



Detailed Project Report ***on*** ***2KL Milk Processing Unit***

Under MKUY

Name of the Entrepreneur/Entity:

Address:



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1. Project Summary

1	Name of the Enterprise (as per the Illustrative List of Enterprises)	Milk Processing
2	Sector (as per the Illustrative List of Enterprises)	ARD
3	Project Capacity ¹	2,000 lit/day
4	Key components of the project	Dairy (Milk Processing)
5	Project Address (Village/Ward, Gram Pranchayat/Municipality, Block, District)	
6	Products/Output from the project	Milk, Curd, Ghee
7	Total Project Cost	Rs. 1,64,11,000
8	Fixed Capital Cost	Rs. 1,50,01,000
9	Working/Recurring capital	Rs. 14,10,000
10	Bank Finance/ Self Finance	Bank Loan
11	Bank Loan Amount	Rs. 1,46,28,900
12	Promoter Contribution (min 10% in case of bank loan)	Rs. 17,82,100
13	Assumed Rate of Interest	11%
14	Subsidy Eligibility (40%, 50%)	
15	Repayment Terms (Tenure, Moratorium, Frequency, Mode of Repayment: equal principal/equal instalment)	Equal Monthly Instalment
16	Key Financial Indicators:	
	1. Average Annual Net Profit	Rs. 40,35,587
	2. Debt Service Coverage Ratio (DSCR)	1.73
	3. Internal Rate of Return	21.64%
	4. Break Even Year	3 Years and 10 Months
17	Estimated employment to be generated (nos.)	20

Note: The price quoted in the DPR is indicative. Final CIS will be calculated as per the Rate in MKUY guideline

¹ Capacity can be in terms of area or quantity



2. Project Profile

2.1 Entrepreneur/Entity Profile

1	Name of the Entrepreneur/Entity	
2	Legal status (Individual/ Group/ FPO/ FPC/ Proprietorship/ Partnership firm/ Company/ Cooperative/ Federation/ Society/ Trust)	
3	Name of Representative ² in Ease of entity	
4	Gender (Male/ Female/ Third Gender/ Not Applicable)	
5	Date of Birth of Individual/Representative of Entity	
6	Date of Incorporation/Registration of Entity	
7	Category opted for (Women/ ST/ SC/ Differently Abled/ Third gender/ Agri & Allied Graduate)	
8	Educational Qualification of Individual/Representative of Entity	
9	Passport size photograph of the Individual/ Representative of entity	
10	Local Address for Correspondence of the Individual/ Representative of entity	
11	Registered Address of Entity	
12	Main Office/Branch Address of Entity	
13	Phone no. of Individual/Representative of Entity	
14	Email Id of Individual/Representative of Entity	
15	AADHAR No. of Individual/Representative	
16	PAN of Individual/Representative of Entity, if available	
17	Farmer Id of Individual, if available	
18	Details of other Partner/Director/ President/Secretary	
19	Registration No./ CIN of the Entity ³	
20	PAN/TAN of Entity	
21	GSTIN of Entity, if available	
22	Details of experience and exposure relevant to the proposed enterprise/project (family business, work experience, e- learning/certificate courses, trainings undertaken etc.)	

² Representative should be authorized by the board/governing body of the entity.

³ Registration document:

Groups (SHG/PG/): FPO: Proprietorship firm: Registration Certificate under Shops & Establishment Act, Partnership firm: Registration Certificate from IGR of state, Company (Pvt. Ltd., Public Ltd., LLP, OPC, FPC): Certification of Incorporation, Cooperative/ Federation: Certificate of Registration from Registrar of Cooperative Societies, Society/Trust: Darpan Unique Id



2.2. Project Consultant Details

DPR prepared by:

Please provide further details of the consultant:





2.3. Concept and Scope of the Project

Milk is a valuable nutritious food that has a short shelf-life and requires careful handling. Milk is highly perishable because it is an excellent medium for the growth of microorganisms – particularly bacterial pathogens – that can cause spoilage and diseases in consumers. Milk processing allows the preservation of milk for days, weeks or months and helps to reduce food-borne illness.

