GHEE

INTRODUCTION:

Ghee is widely used in Indian cuisine. The word ghee comes from Sanskrit. Ghee beginning from almost Vedic times (3000 to 2000 B.C.); there is ample recorded evidence to show that ghee was extensively used by the early inhabitant of India dietary and religious practices. Ghee may be described as the best form for the preservation of milk fat under a tropical condition. It is only source of animal fat in vegetarian diet.

Ghee is basically a light brownish color thick liquid at room temperature. It used medicinally by the doctors and scientist of ayurveda. Today, various industry are preparing ghee on large scale. Because Ghee is one of the best source for nutrition.

OBJECTIVE:

The objectives of extracting Ghee are:

- To provide a product which can be utilised for many food sweet manufacturing operations.
- To conserve, as far as possible, the natural properties of the original raw material.
- To remove the moisture so as to reduce bulk thereby effecting a saving in storage space and packaging cost.
- To provide the proper return to the milk producers by better utilisation of the milk.
- To reduce lack of all weather and refrigerated transport facilities of milk.

RAW MATERIAL AVAILABILITY:

The main raw material is milk and easily available across India.

SUITABLE LOCATION:

Ghee can be manufactured at any location which is near to the market.

MARKET OPPORTUNITIES:

Ghee is being produced in the country since long and as it is a mass consumption item as it is used in preparation of medicine all over the country. It has got medicinal values as well and used in ayurvedic preparation as it cures cough. In the holy month families set aside more for the kitchen budget as the consumption of special delicacies including deep fried items increases manifold. More over the average consumption of oil and fat in India is about 15 gm/day whereas recommended level is 60gm/day which is envisages the further scope for the development of these industries in coming year.

Despite the increase in production, a demand supply gap has become imminent in the dairy industry due to the changing consumption habits, dynamic demographic patterns, and the rapid urbanization of rural India. This means that there is an urgent need for the growth rate of the dairy sector to match the rapidly growing Indian economy.

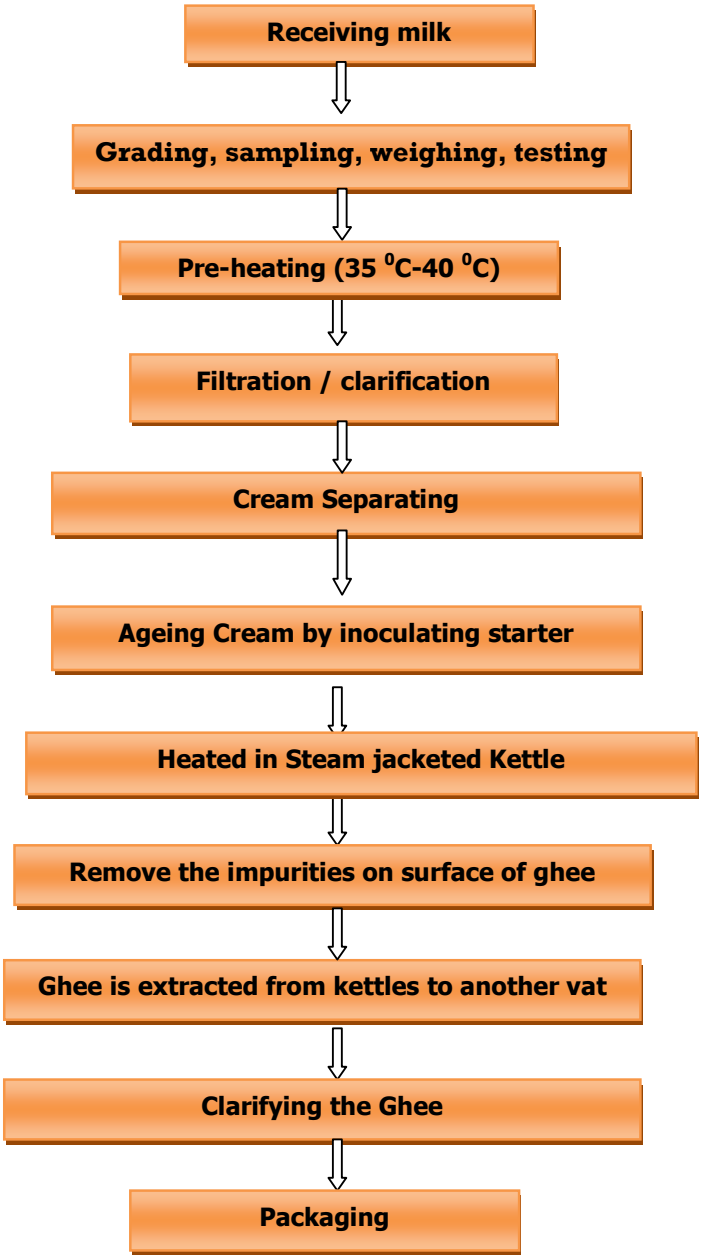
Dairy is next to agriculture in its importance as a source of income to the rural house-holds. The Dairy Development Board of India has launched a massive programme to encourage planned growth of dairying as an industry to augment financial resources of the weaker sections of society and small farmers in the backward and rural areas.

