

# **COMMERCIAL DAIRY FARMING**

**(20 CB COWS)**

APICOL

<b>A</b>	<b>TECHNO ECONOMIC PARAMETERS</b>		
<b>Sl. No.</b>	<b>Parameters</b>	<b>UoM</b>	<b>Value</b>
<b>CROSS BRED COWS</b>			
<b>1</b>	<b>CAPITAL INVESTMENT</b>		
<i>I</i>	<b>Land</b>	Acre	
a	Cost of land development / acre	Rs.	10000
b	Cost of fencing / acre	Rs.	15000
<i>II</i>	<b>Civil Construction</b>		
a	Cost of shed construction / sq.ft.	Rs.	230
b	Cost of store room construction / sq.ft.	Rs.	250
<i>III</i>	<b>Water Supply system</b>		
a	Borewell / Tubewell	Rs.	90000
b	Pump & Pipe line	Rs.	20000
c	Sump / Over head Tank	Rs.	10000
<b>IV</b>	<b>Animal Cost</b>		
a	Cost per cow(Rs.)		40000
b	Cost of culled animals/ Culled animal		10000
<i>V</i>	<b>Electrification</b>		
a	Cost of electrification (as % of civil cost)	percentage	3%
c	DG Set - 15 KVA	Rs.	240000
<i>VI</i>	<b>Plant &amp; Machinery</b>		
a	Cost of equipment / Animal	Rs.	1500
b	Cost of chaff cutter(power operated)		50000
<b>2</b>	<b>RECURRING EXPENDITURE/BATCH</b>		
a	Cost of Concentrate feed / kg	Rs.	20
b	Cost of medicine/ animal/ Year	Rs.	100
c	Veterinary aid/animal/year		1000
d	Quantity of conc. Feed/Bag in Kg		50
f	Cost of dry fodder/kg		2
g	Cost of green fodder/kg		1
h	No of labourers		1

i	Salary of labourer/month		6000
j	Cost of fodder cultivation/ Acre		5000
k	Cost of electricity /animal/year		600
2	No of animals		20
3	No of animals/batch		10
4	Transportation cost/animal		1500
5	Quantity of conc. Feed/Bag in Kg		50
6	Average milk yield (ltr/day)		10
7	Floor space(sq. ft/adult animal)		50
8	Floor space(sq. ft/calf)		20
9	Store room(sq. ft)		100
10	Insurance premium/annum (%)		5%
11	Promoter's margin (%)		25%
12	Bank Loan		75%
13	Rate of Interest (%)		11
14	Repayment period(years)		7
15	Selling price of milk/liter(Rs.)		30
16	Sale price of gunny Bag(Rs.)		10
17	Sale price of Manure/Tonne		Used in fodder cultivation
18	Lactation days(nos)		270
19	Dry days(nos)		150

<b>LACTATION CHART/ANIMAL</b>				
Year	<b>1st Batch</b>		<b>2nd Batch</b>	
	<b>Lactation Days</b>	<b>Dry Days</b>	<b>Lactation Days</b>	<b>Dry Days</b>
1st Year	240	30	90	0
2nd Year	240	120	210	150
3rd Year	210	150	240	120
4th Year	210	150	270	90
5th Year	210	150	270	90
6th Year	210	150	270	90
7th Year	210	150	270	90

<b>FEEDING SCHEDULE</b>					
		Lactation		Dry	
<b>Type of Feed</b>	<b>Rate/Kg (Rs.)</b>	<b>Quantity</b>	<b>Cost/day</b>	<b>Quantity</b>	<b>Cost/day</b>
Conc. feed/animal/day	20	5	100	2	40
Green fodder/animal/day	1	30	Own grown	20	Own grown
Dry fodder/animal/day	2	4	8	5	10
Total			108		50

<b>TOTAL CONCENTRATE FEED CONSUMED(Kgs)</b>				
Year	Lactation	Dry	Total	No of gunny bags
1st Year	16500	600	17100	342
2nd Year	22500	5400	27900	558
3rd Year	22500	5400	27900	558
4th Year	24000	4800	28800	576
5th Year	24000	4800	28800	576
6th Year	24000	4800	28800	576
7th Year	24000	4800	28800	576

