans, moulds etc.		Rs. 10,000/-
iv)	Other equipments like balance sealing machine etc.		Rs. 20,000/-
			Total: Rs. 86,040/-
3)	**Miscellaneous Fixed Asset**		
a)	Electrification		Rs. 10,000/-
b)	Water Installation		Rs. 5,000/-
c)	Furniture & Miscellaneous others		Rs. 15,000/-
			Total: Rs. 30,000/-
4.	**Provision for contingencies**		**Rs. 5,820/-**
5.	**Preliminary & pre-operative expenses**		**Rs. 15,280/-**
			Total Fixed Investment Rs. 1,37,500/-
6.	**Working Capital**		
a)	Raw Material		Rs. 70,250/-
b)	Utilities		Rs. 1,500/-
c)	Salary & Wages		Rs. 13,500/-

d) Other expenses Rs. 15,000/-

Total: Rs. 1,00,250/-

Total working capital for 3 months: Rs. 3,00,750/-

Total Project Cost: Rs. 4,38,250/-

Means of Finance:		**Urban**	**Rural**
1.	Composite loan	3,06,775	2,62,950
2.	Promoter's contribution	21,913	21,913
3.	Subsidy	1,09,562	1,53,387
4.	Debt equity ratio	2.33:1	1.50:1

Profitability:

Sl.No.	Description	1st year	2nd year	3rd year	4th year	5th year
1.	Capacity utilized as percent of installed capacity	60%	70%	80%	80%	80%
2.	**Annual Sales Realization in Rs.**	**9,00,000**	**10,50,000**	**12,00,000**	**12,00,000**	**12,00,000**
3.	**Annual Costs in Rs.**					
a)	Raw Materials	5,05,800	5,90,100	6,74,400	6,74,400	6,74,400
b)	Utilities	10,800	12,600	14,400	14,400	14,400
c)	Selling expenses	69,370	80,933	92,494	92,494	92,494
	Variable Cost	**5,85,970**	**6,83,633**	**7,81,294**	**7,81,294**	**7,81,294**
d)	Wages & Salaries	97,200	1,13,400	1,29,600	1,29,600	1,29,600
e)	Administrative expenses	1,08,000	1,26,000	1,44,000	1,44,000	1,44,000
f)	Depreciation	13,750	13,750	13,750	13,750	13,750
g)	Interest on Composite Loan	35,238	28,501	20,728	12,437	4,146
	Fixed & Semi Variable Cost	2,54,188	2,81,651	3,08,078	2,99,787	2,91,496
4.	**Total Cost**	**8,40,158**	**9,65,284**	**10,89,372**	**10,81,081**	**10,72,790**
5.	**Annual Profit**	**59,842**	**84,716**	**1,10,628**	**1,18,919**	**1,27,210**
6.	**Return on Investment**	**13.65%**	**19.33%**	**25.24%**	**27.13%**	**29.02%**
7.	**Return on sales**	**3.99%**	**5.65%**	**7.38%**	**7.93%**	**8.48%**
8.	Annual contribution	3,14,030	-	-	-	-
9.	Break Even Point	**48.56%**				
10.	Cash accrual	73,592	98,466	1,24,378	1,32,669	1,40,960
11.	Debt Servicing Capacity	1,08,830	1,26,967	1,45,106	1,45,106	1,45,106
12.	Repayment of Composite Loan	49,747	58,039	66,330	66,330	66,330
13.	Debt Serviced	84,985	86,540	87,058	78,767	70,476
14.	**Pay Back Period**	**1 year 3 months 10 days**				
15.	**Debt Service Coverage Ratio**	**1.28:1**				

Cash Flow Statement (Amount in Rs.)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	21,913	-	-	-	-	-
2.	Increase in Term loan	3,06,775	3,00,750	-	-	-	-
3.	Subsidy	1,09,562	-	-	-	-	-
4.	Depreciation	-	13,750	13,750	13,750	13,750	13,750
5.	Profit before interests	-	95,080	1,13,217	1,31,356	1,31,356	1,31,356

A.	**TOTAL SOURCES**	**4,38,250**	**4,09,580**	**1,26,967**	**1,45,106**	**1,45,106**	**1,45,106**
6.	Increase in capital investment	**4,38,250**	-	-	-	-	-
7.	Increase in working capital	-	3,00,750	-	-	-	-
8.	Interest	-	35,238	28,501	20,728	12,437	4,146
9.	Repayment of Term Loan	-	49,747	58,039	66,330	66,330	66,330
B.	**TOTAL DISPOSALS**	**4,38,250**	**3,85,735**	**86,540**	**87,058**	**78,767**	**70,476**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**23,845**	**40,427**	**58,048**	**66,339**
D.	**NET SURPLUS**	**NIL**	**23,845**	**40,427**	**58,048**	**66,339**	**74,630**
E.	**CLOSING BALANCE**	**NIL**	**23,845**	**64,272**	**1,22,320**	**1,88,669**	**2,63,289**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	21,913	81,755	1,66,471	2,77,099	3,96,018
2.	Surplus from operation	95,080	1,13,217	1,31,356	1,31,356	1,31,356
	NET WORTH:	81,755	1,66,471	2,77,099	3,96,018	5,23,228
3.	**Subsidy**	**1,09,562**	**1,09,562**	**1,09,562**	**1,09,562**	**1,09,562**
4.	Term loan outstanding	2,57,028	1,98,989	1,32,659	66,329	-
	TOTAL LIABILITIES	**4,48,345**	**4,75,022**	**5,19,320**	**5,71,909**	**6,32,790**
1.	Gross Block	1,37,500	1,37,500	1,37,500	1,37,500	1,37,500
	Less Depreciation	13,750	27,500	41,250	55,000	68,750
	NET BLOCK	**1,23,750**	**1,10,000**	**96,250**	**82,500**	**68,750**
2.	Working capital	3,00,750	3,00,750	3,00,750	3,00,750	3,00,750
3.	Cash & Bank Balance	**23,845**	**64,272**	**1,22,320**	**1,88,669**	**2,63,289**
	TOTAL ASSETS	**4,48,345**	**4,75,022**	**5,19,320**	**5,71,909**	**6,32,790**

Suppliers of Machinery

1) M/S Baker and Company Pvt. Ltd.
   Crasford Market, Umrinag Building, Bombay
2) M/s Nagpal Brothers
   2798, Hamilton Road, Delhi – 6.

For yeast: M/s Indian Yeast Company Ltd., 4, Back Shell Street, Calcutta – 1.