The usable life of milk can be extended for several days through techniques such as cooling (which is the factor most likely to influence the quality of raw milk) or fermentation. Pasteurization is a heat treatment process that extends the usable life of milk and reduces the numbers of possible pathogenic microorganisms to levels at which they do not represent a significant health hazard. Milk can be processed further to convert it into high-value, concentrated and easily transportable dairy products with long shelf-lives, such as butter, cheese and ghee.

Processing of dairy products gives small-scale dairy producers higher cash incomes than selling raw milk and offers better opportunities to reach regional and urban markets. Milk processing can also help to deal with seasonal fluctuations in milk supply. The transformation of raw milk into processed milk and products can benefit entire communities by generating off-farm jobs in milk collection, transportation, processing and marketing.

Processing will also promote entrepreneurship venture and employment. Processed milk products include dahi, lassi, cheese, yoghurt, chhana, paneer, khoa, ice cream, ghee, butter etc. Regarding milk utilization, only 18% is being utilized for processing of milk products in Odisha. So, there is great scope for utilization of milk for production of various processed milk products which will definitely double the income of the farmer. Odisha is a leading producer of milk.

Market Potential

Total milk production stood at 23.73 Lakh MT during 2020-21. The state currently represents the fourteenth largest dairy market in India. The milk production in Orissa mainly consists of cow and buffalo milk. Cow milk dominates the total milk production, accounting for majority of the total production.

Based on the product type, Orissa dairy market into 18 major product segments:

- Liquid milk
- Ghee
- Curd
- Paneer
- Ice-cream
- Table butter
- Skimmed milk powder
- Frozen/flavoured yoghurt
- Fresh cream
- Lassi
- Butter milk
- Cheese



- Flavoured milk
- UHT milk
- Dairy whitener
- Sweetened condensed milk
- Infant food
- Malt based beverages

Currently, liquid milk represents the biggest product segment in Orissa, accounting for majority of the market share. Some of the fastest growing segments include frozen/flavoured yoghurt, cheese, UHT milk, flavoured milk and butter milk.

3. Techno-commercial Assumptions

Sl. No.	Parameter	Value	Unit
1	Increase in Rate of Product	5	%
2	Increase in Electricity consumption	5	%
3	Collection from Debtors (First Year)	10	Days
4	Collection from Debtors	10	Days
5	Payable to Creditors	15	Days
6	Drawing By Promoter	25	%
7	Increase in Staff Salary	5	%
8	Rate of Interest on TL	11	%
9	Rate of Interest on WC	9	%
10	Loan Repayment (in year)	7	Years
11	Raw Material in Stock (on sales)	5	Days
12	Finished Goods in stock (on sales)	15	Days
13	Promoter's Contribution (Term Loan)	10	%
14	Promoter's Contribution (Working Capital)	20	%
15	Working Capital Requirement	15	Days
16	Working Capital Utilisation	100	%
17	No. of working days	345	Days

4. Financial Details

4.1. Project Fixed Capital

Details of Fixed Assets					
Sl. No.	Particulars	Unit	Qty.	Cost per unit	Total
A	Land				
1	Land Development	sq. ft	10000	0.70	7,000
2	Fencing (Barbed wire/Green Fencing)	ft	400	60.00	24,000
	Sub Total				31,000
B	Civil Construction				
1	Milk reception, processing area	Sq. ft	5000	950.00	47,50,000
2	Effluent Treatment Plant	Sq. ft	1000	400.00	4,00,000
3	Water treatment Plant	Sq. ft	1000	400.00	4,00,000
4	Refrigeration unit	Sq. ft	1000	400.00	4,00,000