<b>B. PROJECT COST of 20 CB</b>		
<b>A</b>	<b>CAPITAL INVESTMENT</b>	
	<b>Particulars</b>	<b>Total cost (Rs)</b>
<b>1</b>	<b>Land</b>	
a	Land Development( LS)	10,000
b	Fencing (LS)	15,000
		<b>25,000</b>
<b>2</b>	<b>Civil Construction</b>	
a	Animal Shed	230,000
b	Calf Shed	92,000
c	Store room	25,000
		<b>347,000</b>
<b>3</b>	<b>Water Supply system</b>	
a	Borewell / Tubewell(LS)	90,000
b	Pump & Pipe line	20,000
c	Sump / Over head Tank(LS)	10,000
		<b>120,000</b>
<b>4</b>	<b>Electrification</b>	
a	Installation & Fitting (LS)	10,410
b	DG Set	240,000
		<b>250,410</b>
<b>5</b>	<b>Plant &amp; Machinery</b>	
A	Equipment	30,000
B	Other required equipments ( Chaff cutter)	50,000
		<b>80,000</b>
<b>6</b>	<b>Animal cost</b>	
	CB Cow(including Transportation, Tax, & Insurance)	830,000
		<b>830,000</b>
<b>7</b>	<b>Miscellaneous</b>	
	Insurance Premium of Assets :---	
	i. Livestocks	40000
	Perennial Fodder Cultivation( LS)	5000
		<b>45000</b>
	<b>Total Capital Cost</b>	<b>1,697,410</b>
<b>B</b>	<b>Recurring Expenditure upto trial Production (not Eligible for CIS)</b>	
a	Cost of feed for 1 month for 1st batch	32400
b	Cost of Medicine for 1 Year	2000
c	Veterinary & vaccination for 20 cows for 1 Year	20000
d	Labour charges for 1 month	6000
e	Electric & Misc. expenses for 1 month	1000
	<b>Total Recurring expenditure to be capitalised</b>	<b>61400</b>
<b>C</b>	<b>TOTAL PROJECT COST</b>	<b>1,758,810</b>
<b>D</b>	<b>MARGIN MONEY</b>	<b>439,703</b>
<b>E</b>	<b>BANK LOAN</b>	<b>1,319,108</b>

<b>C. PROFITABILITY STATEMENT, DSCR &amp; IRR</b>								
	<b>Particulars</b>	<b>1st Year</b>	<b>2nd Year</b>	<b>3rd Year</b>	<b>4th Year</b>	<b>5th Year</b>	<b>6th Year</b>	<b>7th Year</b>
1	Sale of Milk	990000	1350000	1350000	1440000	1440000	1440000	1440000
2	Sale of Gunny Bags	3420	5580	5580	5760	5760	5760	5760
	<b>TOTAL BENEFIT</b>	<b>993420</b>	<b>1355580</b>	<b>1355580</b>	<b>1445760</b>	<b>1445760</b>	<b>1448640</b>	<b>1448640</b>
1	Cost of feeding during lactation	356400	486000	486000	518400	518400	518400	518400
2	Cost of feeding during dry period	18000	162000	162000	144000	144000	144000	144000
3	Cost of Medicine	2000	2000	2000	2000	2000	2000	2000
4	Veterinary & breeding charges	20000	20000	20000	20000	20000	20000	20000
5	Labour charges	72000	72000	72000	72000	72000	72000	72000
6	Electric & Misc. expenses	12000	12000	12000	12000	12000	12000	12000
7	Insurance charges	40,000	40,000	40,000	40,000	40,000	40,000	40,000
	<b>TOTAL RECURRING COST</b>	<b>520400</b>	<b>794000</b>	<b>794000</b>	<b>808400</b>	<b>808400</b>	<b>808400</b>	<b>808400</b>
	<b>PROFIT BEFORE DIT</b>	<b>473020</b>	<b>561580</b>	<b>561580</b>	<b>637360</b>	<b>637360</b>	<b>640240</b>	<b>640240</b>
<b>B</b>	<b>Interest</b>	108,826	129,987	105,803	81,620	57,436	33,253	9,069
<b>C</b>	<b>Depreciation</b>							
a	Civil Construction	17,850	16,958	16,110	15,304	14,539	13,812	<b>13,121</b>
b	Machinery incl. Pump	43,000	38,700	34,830	31,347	28,212	25,391	<b>22,852</b>
<b>II</b>	<b>NET BENEFIT</b>	<b>303,344</b>	<b>375,935</b>	<b>404,837</b>	<b>509,089</b>	<b>537,173</b>	<b>567,784</b>	<b>595,198</b>
<b>I</b>	<b>FINANCIAL ANALYSIS</b>							
a	DF at 15%	1.0000000	0.8695652	0.7561437	0.6575162	0.5717532	0.4971767	0.4323276
b	Initial Project Outlay	1,758,810						
c	Total Discounted Cost	2,279,210	690,435	600,378	531,536	462,205	401,918	349,494