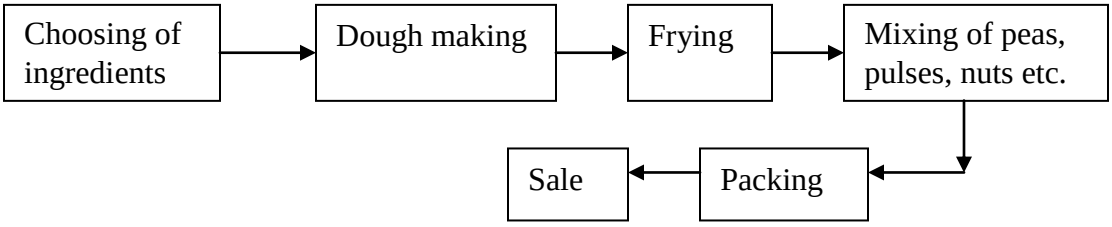
Other required raw materials can be obtained from local markets.

NAMKEEN PRODUCTION

Introduction: Namkeen is a common snack used in our daily eatings, it is brought in use in every home, hotels and family gathering etc. it can be kept at home without any effect in its quality for a fairly long time. Traditionally it is made by housewives for there home purposes only, but as the time leant by, and its demand increased to a great extent, there came changing the production process and variety in taste. Presently, these are number of big and small production house that sell Namkeen in their brand names like Haldiram, Yamkeen, Lehar, Baujiawala, Bikaneri, Jain, Prakash etc. besides these, it is also made by chefs of the restaurant. Different types and tastes of namkeen are available in of clave corn flakes, walnuts, mixed special mixture, Dalmoot, Dalmoong bhujia, etc. The Raw Materials for this product like besan, spices to flavours are easily available in the markets. The demand for this product prevails throughout the year because it is consumed by people of all income group. This unit would definitely be a success for the entrepreneur who keeps quality and hygiene in the production process, on priority. For its marketing, general stores, protein stores, hotels, restaurants and such places can be contacted.

Production Process: for different types of Namkeen, different ingredients are used. Talking about the simplest kind of namkeen besan along with required spices are kneaded. Later, the prepared dough is put into the sev Machine and over the oil where it is fried. Later different things like peas, pulses, are all mixed together, packed and sent to markets.

Process Flow:



Production Target: In the given unit, the target of producing annually and would fetch an income of Rs. 30,05,000/-.

Financial Aspect:

A. **Fixed Capital:**

1)	**Land & Building**	1000 sq.ft.	**Rented**
2)	**Plant & Machinery**		
i)	Flour kneading machine		Rs. 79,250/-
ii)	Oil extractor		Rs. 30,250/-
iii)	Diesel furnace		Rs. 19,000/-
iv)	Frying pan, utensils, water tank, big dish, & other equipments		Rs. 19,000/-
v)	Polythene sealing machine	2 no.	Rs. 5,000/-
vi)	Mixing machine		Rs. 15,000/-
			Total: Rs. 1,60,500/-
3)	Furniture & fixture		Rs. 20,000/-
4)	Preliminary & Pre-operative expenditure		Rs. 18,000/-
5)	Electrification & water installation		Rs. 15,000/-
6)	Contingency		Rs. 12,400/-
			Total: Rs. 65,400/-
			Total Fixed Costs: Rs. 2,25,900/-

B. **Working Capital:**

1)	Raw Material	Rs. 1,79,600/-
2)	Salary & Wages	Rs. 9,000/-
3)	Utilities	Rs. 1,500/-
4)	Misc. expenses (Rent maintenance, insurance advertisement etc.)	Rs. 10,000/-
	TOTAL WORKING CAPITAL:	**Rs. 2,00,100/-**

Total Project Cost: Rs.4,26,000/-

	Means of Finance	**Urban**	**Rural**
(1)	Composite loan under PMEGP	2,98,200/-	2,55,600/-
(2)	Promoters contribution	21,300/-	21,300/-
(3)	Subsidy	1,06,500/-	1,49,100/-
(4)	Debt Equity Ratio	2.33:1	1.5:1

Profitability:

Sl.No.	**Description**	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
1.	Capacity utilized	60%	70%	80%	80%	80%
2.	**Annual Sales Realization in Rs.**	**18,03,000**	**21,03,500**	**24,04,000**	**24,04,000**	**24,04,000**
3.	**Annual Costs in Rs. in**					
a)	Raw Materials	12,93,120	15,08,640	17,24,160	17,24,160	17,24,160
b)	Utilities	10,800	12,600	14,400	14,400	14,400
c)	Repair & Maintenance	15,008	17,508	20,010	20,010	20,010
d)	Selling expenses	7,200	8,400	9,600	9,600	9,600
e)	Wages & Salaries	64,800	75,600	86,400	86,400	86,400
f)	Administrative expenses	72,000	84,000	96,000	96,000	96,000
g)	Depreciation	22,618	22,618	22,618	22,618	22,618
h)	Interest on Composite Loan	34,252	27,704	27,200	11,082	3,022
	Variable Cost	13,26,128	15,47,148	17,68,170	17,68,170	17,68,170
3.	**Total Cost**	**15,19,798**	**17,57,070**	**20,00,388**	**19,84,270**	**19,76,210**
4.	**Annual Profit**	**2,83,202**	**3,46,430**	**4,03,612**	**4,19,730**	**4,27,790**
5.	**Return on Investment**	**18.63%**	**19.71%**	**20.17%**	**21.15%**	**21.65%**
6.	**Return on sales**	**15.70%**	**16.47%**	**16.79%**	**17.46%**	**17.79%**
7.	Annual contribution	4,76,872	5,56,352	6,35,830	6,35,830	6,35,830
8.	Break Even Point	**40.61%**	**37.73%**	**36.52%**	**33.99%**	**32.72%**
9.	Cash accrual	3,05,820	3,69,048	4,26,230	4,42,348	4,50,408
10.	Debt Servicing Capacity	3,40,077	3,96,752	4,53,430	4,53,430	4,53,430
11.	Repayment of Composite Loan	48,357	56,416	64,476	64,476	64,476
12.	Debt Serviced	82,609	84,120	91,676	75,558	67,498
13.	**Pay Back Period**	**11 month 18 days**				
14.	**Debt Service Coverage Ratio**	**4.11:1**				

Cash Flow Statement: (Amount in Rs)

Sl. No.	**Description**	**Pre-operative Period**	**Operating Years**				
			First	**Second**	**Third**	**Fourth**	**Fifth**
1.	Increase in Promoter's contribution	21,300	-	-	-	-	-
2.	Increase in composite loan	2,98,200	2,00,000	-	-	-	-
3.	Subsidy	1,06,500	-	-	-	-	-
4.	Depreciation	-	22,618	22,618	22,618	22,618	22,618

