

## MINI DAIRY MODEL PROJECT FOR TEN ANIMAL UNITS (BUFFALOES)

### PROJECT OUT LAY

1	Unit size	:	10 animals
2	Breed	:	Graded Murrah
3	State	:	Andhra Pradesh
4	Unit cost (Rs)	:	155,030
5	Bank loan (Rs)	:	131,700
6	Margin money (Rs)	:	23,330
7	Repayment period (yrs)	:	5
8	Interest rate (%)	:	13.5
9	BCR at 15% DF	:	1.53:1
10	NPW at 15% DF(Rs)	:	154,403
11	IRR (%)	:	>50

### A INVESTMENT COST

S.No.	Items	Specifications	Phy.units	Unit Cost (Rs./unit)	Total Cost (Rs.)
1	Cost of animals		10	8,200	8,200
2	Transportation cost of animals		10	300	3,000
3	Cost of construction of shed	Sq.ft.	650	55	35,750
4	Cost of Store cum office	Sq.ft.	200	100	20,000
5	Equipments (chaff cutter, milking pails, cans, technicians		10	500	5,000
6	Insurance		10	328	3,280
7	Fodder raising expenses @ Rs.3000/acre		2	3,000	6,000
8	Total cost				155,030
9	Margin money (15% of total cost)			Say	23255 23330
10	Bank loan (85% of total cost)			Say	131776 131700

## B TECHNO ECONOMIC PARAMETERS

i	Animals will be purchased in two batches at an interval of 5-6 months	
ii	Second/Third lactation animals within 30 days of calving will be purchased in first year	
iii	No. of acres of irrigated land for fodder production considered in the project. Green fodder will be produced on the farm. Fodder production expenses is considered in the cash flow analysis. During first year only two seasons are considered.	2
iv	In the first year the fodder production expenses are capitalised for one season (Rs. per acre per season) and manure is utilised for fodder production	3,000
v	It is assumed that the expenditure on calf rearing will nullify the income realised from its sale. However, the heifer will be retained on the farm and the old animals will be sold out.	
vi	No. of milch animals	10
vii	Cost of milch animals	8,200
viii	Transportation cost (Rs. per milch animal including followers)	300
ix	Civil structures:	
	a) Shed (sft. per milch animal)	65
	b) Store and office (sft)	200
x	Cost of construction	55
	a) Shed (Rs. per sft)	100
	b) Store and office	
xi	Cost of equipment (Rs per milch animals)	500
xii	Lactation period (days)	280
xiii	Dry period (days)	150
xiv	Milk yield (lts/day)	7
xv	Sale price of milk (Rs/ltr)	7.75
xvi	Income from sale of gunny bags (20 bags/tonne @ Rs.5/bag)	100
xvii	Expenditure on dry fodder for dry and lactation period requirement (kg/day)	5
	Cost (Rs/kg)	0.5
xviii	Expenditure on concentrates	4.5
	a) Requirement (kg/day)	1
	Lactation period	3.3
	Dry period	
	b) Cost (Rs/kg)	



xix	Veterinary aid/animal/year (Rs)	150
xx	Labour (Rs./month)	900
xxi	Insurance premium (%)	4
xxii	Cost of electricity, water & other overheads (Rs/animal)	200
xxiii	Depreciation(%)	5
	a) Sheds	10
	b) Equipment	
xxiv	Value of closing stock	4,100
xxv	Interest rate(%)	13.5
xxvi	Repayment period (years)	5

### C. Lactation Chart

S.No	Particulars		I	II	Years III	IV	V
<b>I</b>	<b>Lactation Days</b>						
a)	First batch		1,250	1,400	1,250	1,050	1,050
b)	Second batch		900	1,050	1,050	1,050	1,050
	<b>Total</b>		2,150	2,450	2,300	2,100	2,100
<b>II</b>	<b>Dry days</b>						
a)	First batch		550	400	550	750	750
	Second batch		-	750	750	750	750
	<b>Total</b>		550	1,150	1,300	1,500	1,500

### D CASH FLOW ANALYSIS

Sr.No	Particulars	I	II	Year III	IV	IV	
<b>I</b>	<b>Costs</b>						
1	Capital cost*	145,750					
2	Recurring cost						
a)	Green fodder raising expenses	12,000	18,000	18,000	18,000	18,000	
b)	Feeding during lactation period						
	Dry fodder	5,375	6,125	5,750	5,250	5,250	
	Concentrate	31,928	36,383	34,155	31,185	31,185	
	<b>Total</b>	37,303	42,508	39,905	36,435	36,435	
c)	Feeding during dry period						
	Dry Fodder	1,375	2,875	3,250	3,750	3,750	
	Concentrate	1,815	3,795	4,290	4,950	4,950	
	<b>Total</b>	3,190	6,670	7,540	8,700	8,700	

