

PROJECT REPORT
ON
DAIRY PRODUCTS

1. INTRODUCTION

1.1 India is endowed with a largest livestock population in the world having a total bovine population of 304 million compared to the world's total bovine population of 1400 million. It accounts for 57.3% of the world's buffalo population and 14.7% of the cattle population. As per 18th Livestock Census, 2007 the country has 33.06 million cross bred cattle, 199.07

million indigenous cattle and 105.34 million buffaloes. The cross bred cattle are

predominant in Tamil Nadu, Maharashtra, West Bengal, Karnataka, Andhra Pradesh, Uttar Pradesh and Bihar, While buffaloes are very common in Uttar Pradesh, Rajasthan, Andhra Pradesh, Madhya Pradesh, Gujarat, Punjab, Haryana and Bihar.

1.3 There has been a major improvement in milk production, which increased from 17 million tonnes in 1951 to 127.9 million tonnes during 2011-12. Uttar Pradesh, Punjab, Madhya Pradesh, Rajasthan, Maharashtra, Gujarat, Andhra Pradesh, Haryana, Tamil Nadu and Bihar contributed to the extent of 80 percent of the total milk production in the country. The per capita availability of the milk has reached a level of 290 grams per day during the year 2011-12, which is more than the world average of 284 grams per day. Most of the milk in the country is produced by small, marginal farmers and landless laborers.

1.4 Recognizing the importance of the sector, several key initiatives were taken by the Govt. in the past ranging from Operation Flood (OF) programme, Intensive Dairy Development Programme (IDDP), Strengthening infrastructure for Clean Milk Production, Assistance to Cooperatives, Venture Capital Fund (VCF) for Dairy, Dairy Entrepreneurship Development Scheme etc.

1.5 In order to meet the rapidly growing demand for milk with a focus to improve milch animal productivity and increase milk production, the Government has approved National Dairy Plan Phase-I (NDP-I) in February, 2012 with a total investment of about Rs.2242 crore to be implemented from 2011-12 to 2016-17. NDP-I will help to meet the projected national demand of 150 million tons of milk by 2016-17 from domestic production through productivity enhancement, strengthening and expanding village level infrastructure for milk procurement and provide producers with greater access to markets. NDP-I would focus on

14 major milk producing States - Uttar Pradesh, Punjab, Haryana, Gujarat, Rajasthan, Madhya Pradesh, Bihar, West Bengal, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Orissa and Kerala which account for over 90% of the country's milk production. Coverage of NDP- I will however be across the country in terms of benefits accruing from the scheme.

2. MILK PROCUREMENT AND PROCESSING

The organized dairy sector (both cooperatives and private) is presently handles about 15 per cent of total milk production in the country. Thus it indicates, there is a wide scope for processing of milk and manufacture of milk products for domestic consumption as well as export.

3. EXPORT PERFORMANCE

Dairy products form one of the fastest growing segments in the livestock product export. India's Export of Dairy products was 159228.52 MT to the world for the worth of Rs.3318.53 crores during the year 2013-14. The major export destinations are Bangladesh, Egypt, UAE, Algeria, Yemen Republic, Pakistan, Saudi Arabia and Malaysia. The major products exported were Butter & other milk fat, cheese, Whole Milk Powder, Skimmed Milk Powder, fresh cream, ghee, butter milk etc.

4. OBJECTIVES OF THE PROJECT

The financial assistance is extended for processing of milk with the following objectives.

- i) To enhance the keeping quality of milk
- ii) To avoid the economic losses to farmers by procuring the milk in time from them
- iii) To manufacture various milk products as per market demand
- iv) To provide quality products at affordable prices to the consumers.

Recent study shows that India is the largest producer of milk in the world which is nearly 10% of the world production. Various milk-based products which can be manufactured commercially in a rural industry are Paneer (Cheese), Dhahi (Curd), Ghee etc. These products can be manufactured by low cost traditional methods and machineries. This kind of industries can be located in area where abundance quantity of milk is available. The cost of these products would be considerably low compared to those of big companies. A good number of employment generations is possible with low investment.

Milk and its products are the essential item of daily life in our country especially majority of Indians are vegetarian and thus milk and milk products are indispensable to Indians. The per capita consumption was 122 gms. Per day in 1979 against an availability of 281 gms. Today per capita consumption as well as production quantity has increased and there is a need to make available milk and milk products to the people at reasonable price which can be attained only by setting small scale model dairy units in different milk producing areas to cater to the local needs. There is a challenge of multi-national companies paying major role in this industry. So it would be better for rural industries to produce milk products with a traditional tinge.