5.	Profit before interests	-	3,17,454	3,74,134	4,30,812	4,30,812	4,30,812
A.	**TOTAL SOURCES**	**4,26,000**	**5,40,172**	**3,96,752**	**4,53,430**	**4,53,430**	**4,53,430**
6.	Increase in capital investment	4,26,000	-	-	-	-	-
7.	Increase in working capital	-	2,00,000	-	-	-	-
8.	Interest	-	34,252	27,704	27,200	11,082	3,022
9.	Repayment of Loan	-	48,357	56,416	64,476	64,476	64,475
B.	**TOTAL DISPOSALS**	**4,26,000**	**2,82709**	**84,120**	**91,676**	**75,558**	**67,498**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**
D.	**NET SURPLUS**	**NIL**	**2,57,463**	**3,12,632**	**3,61,754**	**3,77,872**	**3,85,933**
E.	**CLOSING BALANCE**	**NIL**	**2,57,463**	**5,70,095**	**9,31,849**	**13,09,721**	**16,95,654**

Projected Balance sheet:

Sl.No.	Description	Amount in Rs as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	21,300	3,04,502	6,50,932	10,54,544	14,74,274
2.	Surplus from operation	2,83,202	3,46,430	4,03,612	4,19,730	4,27,790
	NET WORTH:	**3,04,502**	**6,50,932**	**10,54,544**	**14,74,274**	**19,02,064**
3.	**Subsidy**	**1,06,500**	**1,06,500**	**1,06,500**	**1,06,500**	**1,06,500**
4.	Composite loan	2,49,843	1,93,427	1,28,951	64,478	-
	TOTAL LIABILITIES	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,249**	**20,08,564**
1.	Gross Block	2,25,900	2,25,900	2,25,900	2,25,900	2,25,900
	Less Depreciation	22,618	45,236	67,854	90,472	1,13,090
	NET BLOCK	**2,03,282**	**1,80,664**	**1,58,046**	**1,35,428**	**1,12,810**
2.	Current Assets	2,00,100	2,00,100	2,00,100	2,00,100	2,00,100
3.	Cash & Bank Balance	2,57,463	5,70,095	9,31,849	13,09,721	16,95,654
	TOTAL ASSETS	**6,60,845**	**9,50,859**	**12,89,995**	**16,45,219**	**20,08,564**

PAPAD

Introduction: Papad is a popular and tasty food item in Indian diet since time immemorial. Papad is essentially a wafer like product, circular in shape, made from dough of powdered pulses, spices and salt etc. Types of pulses and spices vary in different varieties of papad. Traditionally papad making was confirmed to the household. Now with the development and standardization the process and quality by CFTRI, Mysore it has been taken up as small scale Industry by enhancing packaging, shelf life and quality of papad.

Product: Papads are light in weight. Its size varies from 20 cm to 30 cm diameter and thickness is less than one millimeter. In the raw form Papad remains soft and pliable and does not crumble. Spiced Papad has pleasing aroma and taste. Typical characteristics requirement of papad are as under:

Moisture	:	12.5-15%
Total Ash (Dry basis)	:	12%
pH of water extracts	:	8.5% (Max)
Fat (Dry basis)	:	3%
Crude Fibre (Dry basis)	:	1.5%

Market: The demand of papad is increasing day by day due to urbanization and improvement in the standard of living of masses particularly in the metros. With the advertisement and publicity, the papad can have very wide market as in the case of Lijjat. Papad being a part of our meals, remains always in great demand. Besides with meals, papad is consumed as snack food also. The demand for papad is increasing in international market also mainly in U.K., UAE, USA and south east Asian countries. Etc. to the tune or more than 5000 tons per annum.

Capacity: in this project, such a unit I is projected which would make around 10,500 kg of papad and there would be a complete sale of the whole stock during the year. To make the calculations involved easy only 2 types of papad would be made while the same unit would have the capacity of making other kinds of papad. The project is based on the working of 300 days per annum.

Production Process of Papad: Papad is mainly prepared of Moong, Moong-Urad mixture, Jwar, Moth, Channa etc. 1 kg. 300 gms of papad can be made from 1 kg of any of the given pulses or dal, flavour salt, heeng etc. are also used. Now-a-days preservatives are also used to prevent the papad getting brittle. Besides this it does not get raddish when cooked and can be safely kept for a long time. It has been considered that making papad involves manual labour but now machineries are also put into use for this purpose. Such machines can be easily obtained by Home and Small Scale Industries and papad can be prepared with its help in thousands. Following Machines are used for making papad.

1. Flour kneading Machine: Flour kneading Machine is the first step among the steps involving papad making, with the help of this machine around 10 kg. flour can be kneaded in one go. About 5 minutes are taken by the machine in kneading one batch (flour, water and other spices). The dough is taken out of the machine and kept in a different dish and thus around 100 kg of flour can be kneaded in 1 Hour.1H.P. motor is required for the operation of this machine and its total weight is 150 kg.

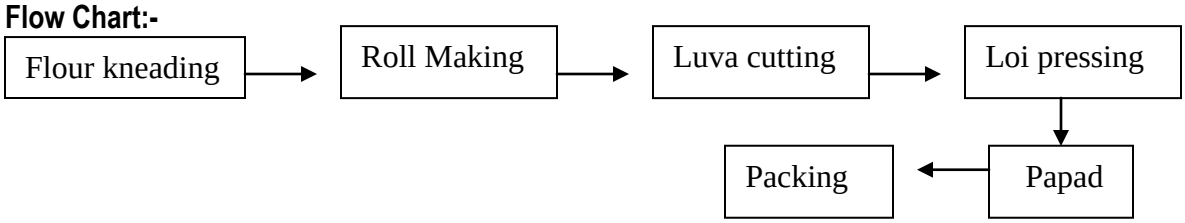
2.Roll making machine: After the flour is kneaded, the 5 kg. dough is put into hopper and the other end, we get rolls of equal sizes. The machine takes 15 minutes to make rolls of 10 kg. dough, hence in an hour about 40 kg. rolls can be made of exact similarity. The roll is made continuously and the roll is cut

after every 12 inch by the scissors.