d)	Veterinary aid & breeding cover	1,125	1,500	1,500	1,500	1,500	
e)	Cost of electricity & water	1,500	2,000	2,000	2,000	2,000	
f)	Insurance	3,280	3,280	3,280	3,280	3,280	
g)	Labour cost	10,800	10,800	10,800	10,800	10,800	
	Total	188,868	52,678	50,945	49,503	48,635	
<b>II</b>	<b>BENEFITS</b>						
a)	Sale of milk	116,637	132,912	124,775	113,925	113,925	
b)	Sale of Gunny bags	1,023	1,218	1,165	1,095	1,095	
c)	Depreciated value of sheds	-				26,813	
d)	Depreciated value of equipments					2,500	
e)	Closing stock value					41,000	
	Total	117,660	134,130	125,940	115,020	185,333	
III	<b>DF @ 15%</b>	0.87	0.76	0.66	0.57	0.50	
IV	<b>DISCOUNTED COSTS AT 15%</b>	164,233	39,832	33,497	28,303	24,180	290,045
V	<b>DISCOUNTED BENEFITS AT 15%</b>	102,313	101,422	82,808	65,763	92,143	444,448
VI	<b>NPW @ 15%</b>	154,403					
VII	<b>BCR @ 15%</b>	1.53:1					
VIII	<b>DF @ 50%</b>	0.667	0.444	0.296	0.198	0.132	
IX	<b>NET BENEFITS</b>	-71,208	81,453	74,995	65,518	136,698	
X	<b>DISCOUNTED NET BENEFITS AT 50%</b>	47,472	36,201	22,221	12,942	18,001	41,893
XI	<b>IRR</b>	>50					

\* excludes the capitalised cost for fodder raising for three months and insurance for one year

#### E REPAYMENT SCHEDULE:

Bank Loan (Rs) - 131700

Interest rate(%) - 13.5

Capital recovery factor - 0.287

Year	Income	Expenses	Gross surplus	Equated annual installment	Net surplus
I	117,660	33,838	83,823	37,798	46,025
II	134,130	52,678	81,453	37,798	43,655
III	125,940	50,945	74,995	37,798	47,197
IV	115,020	49,503	65,518	37,798	27,720
V	115,020	48,635	66,385	37,798	28,587

### Housing Space Requirements for Crossbred cattle

Age-group	Manger Space (mtr.)	Standing or covered area (sq.mtr.)	Open Space(sq.mtr.)
4-6 months	0.2-0.3	0.8-1.0	3.0-4.0
6-12 months	0.3-0.4	1.2-1.6	5.0-6.0
1-2 years	0.4-0.5	1.6-1.8	6.0-8.0
Cows	0.8-1.0	1.8-2.0	11.0-12.0
Pregnant cows	1.0-1.2	8.5-10.0	15.0-20.0
Bulls*	1.0-1.2	9.0-11.0	20.0-22.0

\*To be housed individually

### Feeding Schedules for Dairy Animals

(Quantity in Kgs.)

S.No.	Type of animal	Feeding during	Green Fodder	Dry Fodder	Concentrate
1	2	3	4	5	6
(A)	CROSSBRED COW				
a)	6 to 7 litres milk per day	Lactation days	20 to 25	5 to 6	3.0 to 3.5
		Dry days	15 to 20	6 to 7	0.5 to 1.0
b)	8 to 10 litres milk per day	Lactation days	25 to 30	4 to 5	4.0 to 4.5
		Dry days	20 to 25	6 to 7	0.5 to 1.0
(B)	BUFFALOES				
a)	Murrah (7 to 8 litres milk per day)	Lactation days	25 to 30	4 to 5	3.5 to 4.0
		Dry days	20 to 25	5 to 6	0.5 to 1.0
b)	Mehasana (6 to 7 litres milk per day)	Lactation days	15 to 20	4 to 5	3.0 to 3.5
		Dry days	10 to 15	5 to 6	0.5 to 1.0
c)	Surti (5 to 6 litres milk per day)	Lactation days	10 to 15	4 to 5	2.5 to 3.0
		Dry days	5 to 10	5 to 6	0.5 to 1.0

**Programme for vaccination of farm animals against contagious diseases**

Sr. No.	Name of disease	Type of vaccine	Type of vaccination	Duration of immunity	Remarks
1	2	3	4	5	6
1	Anthrax (Gorhi)	Spore vaccine	Once in an year premonsoon vaccination	One season	-
2	Black Quarter (Sujab)	Killed vaccine	- do -	- do -	-
3	Haemorrhagic Septicaemia (Galgotu)	Ocladjuvant vaccine	- do -	- do -	-
4	Brucellosis (Contagious abortion)	Cotton strain 19 (live bacteria)	At about 6 months of age	3 or 4 calvings	To be done only in infected herds
5	Foot and Mouth disease (Muhkhar)	Polyvalent tissue culture vaccine	At about 6 months of age with booster dose 4 months later	One season	After vaccination repeat vaccination every year in Oct./Nov.
6	Rinderpest (Mata)	Lapinised avianised vaccine for exotic and crossbred catte, caprinised vaccine for zebu cattle.	At about 6 months of age	Life long	It is better to repeat after 3 to 4 years

**Note: The above mentioned is only a model project report. For more accurate figures do contact us.**

**SUPPLIER OF TOTAL SOLUTION FOR THE FARMING INDUSTRY.**