

Cattle Farm with 20 cross bred cows: Project

Assumptions

1. The cost of land for the project is not considered.
2. Inter-calving period of 390 days (300 lactating days and 90 dry days)
3. Provision for silage bunker & mister set
4. Change in market price of the animals assumed in following manner
 1. Animals in 1st lactation: No change
 2. Animals in 2nd lactation: +5%
 3. Animals in 3rd lactation: -5%
 4. Animals in 4th lactation: -10%
 5. Animals in 5th lactation: -30%
 6. Animals in 6th lactation: -50%
 7. Animals in 7th lactation: -70%
5. Once the young animal, reared within the herd that is ready to calve, would replace the oldest animal.
6. The animals apart from 1st, 2nd or 3rd lactations are assumed to be sold off to maintain constant herd size.
7. Required land is available for cultivating green fodder for animals.

8. For lactating animals, total dry matter of feed and fodder is assumed to be in the range of 3.5-4 kg per 100 kg body weight.
9. For dry animals, total dry matter of feed and fodder is assumed to be around 2.5 kg per 100 kg body weight.
10. The project is considered as on-going and therefore, terminal values of assets are not considered.
11. Male calves are assumed to be sold off.
12. Price assumptions are on average basis and would vary region to region
13. Provision for any taxation has not been made
14. Of total 20 cows purchased
 - 10 cows are of 1st lactation having yield of 15 litres/ day, costing ₹ 60,000/ animal
 - 6 cows are of 2nd lactation having yield of 18 litres/ day, costing ₹ 63,000/ animal
 - 4 cows are of 3rd lactation having yield of 17 litres/ day, costing ₹ 60,000/ animal
15. Of 20 animals, 10 are assumed to be purchased at the beginning of the project and rest after 6 months
16. Provision for machine operated chaff cutter
17. Provision of milking machine

Project Details (indicative) for 20 Cow Farm

Land requirement for cattle shed, storage and silage: Sq. ft 4150

Project cost

Item	Amount (₹)
Cattle shed for adult animals	840,000
Cattle shed for calves	280,000
Cattle shed for heifers	490,000
Silage bunker	75,000
Construction for storage area	233,340
Animals	1,246,000
Equipment	106,000
Contingency fund	65,410
Total Project cost	3,335,750

Fixed cost (₹)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Depreciation of cattle shed	184,334	184,334	184,334	184,334	184,334	184,334	184,334
Depreciation of equipment	10,600	10,600	10,600	10,600	10,600	10,600	10,600
Relative change in value of herd	-18,000	-126,000	-12,000	57,000	114,000	0	0
Interest on capital investment	400,290	400,290	400,290	400,290	400,290	400,290	400,290
Total fixed cost	577,224	469,224	583,224	652,224	709,224	595,224	595,224

Variable cost (₹)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Green fodder cultivation	93,000	93,000	93,000	93,000	93,000	93,000	93,000
Green fodder cost	0	0	0	0	0	0	0
Dry fodder cost	287,808	438,000	525,600	595,680	595,680	595,680	595,680
Concentrate cost	343,952	491,330	542,430	583,310	583,310	583,310	583,310

Mineral mixture cost	30,564	44,220	49,695	54,075	54,075	54,075	54,075
Labour charges	120,000	120,000	120,000	120,000	120,000	120,000	120,000
Insurance charges	48,240	48,240	48,240	48,240	48,240	48,240	48,240
Veterinary & breeding expenses	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Electricity & water charges	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Transportation cost for milk sale	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Minor repair of building/ equipments	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Interest on working capital	13,553	14,576	15,050	15,429	15,429	15,429	15,429
Total variable cost	1,009,117	1,321,366	1,466,015	1,581,734	1,581,734	1,581,734	1,581,734

Income (₹)

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Milk	1,708,240	2,400,413	2,217,925	2,070,531	2,168,794	2,323,206	2,323,206

Gunny bags	4,910	7,020	7,750	8,330	8,330	8,330	8,330
Sale of animals	4,500	4,500	4,500	166,500	322,500	355,500	511,500
Sale of dung/ manure	25,200	33,600	33,600	33,600	33,600	33,600	33,600
Total receipt	1,742,850	2,445,533	2,263,775	2,278,961	2,533,224	2,720,636	2,876,636
PBDIT (Operating Profit) (₹)	733,733	1,124,166	797,760	697,227	951,489	1,138,902	1,294,902
Net Profit (₹)	156,509	654,942	214,536	45,003	242,265	543,678	699,678
IRR	19.8%						
ROI	23.4%						