2. **Luva Cutting machine (Electrically operated):** 12 inch Roll obtained by the roll machine is later put into the pipe then it gets a definite size and shape. With the help of this machine we can make about 50 kg of loi in one hour. The cut lots are again covered by the edible oil.
3. **Loi pressing machine:** Before the making of papad, it is quite important to make curved loi, flat. In order to attain this objective, the loi is kept between two P.V.C plastic and circular sheets and is pressed between the 2 sheets by the shaft, thus, the curved structure is now flat. The capacity of this sheet is about 60 strock per minute i.e. about 3600 lois can be pressed in an hour.
4. **Papad machine:** This is the final step towards making of Papad. In this step, in order to make flat (puri like) structure out of the blunt loi, it is placed between 2 P.V.C. sheets that is circular in shape and has a roller attached to it. Now, the circular sheet is brought in contact of the roller by operating the peddle through legs, from now on the structure of loi assumes thin like shape. Later, the peddle is left and the P.V.C. sheet is removed from the plate.

Through this process, about 40 to 50 papad can be made in a minute with the help of this machine. Thus, we can say that about 2400 papad can be made within an hour.

Flow Chart:-



Power: Consumption of power and fuel have been arrived at on the basis of consumption norms of the industry. The energy rate has been considered on the basis of existing power tariffs of the electricity department. The unit will require a total connected load of 180000Kwh and approximately it will be cost Rs.10,000/- per month.

Water: Requirement of water mainly for washing of film developing etc and drinking purpose. The unit shall avail of the PHE water supply already available at the site and it can also install its own tube well supply for the purpose.

Manpower; Three skilled worker / labour and two assistant labour can take care of the unit.
Management, Marketing and accounting the promoter can do himself the activities. The requirement cost of manpower is shown below:

Sl. No	Particulars	No	Amount	Amount
1.	Manager cum-Supervisor	1no	Self	Self
2.	DTP Skilled worker	4nos	3,000/-	12,000/-
3.	Offset operator	1 no	4,000/-	4,000/-
4.	Proof writer	1 no	4,000/-	4,000/-
5.	Marketing Person	1 no	3,000/-	3,000/-
6.	Office boy	1 no	2,000/-	2,000/-
			Total	**Rs.25,000/-**

Capital Cost Estimate:

1.	**Land & Building**	-	**Own**
2.	**Plant & Machinery**		
(i)	Papad Making Machine	3 No.	Rs. 1,95,500/-
(ii)	Flour kneading machine	2 No.	Rs. 1,45,000/-
(iii)	Roll Making Machine	2 No.	Rs. 90,000/-

(iv)	Loi cutting machine	2 No.	Rs. 56,000/-
(v)	Loi pressing machine	2 No.	Rs. 30,000/-
(vi)	Other equipments & utensils		Rs. 17,590/-
(vii)	Installation and Transportation		Rs. 1,00,000/-
			Total: Rs. 6,29,090/-

3. Misc. fixed Assets

i)	Electrification	Rs. 17,000/-
ii)	Furniture & fixture	Rs. 75,500/-
iii)	First aid box	Rs. 3,125/-
	Total:	**Rs. 95,625/-**

4. Provision for contingencies **Rs. 2,000/-**

5. Preliminary & pre-operative expenses **Rs. 1,000/-**

Total Fixed Capital: Rs. 7,27,715/-

6. Working Capital (P.M.)

Raw Materials	Rs. 50,000/-
Salary & Wages:	Rs. 25,000/-
Utilities	Rs. 10,000/-
Administrative Overheads	Rs. 18,147/-
Total Working Capital:	**Rs. 1,05,647/-**

Total Cost of the Project: Rs. 8,33,362/-

Means of Finance:			**Urban**		**Rural**
a.	Composite loan under PMEGP	70%	Rs.5,83,353/-	60%	Rs.5,00,017/-
b.	Subsidy	25%	Rs.2,08,340/-	35%	Rs.2,91,676/-
c.	Margin Money	5%	Rs. 41,669/-	5%	Rs. 41,669/-
		Total	Rs.8,33,362/-		Rs.8,33,362/-
d. Debt Equity Ratio			2.33:1		1.50:1

Profitability:

Sl.No.	Description	1st Year	2nd Year	3rd year	4th Year	5th Year
1.	**Capacity utilized as percent of installed capacity**	**60**	**70**	**80**	**80**	**80**
2.	**Annual Sales Rs.**	**9,60,000**	**11,20,000**	**12,80,000**	**12,80,000**	**12,80,000**
3.	**Annual Costs in Rs.**					
(a)	Raw Materials	3,60,000	4,20,000	4,80,000	4,80,000	4,80,000
(b)	Utilities	72,000	84,000	96,000	96,000	96,000
(c)	Selling expenses	18,000	21,000	24,000	24,000	24,000
4	**Variable Cost**	**4,50,000**	**5,25,000**	**6,00,000**	**6,00,000**	**6,00,000**
(a)	Wages & Salaries	1,80,000	2,10,000	2,40,000	2,40,000	2,40,000
(b)	Administrative expenses	1,30,663	1,52,440	1,74,217	1,74,217	1,74,217
(c)	Depreciation	72,771	72,771	72,771	72,771	72,771
(d)	Interest on Composite Loan	67,007	54,196	39,415	23,650	7,883
5	Fixed & Semi Variable Cost	4,50,441	4,89,407	5,26,403	5,10,638	4,94,871
6	**Total Cost**	**9,00,441**	**10,14,407**	**11,26,403**	**11,10,638**	**10,94,871**
7.	**Annual profit**	**59,559**	**1,05,593**	**1,53,597**	**1,69,362**	**1,85,129**
8	**Return on investment**	**7.15%**	**12.67%**	**18.43%**	**20.32%**	**22.21%**
9.	**Return on sales**	**6.20%**	**9.42%**	**12.00%**	**13.23%**	**14.46%**

10.	Annual Contribution	5,10,000	5,95,000	6,80,000	6,80,000	6,80,000
11	Break Even Point as percent of capacity	**52.98%**				
12	Cash accrual	1,32,330	1,78,364	2,26,368	2,42,133	2,57,900
13.	Debt servicing capacity	1,99,337	2,32,561	2,65,783	2,65,783	2,65,783
14	Repayment of Composite Loan	94,598	1,10,365	1,26,130	1,26,130	1,26,130
15.	Debt serviced	1,61,605	1,64,561	1,65,545	1,49,780	1,34,013
16	**Pay Back Period**	**1 year 6 month 11 days**				
17.	**Debt Service Coverage Ratio**	**1.53:1**				

Cash Flow Statement (Amount in Rs.)