Details of Fixed Assets					
Sl. No.	Particulars	Unit	Qty.	Cost per unit	Total
5	Boiler Section	Sq. ft	1000	400.00	4,00,000
6	Office	Sq. ft	400	950.00	3,80,000
	Sub Total				67,30,000
C	Water Supply				
1	Water Supply with overhead tank, pump and pipeline				2,50,000
D	Electrification				
1	Electrical Installation (with transformer and DG Unit as required)				5,00,000
E	Plant & Machinery				
Sl. No.	Particulars	Specification	Qty	Unit Price	total
1	Water RO Plant		1	3,00,000	3,00,000
2	Effluent Treatment Plant (ETP)		1	5,00,000	5,00,000
3	Chilled water generation unit		1	3,00,000	3,00,000
4	CIP unit		1	3,00,000	3,00,000
5	Boiler		1	5,00,000	5,00,000
	Milk Reception and Testing				
6	Weighment	100 kg	1	50,000	50,000
7	Dump tank	1500 lit	1	50,000	50,000
8	Duplex filter with pump	2000 lit/h	1	30,000	30,000
9	Milk Chiller (PHE)	2000 lit/hr	1	2,00,000	2,00,000
10	Milk testing setup		1	2,00,000	2,00,000
Milk Processing (Pouch Milk)					
11	Milk Pasteurizer unit	500 lit/hr	1	5,00,000	5,00,000
12	Cream Separator	500 lit/hr	1	3,00,000	3,00,000
13	Milk Homogenizer	500 lit/hr	1	5,00,000	5,00,000
14	Buffer tank	500 lit	1	1,00,000	1,00,000
15	Cream Pasteurizer	500 lit/h	1	5,00,000	5,00,000
16	Insulated Cream Storage Tank	200 lit	2	1,00,000	2,00,000
17	Cream transfer pump	200 lit/hr	1	20,000	20,000
18	Cream Chiller	3200 lit/hr	1	1,00,000	1,00,000
19	Cold Room solar	10'x15'x12'	1	5,00,000	5,00,000
Ghee and Butter					
20	Cream ripening tank with transfer pump	200 lit	1	1,50,000	1,50,000
21	Butter Churner	200 lit	1	3,00,000	3,00,000
22	Butter trolley	100 kg	1	50,000	50,000
23	Ghee boiler	200 lit	1	2,00,000	2,00,000
24	Ghee transfer pump	100 lit/hr	1	30,000	30,000
25	Ghee settling tank	100 lit	1	50,000	50,000



Details of Fixed Assets					
Sl. No.	Particulars	Unit	Qty.	Cost per unit	Total
26	Ghee buffer tank	100 lit	1	50,000	50,000
27	Ghee clarifier	100 lit/hr	1	1,50,000	1,50,000
28	Ghee packing machine	1000 lit/hr	1	2,00,000	2,00,000
29	Curd setting tank	500 lit	1	1,00,000	1,00,000
30	Hot water batter for curd setting tank	500 lit	1	60,000	60,000
31	Cup filling machine	100 lit/hr	1	2,00,000	2,00,000
32	Incubation room		1	3,00,000	3,00,000
33	Pipes and fittings		1	1,00,000	1,00,000
	Total				78,40,000
F	Miscellaneous Expenditure				
1	Insurance premium of assets				30,000
	Total				30,000

4.2. Project Variable Expenses

Details of Recurring Expenditure						
A	Details of raw material (per annum @ 100%)					
Sl. No.	Items	Unit	Rate/Unit (Rs)	Qty/day	Qty/annum (kg)	Total Cost (Rs)
1	Milk	Lit	32.00	2,000	6,90,000	2,20,80,000
2	Milk puch (packing material)	Nos.	2.00	1,200	4,14,000	8,28,000
3	Curd cup	Nos.	3.00	2,000	6,90,000	20,70,000
4	Ghee jar	Nos.	5.00	100	34,500	1,72,500
5	Starter Culture	Kg	2000.00	0.1	35	69,000
6	CIP & ETP chemicals	Lit.	100.00	30	10,350	10,35,000
7	SMP for standardization	Kg	300.00	50	17,250	51,75,000
	Total			5,380	18,56,135	3,14,29,500