d	Total Discounted Benefit	993,420	1,178,765	1,025,013	950,611	826,618	720,230	626,287
e	Net Cost / Benefit	-1,285,790	488,330	424,635	419,075	364,413	318,312	<b>276,793</b>
f	NPW @ 15% DF	1005769						
g	BCR at 15% DF	1.19						
h	IRR	22%						
i	Loan repayment	108,826	349,838	325,655	301,471	277,287	253,104	228,920
j	DSCR	4.35	1.61	1.72	2.11	2.30	2.53	2.80
k	Average DSCR	2.49						

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**D. CASH FLOW STATEMENT**

<b>Particulars</b>	<b>1st yr.</b>	<b>2nd yr.</b>	<b>3rd yr.</b>	<b>4th yr.</b>	<b>5th yr.</b>	<b>6th yr.</b>	<b>7th yr.</b>
<b>CASH INFLOW</b>							
Opening Balance	0	425,594	211,742	235,925	335,889	360,073	384,256
Bank Loan	1,319,108	-	-	-	-	-	-
Promoter Contribution	439,703	-	-	-	-	-	-
Sale of Milk	990,000	1,350,000	1,350,000	1,440,000	1,440,000	1,440,000	1,440,000
Sale of gunny bags	3,420	5,580	5,580	5,760	5,760	5,760	5,760
<b>Total</b>	<b>2,752,230</b>	<b>1,355,580</b>	<b>1,355,580</b>	<b>1,445,760</b>	<b>1,445,760</b>	<b>1,445,760</b>	<b>1,445,760</b>
<b>CASH OUTFLOW</b>							
Land devt. & fencing	25,000	-	-	-	-	-	-
Civil Construction	347,000	-	-	-	-	-	-
Water Supply System	120,000	-	-	-	-	-	-
Electrification	250,410	-	-	-	-	-	-
Plant & Machinery	80,000	-	-	-	-	-	-
Animal Cost	830,000						
Miscellaneous	45,000						
Cost of Feed	374,400	648,000	648,000	662,400	662,400	662,400	662,400
Medicine Cost	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Veteterinary Cost	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Labour charges	72,000	72,000	72,000	72,000	72,000	72,000	72,000
Power bill	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Insurance Charges	40,000	40,000	40,000	40,000	40,000	40,000	40,000
Interest Payment	108,826	129,987	105,803	81,620	57,436	33,253	9,069
Repayment of TL		219,851	219,851	219,851	219,851	219,851	219,851
<b>CLOSING BALANCE</b>	<b>425,594</b>	<b>211,742</b>	<b>235,925</b>	<b>335,889</b>	<b>360,073</b>	<b>384,256</b>	<b>408,440</b>
<b>Total</b>	<b>2,752,230</b>	<b>1,355,580</b>	<b>1,355,580</b>	<b>1,445,760</b>	<b>1,445,760</b>	<b>1,445,760</b>	<b>1,445,760</b>