Sl. No.	**Description**	**Pre-operative Period**	**Operating Years**				
			60%	**70%**	**80%**	**80%**	**80%**
			First	**Second**	**Third**	**Fourth**	**Fifth**
1.	Increase in Promoter's capital	41,669	NIL	NIL	NIL	NIL	NIL
2.	Increase in composite loan	5,83,353	NIL	NIL	NIL	NIL	NIL
3	Increase in Subsidy	2,08,340	NIL	NIL	NIL	NIL	NIL
4.	Depreciation	NIL	72,771	72,771	72,771	72,771	72,771
5.	Profit before interests	NIL	1,26,566	1,59,789	1,93,012	1,93,012	1,93,012
A.	**TOTAL SOURCES**	**8,33,362**	**1,99,337**	**2,32,560**	**2,65,783**	**2,65,783**	**2,65,783**
6.	Increase in capital investment	7,27,715	NIL	NIL	NIL	NIL	NIL
7.	Increase in working capital	1,05,647	NIL	NIL	NIL	NIL	NIL
8.	Interests	NIL	67,007	54,196	39,415	23,650	7,883
9.	Repayment of loan	NIL	94,598	1,10,365	1,26,130	1,26,130	1,26,130
B.	**TOTAL DISPOSALS**	**8,33,362**	**1,61,605**	**1,64,561**	**1,65,545**	**1,49,780**	**1,34,013**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**
D.	**NET SURPLUS**	**NIL**	**37,732**	**67,999**	**1,00,238**	**1,16,003**	**1,31,770**
E.	**CLOSING BALANCE**	**NIL**	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**	**4,53,742**

Projected Balance sheet:

Sl. No.	**Description**	**Amount in Rs. as at the end of the**				
		1st Yr.	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**
1.	Capital Account of the Promoter	41,669	1,01,228	2,06,821	3,60,418	5,29,780
2.	Surplus from operations	**59,559**	**1,05,593**	**1,53,597**	**1,69,362**	**1,85,129**
	NET WORTH:	**1,01,228**	**2,06,821**	**3,60,418**	**5,29,780**	**7,14,909**
3.	Composite loan	4,88,755	3,78,390	2,52,260	1,26,130	Nil
4.	Subsidy	2,08,340	2,08,340	2,08,340	2,08,340	2,08,340
A.	**TOTAL LIABILITIES**	**7,98,323**	**7,93,551**	**8,21,018**	**8,64,250**	**9,23,249**
1.	Gross Block	7,27,715	7,27,715	7,27,715	7,27,715	7,27,715
	Less Depreciation	72,771	145542	218313	291084	363855
2	**NET BLOCK**	**654944**	**582173**	**509402**	**436631**	**363860**
3	Current Assets	1,05,647	1,05,647	1,05,647	1,05,647	1,05,647
4.	Cash & Bank Balance	**37,732**	**1,05,731**	**2,05,969**	**3,21,972**	**4,53,742**
B.	**TOTAL ASSETS**	**7,98,323**	**7,93,551**	**8,21,018**	**8,64,250**	**9,23,249**

Suppliers of Machineries & Equipments

1. M/s Gupta Agencies, Gujari Chowk, Balaghat. M.P.
2. Gujrat Engineering Enterprise, 31/1, Payga Estate, Jehangirabad, Bhopal.

NOODLES

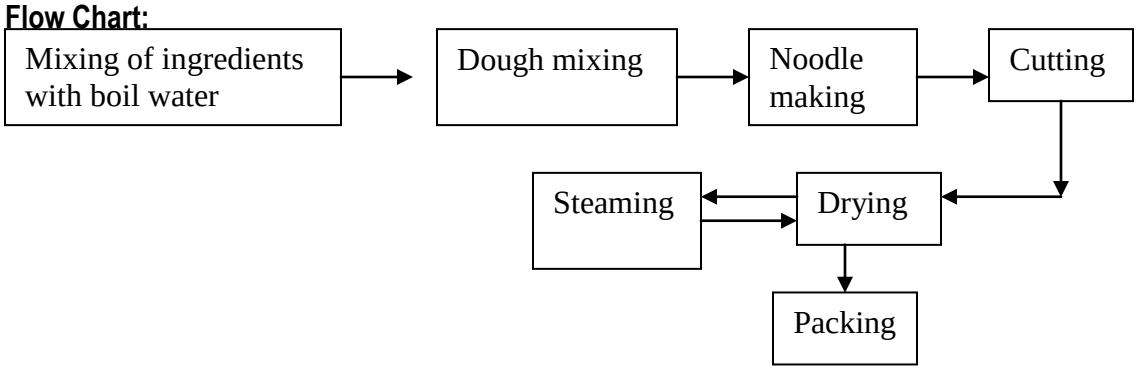
Introduction: The noodles are basically Japanese and Chinese food products now becoming common in India as ready to eat food in the form of instant noodles. Due to the convenience and good taste, it has now become popular among housewives as well as children. Noodles are made from fine wheat power (maida) and startch (Tapioca flour) and other additives. Noodles are long thread like, having diameter of about one third of a millimeter. Different types of flavoures are incorporated by adding particular combination of spices and flavours. The precooking makes the noodles ready to eat, harder grain and higher shelf life.

Market: Noodles being a ready to eat food are becoming more & more popular in our country due to rapid urbanization and changing food habits. Noodles have become an essential part of modern kitchen. Besides domestic consumption, Noodles are available in fast food outlets and restaurants as well as in Railway caterings. With ready to serve and eat packing in thermoformed plastic containers its popularity has in creased much more.

Capacity: The minimum economic capacity for a unit manufacturing noodles 50,000 is packets (each 450 gms) per annum. The manufacturing unit shall operate for single shift of eight hours per day for three hundred working days per annum.

Manufacturing Process: The fine wheat flour or maida, custard powder and other ingredients are mixed in suitable proportions in a mixer. Boiled water is added in the above mixture and kneaded in by a kneader into the form of dough. This kneaded dough is transferred to the inlet feed hopper of extruder where the noodles are produced through the outlet die and cutting blade. The speed of cutting blade and its position is adjusted to achieve desired length of noodles. In this process moisture content is reduced from 35% to 29.5%. it is further stem cooked and dried through indirect exposure to sunlight upto 10% moisture content. The noodles are packed in plastic packing.