Details of salary and other benefits				
Sl. No.	Type of Workers	No. of Worker	Salary Per Month/head (Rs)	Total Salary per Annum (Rs)
1	Unskilled	10	8,000	960000
2	Skilled	5	12,000	720000
3	Domain Skilled	2	20,000	4,80,000
4	Purchase and Store	1	18,000	2,16,000
5	Sales	1	18,000	2,16,000
6	Manager	1	30,000	3,60,000
	Grand Total	20		29,52,000



4.3. Details of Sales

Details of sales (Per annum @100% capacity)						
Sl. No.	Type of products	Unit	Rate/Unit (Rs)	Quantity/day	Quantity/annum	Total (Rs)
1	Milk	Lit	45.00	1,200	4,14,000	1,86,30,000
2	Ghee	Lit	500.00	20	6,900	34,50,000
3	Curd	Kg	150.00	500	1,72,500	2,58,75,000
	Total			1,720	5,93,400	4,79,55,000





4.4. Project Balance Sheet

Liabilities	I	II	III	IV	V	VI	VII
Liabilities	I	II	III	IV	V	VI	VII
Opening Capital	-	21,91,233	37,04,666	52,84,869	72,18,654	90,06,355	1,12,48,615
Add: Introduced	17,82,100						
Add: Profit	5,46,133	27,49,433	33,42,202	43,40,786	47,90,701	59,92,260	64,87,592
Less: Drawing	1,37,000	12,36,000	17,62,000	24,07,000	30,03,000	37,50,000	44,35,000
Closing Capital	21,91,233	37,04,666	52,84,869	72,18,654	90,06,355	1,12,48,615	1,33,01,207
Term Loan from Bank	1,21,44,969	1,06,32,132	89,44,230	70,61,007	49,59,859	26,15,569	-
Current Liabilities							
Cash Credit from Bank	11,28,000	11,28,000	11,28,000	11,28,000	11,28,000	11,28,000	11,28,000
Sundry Creditors	7,85,738	12,37,550	13,86,100	15,46,400	16,23,750	18,05,250	18,95,550
Expenses Payable	4,60,800	5,88,800	6,40,200	6,95,400	7,30,200	7,92,200	8,32,800
Current Provisions	27,158	9,10,471	11,64,515	15,92,480	17,85,300	23,00,254	25,12,539
Total Current Liabilities	24,01,696	38,64,821	43,18,815	49,62,280	52,67,250	60,25,704	63,68,889
Total Liabilities	1,67,37,898	1,82,01,619	1,85,47,914	1,92,41,941	1,92,33,464	1,98,89,888	1,96,70,096
Assets							
Fixed Assets	1,49,71,000	1,49,71,000	1,49,71,000	1,49,71,000	1,49,71,000	1,49,71,000	1,49,71,000
Less Depreciation	19,11,000	35,68,350	50,06,798	62,56,208	73,42,264	82,87,062	91,09,628
Net Fixed Assets	1,30,60,000	1,14,02,650	99,64,203	87,14,792	76,28,736	66,83,938	58,61,372
Current Assets							
Sundry Debtors	7,99,300	12,58,900	14,09,900	15,73,000	16,51,600	18,36,200	19,28,100
Inventories	12,70,300	14,01,300	20,43,757	22,87,300	25,22,352	26,77,561	29,44,543
Cash and Bank Balance	1,59,900	2,51,800	2,82,000	3,14,600	3,30,400	3,67,300	3,85,700
Other Current Assets	14,48,398	38,86,969	48,48,055	63,52,249	71,00,376	83,24,890	85,50,380
Total Current Assets	36,77,898	67,98,969	85,83,712	1,05,27,149	1,16,04,728	1,32,05,951	1,38,08,724



4.5. Calculation of Depreciation

Rates of Depreciation		10%	15%	Total depreciation for the year (Rs)
Year	1	6,60,000.00	12,51,000	19,11,000
	2	5,94,000.00	10,63,350	16,57,350
	3	5,34,600.00	9,03,848	14,38,448
	4	4,81,140.00	7,68,270	12,49,410
	5	4,33,026.00	6,53,030	10,86,056
	6	3,89,723.40	5,55,075	9,44,799
	7	3,50,751.06	4,71,814	8,22,565