Rural industries can market their dairy products through Co-operative marketing channels. So that their product will no way get compared with that of large industri

Paneer (Cheese) – There are different types of Cheese produced commercially, but the process given below is of Cheddar cheese made from buffalo milk. The raw buffalo milk should be preferably fresh and bacteriologically sound. The standardized milk is pasteurized at 71°C for 5 minutes and subsequently cooled to 10°C. The pasteurized milk is inoculated with suitable culture of desired quantity and milk is then held at 8-10°C for about 12 hours. The milk is then transferred to sterilized cheese vats for further processing where the temperature is raised to 34-35°C by circulating hot water in the jacket. A 40 per cent solution of Calcium chloride is added @ 15 ml. per hundred liters of milk, which is followed by the addition of starter culture @

1.5-2 per cent of the milk allowed to ripen until its acidity comes to 0.19-0.2 percent. Hensor's powdered rennet is used @2.5-3 gms.for hundred liters of milk. The renneted milk is allowed to set till the curd attains consistency similar to that required for cheddar cheese making. It is then cut into cubes, which is left undisturbed for five minutes. The curd is then cooked gradually to raise its temperature to 39° C and kept at this temperature for 10 minutes with constant stirring. The temperature of the content of the vat is raised another 10 minutes, which is then lowered to 34-35° C by circulation of cold water.

The cooked curd particles are gathered at the end of the vat and allowed to settle down at the bottom of the vat. The vat is then covered with lid and its content left undisturbed for 8-10 hours, until the acidity of whey increases to 0.4-0.45 per cent, while temperature is maintained 34-36° C. The whey is drained off and curd block is then stripped into long pieces and passed through milling machine to get small cubes of desired size. The sliced curd is uniformly spread in vat and washed with hot water for 4-5 minutes taking care that the curd cubes should not float in water. The hot water is drained; washed curd is filled in hoops of 35 x 28x 10 cms. Size and then pressed. The block of cheese is then obtained, smeared with salt mash and left in the cold Storage (5-10° C and 90 per cent relative humidity) for 48 hours. The block is turned once and smeared with salt as before at the end of 24 hours. After salt simmering and initial drying for 48 hours the cheese is immersed in 18 per cent brine solution prepared by mixing pasteurized whey and water in the proportion of 2:1 and calculated amount of salt. It is allowed to continue for 12-15 hours in humidity controlled Room at 15-16° C and 10 percent R.H. During this process the upper surface of floating block cheese is sprinkled with dry salt on alternate days. The cheese blocks are then removed and left to dry at the same temperature for 2-3 weeks. Subsequently these are washed with water at 50° C, dried, Para fined and kept in cold storage for another 4-5 weeks for further ripening. Total time for ripening is about 8-9 weeks.

A. ABOUT THE PROMOTER

PARTICULARS	ABOUT THE PROMOTER
1. Name	: Narendra Kumar
2. Address	: S/o Mr Puran Singh VPO-Faizpur Ninana Dist-Baghat Pin-250619
3. Contact Number	7078559615
4. Age	43
5. Educational Qualification	: M.Sc Agriculture
6. Experience	5 Year

COST OF PROJECT

PARTICULARS	EXISTING	PROPOSED	AMOUNT
1. Fixed Assets	0.00	1200,000.00	1200,000.00
2. Current Assets	0.00	0.00	0.00
3. Working Capital Requirement	0.00	800,000.00	800,000.00
	0.00	2,000,000.00	2,000,000.00

MEANS OF FINANCE

PARTICULARS	EXISTING	PROPOSED	AMOUNT
1. Own Capital	0.00	500,000.00	500,000.00
2. Current Liabilities	0.00	0.00	0.00
3. Term Loan	0.00	1,500,000.00	1,500,000.00
	0.00	2,000,000.00	2,000,000.00

Fixed Assets Includes

1. BMC	280000.00
2. Mawa making machine	88000.00
3. Cream Separator	39000.00
4. Dee Fridge	80000.00
5. Milk Vending Machine	184000.00
6. Milk Testing Machine Set	100000.00
7. Submersible	50000.00
8. Office Furniture	50000.00
9. Laptop	35000.00
10. Miscellaneous (Cane, Drums etc.)	50000.00
11. Generator	244000.00
Total	1200000.00

COST PRICE OF ITEMS ANNUALLY

NAME OF ITEM	AMOUNT IN RS
1. Fresh Milk	700000
2. Others	100000
Total	800000

* Average Rate includes cost of transportation & packing.