Flow Chart:



Raw- Materials: The Unit shall need Maida, Edible Oil, Tapioca Flour, Castard Powder, Salt, etc which are readily available in the local market. The Requirement and costs of raw- materials are shown below:

1. Fine wheat flour powder (Maida):	1 tonne	Rs. 99,000/-
2. Custard Powder	10 kg.	Rs. 9,900/-
3. Salts, Preservatives, edible colour etc.		Rs. 6,600/-
4. Packing materials like polythene bags, labels etc.		Rs. 16,500/-
5. Refined vegetable oil		Rs. 24,750/-
		Total: Rs. 1,56,750/-

Capital Cost Estimate:

1.	**Land & Building**		**Rented**
2.	**Plant & Machinery**		
	(i)	Vertical type powder mixer 500 kgs. Cap. With ½ H.P. motor	Rs. 96,000/-
	(ii)	Noodles making power operated automatic Machine	Rs. 60,000/-
	(iii)	Plastic Buckets 4 nos. 20 litres cap.Aluminium/ Galvanized water tank with tap fitting	Rs. 3,600/-
	(iv)	Boiler, fuel heated, 75 ltrs. Cap. Measuring Cutting, turning equipments	Rs. 54,000/-
			Total: **Rs. 2,13,600/-**
3.	**Misc. fixed assets**		
	(i)	Electrification & water installation	Rs. 18,000/-
	(ii)	Furniture & fixture	Rs. 18,000/-
			Total: **Rs. 36,000/-**
4.	**Preliminary & pre-operative expenses**		**Rs. 18,000/-**
5.	**Contingency**		**Rs. 12,675/-**
			Total Fixed Costs: Rs. 2,80,275/-

6.Working Capital		
(a)	**Raw Material**	Rs. 1,56,750/-
(b)	Salary & Wages	Rs. 29,700/-
(c)	Misc. expenses	Rs. 1,650/-
(d)	Electricity/Utilities	Rs. 3,960/-
	Total Working Capital:	**Rs. 1,92,060/-**
	Total Project Cost	**Rs. 4,72,335/-** **Say 4,72,000/-**

	Means of Finance	**Urban**	**Rural**
(1)	Composite loan under PMEGP	Rs. 3,30,400/-	Rs. 2,83,200/-
(2)	Promoters contribution	Rs. 23,600/-	Rs. 23,600/-
(3)	Subsidy	Rs. 1,18,000/-	Rs. 1,65,200/-
(4)	Debt Equity Ratio	2.33:1	1.50:1

Profitability: (Rs in Thousands)

Sl.No.	**Description**	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
1.	Capacity utilized	60%	70%	80%	80%	80%
2.	**Annual Sales Realization.**	**726**	**847**	**968**	**968**	**968**
3.	**Annual Costs in**					
a)	Raw Materials	376	439	502	502	502
b)	Utilities	9	11	13	13	13
c)	Selling expenses	16	18	21	21	21
	Variable Costs	401	468	536	536	536
d)	Wages & Salaries	71	83	95	95	95
e)	Administrative expenses	40	46	53	53	53
f)	Depreciation	21	21	21	21	21
g)	Interest on Composite Loan	33	26	19	11	4

3.	**Total Cost**	**566**	**644**	**724**	**716**	**709**
4.	**Annual Profit**	**160**	**203**	**244**	**252**	**259**
5.	**Return on Investment**	**33.90%**	**43.01%**	**51.69%**	**53.39%**	**54.87%**
6.	**Return on sales**	**22.04%**	**23.97%**	**25.21%**	**26.03%**	**26.76%**
7.	Annual contribution	325	-	-	-	-
8.	Break Even Point	**30.46%**				
9.	Cash accrual	181	224	265	273	280
10.	Debt Servicing Capacity	214	250	284	284	284
11.	Repayment of Composite Loan	54	60	72	72	72
12.	Debt Serviced	87	86	91	83	76
13.	**Pay Back Period**	**1 year 8 months**				
14.	**Debt Service Coverage Ratio**	**3.11:1**				

Cash Flow Statement (Rs in Thousands)

Sl. No.	**Description**	**Pre-operative Period**	**Operating Years**				
			First	**Second**	**Third**	**Fourth**	**Fifth**
1.	Increase in Promoter's contribution	24	-	-	-	-	-
2.	Increase in composite loan	330	-	-	-	-	-
3.	Subsidy	118	-	-	-	-	-
4.	Depreciation	-	21	21	21	21	21
5.	Profit before interests	-	193	229	263	263	263
A.	**TOTAL SOURCES**	**472**	**214**	**250**	**284**	**284**	**284**
6.	Increase in Fixed investment	280	-	-	-	-	-
7.	Increase in working capital	192	-	-	-	-	-
8.	Interest	-	33	26	19	11	4
9.	Repayment of Loan	-	54	60	72	72	72
B.	**TOTAL DISPOSALS**	**472**	**87**	**86**	**91**	**83**	**76**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**127**	**291**	**484**	**685**
D.	**NET SURPLUS**	**NIL**	**127**	**164**	**193**	**201**	**208**
E.	**CLOSING BALANCE**	**NIL**	**127**	**291**	**484**	**685**	**893**

Projected Balance sheet:

Sl.No.	**Description**	**Amount in Rs Thousand as at the end of the**				
		1st Yr.	**2nd Yr.**	**3rd Yr.**	**4th Yr.**	**5th Yr.**
1.	Capital Account of Promoter	24	184	387	631	883
2.	Surplus from operation	160	203	244	252	259
	NET WORTH:	**184**	**387**	**631**	**883**	**1142**
3.	Subsidy	118	118	118	118	118
4.	Composite loan	276	216	144	72	-
	TOTAL LIABILITIES	**578**	**721**	**893**	**1073**	**1260**
1.	Gross Block	280	280	280	280	280
	Less Depreciation	21	42	63	84	105
	NET BLOCK	**259**	**238**	**217**	**196**	**175**
2.	Current Assets	192	192	192	192	192
3.	Cash & Bank Balance	127	291	484	685	893
	TOTAL ASSETS	**578**	**721**	**893**	**1073**	**1260**

Suppliers of Machinery:

1. G.R.Engg. Works Pvt. Ltd, G.R.House, 36, M.Vasanji Road, Mumbai- 400 059.
2. Archana Machinery Stores, M.S.Road, Fancy Bazar, Guwahati- 781 001.

POTATO/BANANA WAFERS

Introduction: Potato/Banana chips and wafers occupy an important place in the ready to eat convenience foods market in India. The traditional laborious practices which used to be followed earlier in their preparation are steadily giving way to modern efficiently organised manufacturing methods. Significantly, the last five years have witnessed the entry of several industrialists in the processed food industry. Consequently, there has been massive investment in plant, machinery and technology, for creation of huge capacities for new varieties of potato snacks and in marketing with sophisticated advertising and promotional inputs. These in turn have triggered a change in consumer attitudes and the perception of processed potato snacks. Potato/Banana wafers are ready to eat, convenient snack foods, consumed by large number of urban population. Proper spicing makes these wafers very tasty. These wafers can be produced in different sizes and shapes to provide variety in presentation and taste. These wafers are produced and packed under hygienic conditions. Banana contains about 20% sugar and reasonable amount of Vitamins A, B and C. this is considered to be a rich source of energy producing food. Banana Wafers are considered as one of the most common processed foods derived from Banana.