MANUFACTURING PROCESS:

Process of Manufacture Skimmed Milk Powder:
The fat free (skim) milk obtained from cream separator is collected in storage tanks. It is heated to a temperature of about 85 degree C to 90 degree C and is pumped on the surface of the steam heated revolving metallic drum. The steam pressure in the drier should be about 69 lb/sq. inch (12 degree C temp.). The milk is dried into a thin film on the surface of roller drum. It is removed by means of stationery steel scrapper, which is attached from the roller and collected through screw type burrer. It is then pulverized to desired mesh and packed.

Process of Manufacture Ghee:
Upon the arrival of milk at the plant till the cream separated. Cream is stored at 100 degree C then Ripened by Inoculating with 5% to 10% of its weigh by starter, it is mixed well and left to ripe for at least 0.2 to 0.4 acidity develops. Then heated in the steam jacked kettles the impurities comes up at the top which is removed by perforated ladle and the ghee obtained is filtered through thin cloth and then starts packaging in different quantities.

Flow Chart of Ghee



CAPACITY OF THE PROJECT:

- The total capacity of the unit is to be produced 90 MT Ghee per year and 171 MT Skimmed Milk Powder per year as a by-product.

PRODUCTION TARGETS (PER ANNUM):

- The scheme is worked out per shift (8 Hour) basis and 300 working days per annum.
- Assume there'll be 70% production in first year.
- Quantity: 63 MT Ghee per year or 5.25 MT per month.
- Quantity: 119.70 MT skimmed milk powder per year or 9.975 MT per month as a by-product.

PROJECT COMPONENT AND COST:

FINANCIAL ASPECTS:-

APPLICATION OF FUNDS

Particular	Amount
Land : 700 sq. meter total area Building : 400 sq. meter covered area on rent	
Plant & Machinery	10,945,000.00
Office Equipment & Furniture	70,000.00
Working Capital	5,144,761.08
Pre-Operative Expenses	25,000.00
Total	**16,184,761.08**

SOURCE OF FUND

Particular	Amount
Own Capital	4,803,990.27
Loan from Banks	8,261,250.00
Loan for Working Capital	3,119,520.81
Total	**16,184,761.08**

FIXED ASSETS

(1)	**Land And Building:**			**Value (Rs.)**
	Land 700 sq. meter total area and & 400 sq. meter covered area on rent			360,000 per annum
(2)	**Machinery And Equipment:**			
S. N.	**Description (Name of machine with specification)**	**Qty.**	**Rate**	**Value (Rs.)**
	Production Unit			
	MILK RECEPTION SECTION			
i	Roller Conveyor	1	30,000.00	30,000.00
ii	Can Tipping Bar	1	10,000.00	10,000.00
iii	Weighing Scale	1	100,000.00	100,000.00
iv	Dump Tank: 1000 L	1	100,000.00	100,000.00
v	Disc Type Strainer	2	25,000.00	50,000.00
vi	Can Drip Saver	1	20,000.00	20,000.00
vii	Can Scrubber	1	90,000.00	90,000.00
viii	Can Steaming Block	1	20,000.00	20,000.00
ix	Storage Tank: 1000 L	2	90,000.00	180,000.00
	MILK PROCESSING SECTION			
x	Pasteurization Plant: 1000 LPH	1	800,000.00	800,000.00
xi	Homogeniser: 1000 LPH	1	600,000.00	600,000.00
xii	Chiller	1	300,000.00	300,000.00
xiii	CIP System: Semi-Automatic	1	900,000.00	900,000.00
xiv	Pump	4	40,000.00	160,000.00