SALES REALIZATION ANNUALLY

NAME OF ITEM	AMOUNT IN RS
1. Milk	500000
2. Ghee	50000
3. Dahi	100000
4. Mawa	200000
5. Paneer	50000
6. Milk byproducts	30000
Monthly Total	930000
Annual Total	2,976,000.00

SATFF SALARY

	NO	SALARY PER MONTH	AMOUNT
1. Manager	1	15000	15,000.00
2. Salesman	1	10000	10,000.00
3. Others	2	8500	17,000.00
		Total	42,000.00

Salary per year **504,000.00**

Other Expenses (Per month)

	AMOUNT
1. Stationery Expenses	1000
2. Rent	10000
3. Electricity Expenses	15000
4. Insurance expenses	7500
5. Misc. Expenses	2500
Total	36,000.00

Expenses per year **432,000.00**

PROJECTED PROFITABILITY STATEMENT

	(Figures in Lakh")					
ITEM (A)	1 YEAR	2 YEAR	3 YEAR	4 YEAR	5 YEAR	6 YEAR
SALES	29.76	32.74	36.01	39.61	42.58	46.84
Total	29.76	32.74	36.01	39.61	42.58	46.84
B. EXPENDITURE						
cost of Items	8.00	8.80	9.68	10.65	11.71	12.88
Staff Salary & Labour Exp.	5.04	5.04	5.54	6.10	6.71	7.38
Other Expenses	4.32	4.32	4.75	5.23	5.75	6.32
Interest on Term Loan	0.45	1.55	1.17	0.80	0.42	0.07
depreciation	0.42	0.26	0.19	0.15	0.12	0.11
Total	18.22	19.97	21.34	22.92	24.72	26.76
Profit (A-B)	11.54	12.76	14.67	16.69	17.86	20.08
Income Tax	3.46	3.83	4.40	5.01	5.36	6.02
Profit after Tax	8.08	8.94	10.27	11.68	12.50	14.05

PROJECTED BALANCE SHEET

(Figures in Lakh")

PARTICULARS	1 YEAR	2 YEAR	3 YEAR	4 YEAR	5 YEAR	6 YEAR
<u>LIABILITIES</u>						
Capital	0.00	11.08	18.01	25.28	32.96	42.47
Add : Addition	5.00	0.00	0.00	0.00	0.00	0.00
Add : Profit after tax	8.08	8.94	10.27	11.68	12.50	14.05
	13.08	20.01	28.28	36.96	45.47	56.52
Less : Drawing	2.00	2.00	3.00	4.00	3.00	2.00
	11.08	18.01	25.28	32.96	42.47	54.52
<u>LOAN LIABILITIES</u>						
Term Loan	15.00	15.00	15.00	15.00	15.00	15.00
Creditor	8.00	9.00	10.00	10.00	12.00	12.00
	34.08	42.01	50.28	57.96	69.47	81.52
<u>ASSETS</u>						
Fixed Assets (Less Depreciation)	1.58	1.32	1.13	0.98	0.85	0.75
<u>CURRENT ASSETS</u>						
Stocks	15.00	16.50	18.15	19.42	20.78	22.23
Debtors	12.00	13.00	14.00	15.00	17.50	20.00
Cash & Bank Balance	5.49	11.19	17.00	22.57	30.34	38.54
	34.08	42.01	50.28	57.96	69.47	81.52

DEPRECIATION SCHEDULE

COMPUTATION OF DEPRECIATION ON W.D.V. METHOD.

(Figures in Lakh")				
YEARS	FURNITURE	EQUIPMENTS	LAPTOP	TOTAL
	10%	15%	60%	
1 YEAR	0.80	0.85	0.35	2.00
Less : Dep	0.08	0.13	0.21	0.42
2 YEAR	0.72	0.72	0.14	1.58
Less : Dep	0.07	0.11	0.08	0.26
3 YEAR	0.65	0.61	0.06	1.32
Less : Dep	0.06	0.09	0.03	0.19
4 YEAR	0.58	0.52	0.02	1.13
Less : Dep	0.06	0.08	0.01	0.15
5 YEAR	0.52	0.44	0.01	0.98
Less : Dep	0.05	0.07	0.01	0.12
6 YEAR	0.47	0.38	0.00	0.85
Less : Dep	0.05	0.06	0.00	0.11