Market: At present the urban population accounts for most of the market for potato/banana chips and wafers and this segment has shown increasing acceptability towards the colourful packets of potato/banana chips which entice discovering palates hankering after a crunchy munch. Till the early eighties the production of chips and wafers was confined to the cottage scale and small scale sector which gradually was moving into the hands of the organised sector. The transition has resulted in a shift to mechanized processing and sophisticated packaging which is likely to produce a thrust on exports also. It is estimated that roughly 40 to 50 units are manufacturing potato/banana chips and wafers. They are spread in all parts of the country, however, the concentration is more in the metropolitan cities. The average capacity is understood to be 50 to 100 tons per annum. The popularity of snack foods is growing high day by day. Potato and banana wafers have emerged as a potential snack foods. These products can be easily marketed in tea stalls, restaurants, railway stations to public places and large number of shops and stores.

Manufacturing Process: The processing of fresh potatoes to manufacture potato chips and wafers using automatic or fully automatic potato chip making plant involves following operations in sequence.

Raw Material preparation: The best results are obtained from second crop potatoes grown in a dry sandy soil although varieties of Kurfi and Chandramukhi are also very good. The selected potatoes must be large in size, free from diseases of eyes. In addition the reducing sugar (R.S.) content of the potatoes must not be greater than 2.5 R.S. (moisture free basis). The potatoes should be large and soft. Bananas should be firm and semi ripe.

Washing: The potatoes should be thoroughly washed to remove adhering dirt prior to processing. Washing may be accomplished by passing the potatoes first under water sprays and through a tank of brine in which they float while any stones, which may have been mixed with them during sink to the bottom.

Peeling and Trimming: There are several systems in use for peeling and trimming of potatoes. Some of these are described below:

(i) **Abrasive Peeling:** In this method the potatoes are rotated against rough surfaces such as carborandum, which rub off the soft peel. Losses in this system range between 15-30%.

(ii) **Lye Peeling:** The lye peeling operation involves a preliminary dusting and water wash, followed by a rigorous water rinse and trumbling in a washer to remove all skins and chemicals and then an acid neutralizing bath, after which hand trimming and cutting is done to give perfectly finished potatoes.

(iii) **Flame Retardent Heat Peeling**: Peeling by this process is a recent development. In this process the potatoes are brought either in direct contract with live flame or subjected to high radiant heat temperature.

(iv) **Steam Peeling**: In this process the potatoes are exposed to steam at 90 psig pressure for about 25 seconds. After exposure the potatoes are passed under high pressure jets of water in a rotary washer which removes the loosened peel.

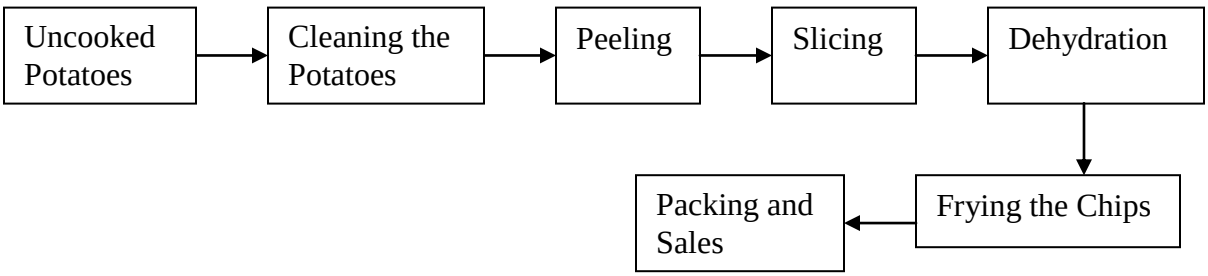
Slicing and Cutting: In this operation, the potatoes are fed to the hopper of a universal slicing and shredding machine in which the thickness of the product can be adjusted by fixing suitable slicing disc in the machine. This is to ensure that the chips are uniform in thickness otherwise variation in thickness may lead to large difference in moisture content of the finished product thereby affecting the quality of the product.

Washing, Sorting, Dewatering: The sliced material is washed with a water spray to remove the starch and is made to flow on a moving belt conveyer from which sorting of any foreign material or damaged product can be done manually. Removal of surface moisture for dewatering of sliced material from the washed vegetables) is done on centrifuges. This process helps in reducing the frying time as well as saving frying oil.

Frying and Cooling: The potato slices are fried by being carried on a moving conveyor through a trough of all which is maintained at a predetermined temperature of 150-180°C, depending upon the residence time of frying. The heat generator particle extractor, oil filter and oil extractor are incorporated in the frying post to avoid wastage of frying oil. The process ends with cooling and salting, which is carried out manually while feeding the fried chips to hopper through a moving belt conveyer in small plants and automatically by dosing in an automatic plant.

Packaging: In the case of higher chips production capacities the packaging of the finished product is performed automatically in an automatic packaging machine.

Flow Chart:



Installed Capacity: 300 working days in a year, 25 working days in a month and working hours in a day would be 8 hrs. production will be 30,000 kg per annum with a sales value of Rs. 11,00,000/-.

Raw- Materials: The Unit shall need Potato, Edible Oil, Spices, Salt, etc which are readily available in the local market. The Requirement and costs of raw- materials to be need for the unit Rs.1,42,500/- (Potato, Edible oil, Salt, Pepper, spices, Gas. Printed Polythene bags capacity of 50 to 500 gms) per quarter.