xv	Spray Dryer	1	2,500,000.00	2,500,000.00
xvi	Powder Packaging Machine	1	600,000.00	600,000.00
	BY PRODUCT SECTION			
xvii	Cream Separator	1	600,000.00	600,000.00
xviii	Cream Pasteuriser	1	300,000.00	300,000.00
ixx	Steam Jacketted Kettle: 500 L	2	250,000.00	500,000.00
xx	Storage Tank: 500 L	1	90,000.00	90,000.00
xxi	Ghee Packaging Machine	1	300,000.00	300,000.00
	UTILITIES SECTION			
xxii	Boiler: 500 Kg/Hr	1	800,000.00	800,000.00
xxiii	DG Set: Cap 60 KVA	1	500,000.00	500,000.00
xxiv	Miscellaneous Equipments (pipe & fittings, perforated ladle etc.)	0	-	400,000.00
	Total Cost of Machinery & Equipments		**-**	**9,950,000.00**
	Electrification & Installation Charges @ 10%		-	995,000.00
	Total Cost of Production Unit		**-**	**10,945,000.00**
	Furniture & Fixtures		-	70,000.00
(3)	Pre-Operative Expenses:		-	25,000.00
	Total Fixed Capital (2+3)		**-**	**10,970,000.00**

SALES TURNOVER PER MONTH

Description	**Qty. (Kg)**	**Rate (Rs/Kg)**	**Value (Rs.)**
Ghee	5,250.00	330.00	1,732,500.00
Skimmed Milk Powder	9,975.00	220.00	2,194,500.00
Total			**3,927,000.00**

RAW MATERIAL REQUIREMENT & STOCK

Raw Material (per month):

Description with specification	**Qty. (Kg)**	**Rate (Rs/Kg)**	**Value (Rs.)**
Milk	105,000.00	29.00	3,045,000.00
Laboratory Chemicals	-	-	2,000.00
Total			**3,047,000.00**

ANNUAL CONSUMPTION

Milk	Rs	36,540,000.00
Laboratory Chemicals	Rs	24,000.00
Total		**36,564,000.00**
Stock of Raw Material	30 Days	3,005,260.27
Stock of WIP	02 Days	200,219.18
Purchase Cost of Raw Material	Rs	39,769,479.45

WORKING CAPITAL REQUIREMENT

Particulars	Days	Year' 1
Raw Material	30	3,005,260.27
Work in Process	2	200,219.18
Finished Goods	10	1,126,404.91
Receivables	30	3,927,000.00
Advance/Security		200,000.00
Total		8,458,884.37
Less: Creditors	30	3,314,123.29
Net Current Assets		**5,144,761.08**
Paid Stock		1,017,761.08
75% of Paid Stock		763,320.81
60% of Book Debts		2,356,200.00
Bank Limits		3,119,520.81
Margin for Working Capital		2,025,240.27

SELLING & ADMINISTRATION EXPENSES

	Particular	Year I
i	Postage	15,000.00
ii	Commission on sales	60,000.00
iii	Office Expenses	48,000.00
iv	Tour & Travel	60,000.00
v	Printing & Stationary	20,000.00
vi	Advertisement	200,000.00
vii	Telephone	50,000.00
viii	Repair & Maintenance	60,000.00
ix	Conveyance	60,000.00
x	Sales expenses	70,000.00
xi	Insurance	40,000.00
xii	Misc. Expenses	14,000.00
	Total	**697,000.00**

STAFF AND LABOUR EXPENSES

S. No.	Description	No.	Salary	Total Salaries- Year I
(a)	**Administrative & Supervisory**			
i	Production Manager	1	15,000.00	180000.00
ii	Accountant	1	10,000.00	120,000.00
iii	Salesman	2	8,000.00	192,000.00
iv	Peon/watchman	1	5,000.00	60,000.00
v	Sweeper	1	5,000.00	60000.00
	Total Salaries			**612,000.00**
(b)	**Technical Skilled & Unskilled**			
i	Skilled Worker	1	10,000.00	120,000.00
ii	Semi Skilled Worker	1	8,000.00	96,000.00
iii	Helper	2	5,000.00	120,000.00
	Total Wages			**336,000.00**
	Grand Total			**948,000.00**