4.6. Projected P&L

Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
Capacity Utilisation	50	75	80	85	85	90	90
Revenue							
Sales	2,39,77,500	3,77,65,000	4,22,97,000	4,71,88,000	4,95,48,000	5,50,86,000	5,78,41,000
Opening Stock of Finished Goods	-	(10,42,500)	(16,41,957)	(18,39,000)	(20,51,652)	(21,54,261)	(23,95,043)
Closing Stock of Finished Goods	10,42,500	16,41,957	18,39,000	20,51,652	21,54,261	23,95,043	25,14,826
Total Income (A)	2,50,20,000	3,83,64,457	4,24,94,043	4,74,00,652	4,96,50,609	5,53,26,783	5,79,60,783
Expenditure							
Opening stock of Raw Material	-	2,27,800	3,58,800	4,01,800	4,48,300	4,70,700	5,23,300
Purchase (Net) of Material	1,57,14,750	2,47,51,000	2,77,22,000	3,09,28,000	3,24,75,000	3,61,05,000	3,79,11,000
Closing Stock of Raw material	2,27,800	3,58,800	4,01,800	4,48,300	4,70,700	5,23,300	5,49,500
Raw Material Consumption	1,54,86,950	2,46,20,000	2,76,79,000	3,08,81,500	3,24,52,600	3,60,52,400	3,78,84,800
Repair & Maintenance - Machinery (@5% of Cost)	1,49,400	1,56,900	1,64,800	1,73,100	1,81,800	1,90,900	2,00,500
Electricity expense	19,18,200	30,21,200	33,83,800	37,75,100	39,63,900	44,06,900	46,36,900
Insurance cost	30,000	31,500	33,100	34,800	36,600	38,500	40,500
Administrative salaries and wages	29,52,000	30,99,600	32,54,600	34,17,400	35,88,300	37,67,800	39,56,200



Description	Year ending March 31st						
	I	II	III	IV	V	VI	VII
Other Misc. Expenses [@2% of sales]	4,79,550	7,55,300	8,45,940	9,43,760	9,90,960	11,01,720	11,59,216
Total Cost	2,10,16,100	3,16,84,500	3,53,61,240	3,92,25,660	4,12,14,160	4,55,58,220	4,78,78,116
Profit Before Depreciation, Interest and Tax	40,03,900	66,79,957	71,32,803	81,74,992	84,36,449	97,68,563	1,00,82,667
Depreciation	19,11,000	16,57,350	14,38,448	12,49,410	10,86,056	9,44,799	8,22,565
Profit Before Interest and Tax	20,92,900	50,22,607	56,94,356	69,25,582	73,50,393	88,23,764	92,60,102
Interest on Term Loan	14,18,089	12,61,182	10,86,118	8,90,796	6,72,872	4,29,729	1,58,451
Interest on Working Capital Loan	1,01,520	1,01,520	1,01,520	1,01,520	1,01,520	1,01,520	1,01,520
Total Interest Paid	15,19,609	13,62,702	11,87,638	9,92,316	7,74,392	5,31,249	2,59,971
Profit Before Tax	5,73,291	36,59,904	45,06,718	59,33,266	65,76,001	82,92,514	90,00,131
Income Tax	27,158	9,10,471	11,64,515	15,92,480	17,85,300	23,00,254	25,12,539
Profit after Tax	5,46,133	27,49,433	33,42,202	43,40,786	47,90,701	59,92,260	64,87,592

4.7. Projected Cash Flow

Period Ending:	I	II	III	IV	V	VI	VII
Cash & Bank Balance at Beginning	-	1,59,900	2,51,800	2,82,000	3,14,600	3,30,400	3,67,300
Cash Inflow during the Period	1,86,48,898	58,69,909	52,34,644	62,33,661	61,81,727	76,95,513	76,53,342
Cash Outflow during the Period	1,84,88,998	57,78,009	52,04,444	62,01,061	61,65,927	76,58,613	76,34,942
Closing Cash & Bank Balance	1,59,900	2,51,800	2,82,000	3,14,600	3,30,400	3,67,300	3,85,700