Capital Cost Estimate:

1.	**Land & building**	500 sq. feet	**Rented**
2.	**Plant & Machinery**		
i)	Peeling Machine	1	Rs. 40,285/-
ii)	Slicing Machine	1	Rs. 44,850/-
iii)	Dehydrator (0.5 H.P. Motor)	1	Rs. 42,500/-
iv)	Diesel furnace of 12 burners with 0.5 H.P. blower and diesel tank	1	Rs. 20,265/-
v)	Aluminium frying Pan of 42"x39"x14 size	1	Rs. 5,100/-
vi)	Establishment charges, Transportation & Electric connection etc.		Rs. 25,000/-
		Total	**Rs.1,78,000/-**
3.	**Preliminary & Preoperative expenses**		**Rs. 17,150/-**
4.	**Office furniture & equipments**		**Rs. 28,000/-**
5.	**Contingency**		**Rs. 10,000/-**
	Total Fixed Costs		**Rs.2,33,150/-**
6.	**Working Capital**		
	(a) Raw Materials (for 3 months)		Rs.1,42,500/-
	(b) Wages & salaries		Rs. 27,000/-
	(c) Electricity		Rs. 3,600/-
	(d) Administrative expenses		Rs. 1,500/-
		Total	**Rs.1,74,600/-**
	Total Project Cost		**Rs.4,07,750/-**
		Say	**Rs.4,08,000/-**

Means of Finance		**Urban**	**Rural**
1.	Composite loan under PMEGP	Rs. 2,86,000/-	Rs. 2,44,800/-
2.	Promoters Capital	Rs. 20,000/-	Rs. 20,400/-
3.	Subsidy	Rs. 1,02,000/-	Rs. 1,42,800/-
4.	Debt Equity ratio	2.33:1	1.50:1

Profitability: (Amount in Rs.)

Sl.No.	**Description**	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
1.	Capacity utilized as percent of installed capacity	60	70	80	80	80
2.	**Annual Sales Realization**	**6,60,000**	**7,70,000**	**8,80,000**	**8,80,000**	**8,80,000**
3.	**Annual Costs in**					
a)	Raw Materials	3,42,000	3,99,000	4,56,000	4,56,000	4,56,000
b)	Interest on working capital	14,108	16,459	18,810	18,810	18,810
c)	Utilities	8,640	10,080	11,520	11,520	11,520
d)	Selling expenses	14,400	16,800	19,200	19,200	19,200
	Variable Cost	3,79,148	4,42,339	5,05,530	5,05,530	5,05,530
e)	Wages & Salaries	64,800	75,600	86,400	86,400	86,400
f)	Administrative expenses	36,000	42,000	48,000	48,000	48,000
g)	Depreciation	18,315	18,315	18,315	18,315	18,315
h)	Interest on Composite Loan	29,750	24,063	17,500	10,500	3,500
	Fixed & Semi Variable Cost	1,48,865	1,59,978	1,70,215	1,63,215	1,56,215
3.	**Total Cost**	**5,28,013**	**6,02,317**	**6,75,745**	**6,68,745**	**6,61,745**
4.	**Annual Profit**	**1,31,987**	**1,67,683**	**2,04,255**	**2,11,255**	**2,18,255**
5.	**Return on Investment**	**35.57%**	**45.20%**	**55.05%**	**56.94%**	**58.83%**
6.	**Return on sales**	**19.99%**	**21.78%**	**23.21%**	**24.015**	**24.80%**

7.	Annual contribution	2,80,852	3,27,661	3,74,470	3,74,470	3,74,470
8.	Break Even Point as percent of capacity	**31.80%**				
9.	Cash accrual	1,50,302	1,85,998	2,25,570	2,29570	2,36,570
10.	Debt Servicing Capacity	1,80,052	2,10,061	2,43,070	2,40070	2,40,070
11.	Repayment of Composite Loan	45,000	55,000	62,000	62,000	62,000
12.	Debt Serviced	74,750	79,063	79,500	72,500	65,500
13.	**Pay Back Period**	**2 year 6 months**				
14.	**Debt Service Coverage Ratio**	**2.51:1**				

Cash Flow Statement (Amount in Rs)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	20,000	-	-	-	-	-
2.	Increase in Term loan	2,86,000		-	-	-	-
3.	Subsidy	1,02,000	-	-	-	-	-
4.	Depreciation	-	18,315	18,315	18,315	18,315	18,315
5.	Profit before interests	-	1,61,737	1,91,746	2,21,755	2,21,755	2,21,755
A.	**TOTAL SOURCES**	**4,08,000**	**1,80,052**	**2,10,061**	**2,40,070**	**2,40,070**	**2,40,070**
6.	Increase in capital investment	2,33,000	-	-	-	-	-
7.	Increase in working capital	1,75,000	-	-	-	-	-
8.	Interest	-	29,750	24,063	17,500	10,500	3,500
9.	Repayment of Loan	-	45,000	55,000	62,000	62,000	62,000
B.	**TOTAL DISPOSALS**	**4,08,000**	**74,750**	**79,063**	**79,500**	**72,500**	**65,500**
C.	**OPENING BALANCE**	**NIL**	**NIL**	**1,05,302**	**2,36,300**	**3,96,870**	**5,64,440**
D.	**NET SURPLUS**	**NIL**	**1,05,302**	**1,30,998**	**1,60,570**	**1,67,570**	**1,74,570**
E.	**CLOSING BALANCE**	**NIL**	**1,05,302**	**2,36,300**	**3,96,870**	**5,64,440**	**7,39,010**

Projected Balance sheet:

Sl. No.	Description	Amount in Rupees as at the end of the				
		1st Yr.	2nd Yr.	3rd Yr.	4th Yr.	5th Yr.
1.	Capital Account of Promoter	20,000	1,51,987	3,19,670	5,23,925	7,35,180
2.	Surplus from operation	1,31,987	1,67,683	2,04,255	2,11,255	2,18,255
	NET WORTH:	**1,51,987**	**3,19,670**	**5,23,925**	**7,35,180**	**9,53,435**
3.	Subsidy	1,02,000	1,02,000	1,02,000	1,02,000	1,02,000
4.	Term loan outstanding	2,41,000	1,86,000	1,24,000	62,000	-
	TOTAL LIABILITIES	**4,94,987**	**6,07,670**	**7,49,925**	**8,99,180**	**10,55,435**
1.	Gross Block	2,33,000	2,33,000	2,33,000	2,33,000	2,33,000
	Less Depreciation	18,315	36,630	54,945	73,260	91,575
	NET BLOCK	**2,14,685**	**1,96,370**	**1,78,055**	**1,59,740**	**1,41,425**
2.	Working capital	1,75,000	1,75,000	1,75,000	1,75,000	1,75,000
3.	Cash & Bank Balance	1,05,302	2,36,300	3,96,870	5,64,440	7,39,010
	TOTAL ASSETS	**4,94,987**	**6,07,670**	**7,49,925**	**8,99,180**	**10,55,435**

Suppliers of Machinery:

1. Huma Traders, Opposite Shahjanabag P.S., Bhopal- 462 001.
2. K.C.Trunk Factory, Fancy Bazar, Guwahati- 781 001.