PROJECTED FUND FLOW STATEMENT

(Figures in Lakh")

PARTICULARS	1 YEAR	2 YEAR	3 YEAR	4 YEAR	5 YEAR	6 YEAR
<u>SOURCE OF FUND</u>						
Own Contribution	5.00	0.00	0.00	0.00	0.00	0.00
Net Profit	8.08	8.94	10.27	11.68	12.50	14.05
Term Loan	15.00	0.00	0.00	0.00	0.00	0.00
Depreciation	0.42	0.26	0.19	0.15	0.12	0.11
Creditor	8.00	1.00	1.00	0.00	2.00	0.00
	36.49	10.20	11.46	11.83	14.63	14.16
<u>APPLICATION OF FUNDS</u>						
Increase in fixed assets	2.00	0.00	0.00	0.00	0.00	0.00
Increase in Stocks	15.00	1.50	1.65	1.27	1.36	1.45
Debtors	12.00	1.00	1.00	1.00	2.50	2.50
	29.00	2.50	2.65	2.27	3.86	3.95
Opening Balance	0.00	5.49	11.19	17.00	22.57	30.34
Cash Surplus/ Deficit	7.49	7.70	8.81	9.56	10.77	10.20
	7.49	13.19	20.00	26.57	33.34	40.54
Closing Balance	5.49	11.19	17.00	22.57	30.34	38.54

PROJECTED DEBT SERVICE COVERAGE RATIO STATEMENT

Particular	(Figures in Lakh")					
	1 YEAR	2 YEAR	3 YEAR	4 YEAR	5 YEAR	6 YEAR
<u>SOURCES OF FUND</u>						
Net Profit	8.08	8.94	10.27	11.68	12.50	14.05
Depreciation	0.42	0.26	0.19	0.15	0.12	0.11
Interest on T/Loan	0.45	1.55	1.17	0.80	0.42	0.07
<u>TOTAL</u>	8.94	10.75	11.63	12.63	13.05	14.23
<u>DEBTS TO SERVICE</u>						
Repayment of T/Loan	0.75	3.00	3.00	3.00	3.00	2.25
Interest on T/Loan	0.45	1.55	1.17	0.80	0.42	0.07
<u>TOTAL</u>	1.20	4.55	4.17	3.80	3.42	2.32
DSCR	7.48	2.36	2.79	3.33	3.81	6.13
Average DSCR	2.80					

PROJECTED INTEREST CALCULATION & REPAYMENT SCHEDULE

INTEREST ON TERM LOAN

(Rs. In 'Lakh')

<u>YEARS</u>	<u>QTRS.</u>	<u>OPENING</u>	<u>REPAYMENT</u>		<u>BALANCE</u>	<u>QUARTER INTEREST</u>	<u>YEARLY INT. @ 12.5%</u>
1 YEAR	1st	0.00	0.00		0.00	0.00	
	2nd	0.00	0.00		0.00	0.00	
	3rd	0.00	0.00		0.00	0.00	
	4th	15.00	0.75	0.75	14.25	0.45	0.45
2 YEAR	1st	14.25	0.75		13.50	0.42	
	2nd	13.50	0.75		12.75	0.40	
	3rd	12.75	0.75		12.00	0.38	
	4th	12.00	0.75	3.00	11.25	0.35	1.55
3 YEAR	1st	11.25	0.75		10.50	0.33	
	2nd	10.50	0.75		9.75	0.30	
	3rd	9.75	0.75		9.00	0.28	
	4th	9.00	0.75	3.00	8.25	0.26	1.17
4 YEAR	1st	8.25	0.75		7.50	0.23	
	2nd	7.50	0.75		6.75	0.21	
	3rd	6.75	0.75		6.00	0.19	
	4th	6.00	0.75	3.00	5.25	0.16	0.80
5 YEAR	1st	5.25	0.75		4.50	0.14	
	2nd	4.50	0.75		3.75	0.12	
	3rd	3.75	0.75		3.00	0.09	
	4th	3.00	0.75	3.00	2.25	0.07	0.42
6 YEAR	1st	2.25	0.75		1.50	0.05	
	2nd	1.50	0.75		0.75	0.02	
	3rd	0.75	0.75	2.25	0.00	0.00	0.07