4.8. Projected Loan Repayment

Year	Interest	EMI	Principal
1	14,18,088.76	27,74,019.62	13,55,930.86
2	12,61,182.02	27,74,019.62	15,12,837.60
3	10,86,118.22	27,74,019.62	16,87,901.41
4	8,90,796.23	27,74,019.62	18,83,223.39
5	6,72,871.81	27,74,019.62	21,01,147.81



Year	Interest	EMI	Principal
6	4,29,729.43	27,74,019.62	23,44,290.19
7	1,58,450.90	27,74,019.62	26,15,568.73
Total	59,17,237.37	1,94,18,137.37	1,35,00,900.00

4.9. Calculation of DSCR, IRR and BEP

Year	I	II	III	IV	V	VI	VII
Net Sales	2,39,77,500	3,77,65,000	4,22,97,000	4,71,88,000	4,95,48,000	5,50,86,000	5,78,41,000
Net Profit	5,46,133	27,49,433	33,42,202	43,40,786	47,90,701	59,92,260	64,87,592
Depreciation	15,19,609	13,62,702	11,87,638	9,92,316	7,74,392	5,31,249	2,59,971
Cash Accruals (a)	20,65,742	41,12,135	45,29,841	53,33,102	55,65,093	65,23,510	67,47,563
Principal	13,55,931	15,12,838	16,87,901	18,83,223	21,01,148	23,44,290	26,15,569
Interest	15,19,609	13,62,702	11,87,638	9,92,316	7,74,392	5,31,249	2,59,971
Total (b)	28,75,540	28,75,540	28,75,540	28,75,540	28,75,540	28,75,540	28,75,540
DSCR	0.72	1.43	1.58	1.85	1.94	2.27	2.35
Average DSCR	1.73						

Calculation of Break-Even Point (BEP)							
Sales	2,50,20,000	3,83,64,457	4,24,94,043	4,74,00,652	4,96,50,609	5,53,26,783	5,79,60,783
Variable Cost	1,59,66,500	2,53,75,300	2,85,24,940	3,18,25,260	3,34,43,560	3,71,54,120	3,90,44,016
Contribution	90,53,500	1,29,89,157	1,39,69,103	1,55,75,392	1,62,07,049	1,81,72,663	1,89,16,767
Fixed Cost	84,80,209	93,29,252	94,62,386	96,42,127	96,31,048	98,80,148	99,16,636
BEP Sales	2,34,35,668	2,75,54,652	2,87,84,598	2,93,43,922	2,95,04,902	3,00,80,172	3,03,84,472
Average BEP sales	2,84,41,198						



Calculation of Internal Rate of Return (IRR)				
Sl. No.	Year	PAT	Depreciation	Cash Accrual
	Cash outflow at beginning			-1,64,11,000
1	31-03-2023	5,46,133	19,11,000	24,57,133
2	31-03-2024	27,49,433	16,57,350	44,06,783
3	31-03-2025	33,42,202	14,38,448	47,80,650
4	31-03-2026	43,40,786	12,49,410	55,90,196
5	31-03-2027	47,90,701	10,86,056	58,76,757
6	31-03-2028	59,92,260	9,44,799	69,37,059
7	31-03-2029	64,87,592	8,22,565	73,10,157
IRR		21.64%		
Payback Period		3 Years 10 Months		

4.10. Summary of Project Cost

Sl. No.	Name of Assets	Amount (Rs)
1	Land	-
2	Civil Construction	63,50,000
3	Irrigation/Water Supply	2,50,000
4	Electrification	5,00,000
5	Plant & Machinery	78,40,000
6	Land Development	31,000
7	Livestock	-
8	Insurance	30,000
9	DPR Cost	-
	Total Fixed Cost	1,50,01,000
	Recurring	14,10,000