MANUFACTURING AND PROFIT & LOSS ACCOUNT

Particulars	Year' 1
Sales Value of Ghee and Skimmed Milk Powder	**47,124,000.00**
Cost of Production:	
Raw Material Consumed:	
Opening Stock	-
Add: Purchases	39,769,479.45
	39,769,479.45
Less: Closing Stock	3,005,260.27
Raw Material Consumption	36,764,219.18
Add: Op Stock of WIP	-
	36,764,219.18
Less: Cl Stock of WIP	200,219.18
	36,564,000.00
Power & Fuel	1,000,000.00
Manufacturing Wages	336,000.00
Bonus & Incentives	20,160.00
Packaging Materials	913,500.00
Rent	360,000.00
Raw material storage & ins. Cost	16,800.00
Carriage inward	238,616.88
Depreciation	1,101,500.00
Total Cost of Production	**40,550,576.88**
Add: Op. Stock of Finish. Goods	-
	40,550,576.88
Less: Cls. Stock of F. Goods	1,126,404.91
Cost of Sales	39,424,171.96
Gross Profit	**7,699,828.04**
	0.16
Selling & Admin Cost:	
Expenses	697,000.00
Salary	612,000.00
Financial Expenses:	
Interest on Term Loan	975,515.94
Interest on W. Capital	389,940.10
Pre. Expenses	5,000.00
Profit Before Taxation	**5,020,372.00**
Taxation	1,506,111.60
Net Profit After Taxation	**3,514,260.40**
Cash withdrawal	1,405,704.16
Transfer to Reserves	2,108,556.24
Cumulative Reserves	2,108,556.24
% of PBT on Sales	10.65

BALANCE SHEET

Particulars	Year' 1
Liabilities:	
Capital	4,803,990.27
Reserve & Surplus	2,108,556.24
Secured Loan:	
Term Loan	6,609,000.00
Unsecured loan:	
Current Liabilities:	
Bank Borrowings	3,119,520.81
Sundry Creditors	3,314,123.29
	19,955,190.60
Assets:	
Fixed Assets:	
Gross Block:	11,015,000.00
Less: Depreciation	1,101,500.00
	9,913,500.00
Current Assets:	
Inventories	4,331,884.37
Receivables	3,927,000.00
Advance/Security	200,000.00
Cash & Bank Balance	1,562,806.24
Preliminary Expenses	20,000.00
	19,955,190.60
Difference	0.00

RATIO ANALYSIS

Particulars	Year' 1
Net Profit ratio	
NP*100/Total sales	**7.46**
Rate of Return	
NP*100/Total Investment	**21.71**

BREAK EVEN ANALYSIS

Fixed Cost	
Rent	360,000.00
Interest on Borrowing	975,515.94
40% of Salaries	244,800.00
40% of Utilities	400,000.00
25% of Admin Exp	174,250.00
Depreciation	1,101,500.00
Total	**3,256,065.94**

Break Even Point $\frac{\text{Fixed Cost} * 100}{\text{Fixed Cost + Profit}}$

48.09

ADDRFESS OF MACHINERY & EQUIPMENT SUPPLIERS:

- M/s Bajaj Processpack Maschinen Pvt. Ltd., 7/27, Jai Lakshmi Industrial Estate, Sahibabad Industrial Area, Sahibabad, Dist. Ghaziabad (U.P.) - 201301.
- M/s Jaya Industries, No. 543, Jessore Road, Kolkata - 700 028, West Bengal, India.
- M/s Food & Biotech Engineers (I) Pvt. Ltd., Chaprola Road, Prithla, Tehsil- Palwal Distt. - Palwal, Pin: 121102 Haryana (India).
- M/s Filtron Engineers Ltd., 6, Sitabaug Colony, Sinhagad Road, Pune – 411030 (Mahaeashtra).
- M/s Eskimo Refrigeration Industries, S. No. 85/1, Shree Shankar Nagar, B-Building, Ground Floor, Poud Road, Kothrud, Pune - 411038, Maharashtra, India.
- M/s Om Metals & Engineers, S. No. 5, Ekata Hsg. Society, Bapujibuwa Nagar, Thergaon, Pune - 411 033, Maharashtra, India.