**E. BREAK EVEN POINT**

<b>Particulars</b>	<b>yr-1</b>	<b>yr-2</b>	<b>yr-3</b>	<b>yr-4</b>	<b>yr-5</b>	<b>yr-6</b>	<b>yr-7</b>
Revenue	993420	1355580	1355580	1445760	1445760	1448640	1448640
Variable cost(excluding Administrative cost)	396400	670000	670000	684400	684400	684400	684400
Fixed							
Interest	108826	129987	105803	81620	57436	33253	9069
Depreciation	60850	55658	50940	46651	42751	39203	35973
Insurance	40000	40000	40000	40000	40000	40000	40000
Total FC	209676	225645	196743	168271	140187	112456	85042
Contribution	597020	685580	685580	761360	761360	764240	764240
Breakeven	35.12	32.91	28.70	22.10	18.41	14.71	11.13
Average BEP	23						

REPAYMENT SCHEDULE					
Year	Gross surplus	Interest	Principal	Total Repayment	Surplus
1st	473,020	108,826	-	108,826	364,194
2nd	561,580	129,987	219,851	349,838	211,742
3rd	561,580	105,803	219,851	325,655	235,925
4th	637,360	81,620	219,851	301,471	335,889
5th	637,360	57,436	219,851	277,287	360,073
6th	640,240	33,253	219,851	253,104	387,136
7th	640,240	9,069	219,851	228,920	411,320
		<b>525,994</b>	<b>1,319,108</b>	<b>1,845,102</b>	<b>2,306,278</b>

EQUAL QUARTERLY INSTALMENT TABLE							
Loan Amount		<b>1,319,108</b>					
Loan Term (Years)		6					
Payments Per Year		4					
Rate of Interest		11					
EQI		54,963					
Year	Quarter	OB	TL repayment	CB	Interest payment	Annual Interest payment	Annual TL repayment
1st Year	Apr-June	-	-	-	0		
	July-Sep	-	-	1,319,108	36,275		
	Oct-Dec	1,319,108	-	1,319,108	36,275		
	Jan-Mar	1,319,108	-	1,319,108	36,275	<b>108,826</b>	-
2nd Year	Apr-June	1,319,108	54,963	1,264,145	34,764		
	July-Sep	1,264,145	54,963	1,209,182	33,253		
	Oct-Dec	1,209,182	54,963	1,154,219	31,741		
	Jan-Mar	1,154,219	54,963	1,099,256	30,230	<b>129,987</b>	<b>219,851</b>
3rd Year	Apr-June	1,099,256	54,963	1,044,293	28,718		
	July-Sep	1,044,293	54,963	989,331	27,207		
	Oct-Dec	989,331	54,963	934,368	25,695		

	Jan-Mar	934,368	54,963	879,405	24,184	<b>105,803</b>	<b>219,851</b>
4th Year	Apr-June	879,405	54,963	824,442	22,672		
	July-Sep	824,442	54,963	769,479	21,161		
	Oct-Dec	769,479	54,963	714,517	19,649		
	Jan-Mar	714,517	54,963	659,554	18,138	<b>81,620</b>	<b>219,851</b>
5th Year	Apr-June	659,554	54,963	604,591	16,626		
	July-Sep	604,591	54,963	549,628	15,115		
	Oct-Dec	549,628	54,963	494,665	13,603		
	Jan-Mar	494,665	54,963	439,703	12,092	<b>57,436</b>	<b>219,851</b>
6th Year	Apr-June	439,703	54,963	384,740	10,580		
	July-Sep	384,740	54,963	329,777	9,069		
	Oct-Dec	329,777	54,963	274,814	7,557		
	Jan-Mar	274,814	54,963	219,851	6,046	<b>33,253</b>	<b>219,851</b>
7th Year	Apr-June	219,851	54,963	164,888	4,534		
	July-Sep	164,888	54,963	109,926	3,023		
	Oct-Dec	109,926	54,963	54,963	1,511		
	Jan-Mar	54,963	54,963	-	-	<b>9,069</b>	<b>219,851</b>

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