

BUSINESS PLAN

INTENSIVE DAIRY CATTLE

Executive Summary

Business name	
Business type	
Location	
Herd size	
Target market	
Ownership structure	
Start Date	

Executive Summary

Vision: To be a leading provider of high-quality milk and dairy products through sustainable and innovative dairy farming practices.

Mission: To produce safe, nutritious milk year-round through an indoor production system that emphasizes animal welfare, efficiency, and environmental stewardship.

Market Analysis

1. Industry

- Global dairy demand is growing, especially for value-added products.
- Urbanization increases demand for consistent milk supply, favoring indoor systems.
- Indoor farming provides biosecurity, consistent productivity, and climate control.

2. Target Customers

- Milk processors (bulk buyers)
- Urban retailers (supermarkets and hotels)
- Niche consumers (For example, organic, certified sustainable.)

3. Competitive Advantage

- Year-round milk production regardless of weather
- Higher hygiene standards
- Potential for value-added processing (e.g., yogurt, cheese)
- Sustainable practices
- Maximised animal welfare

Farm Design and Facilities

Land Requirement

Minimum of 2–3 acres for infrastructure + adjacent land for silage production or leasing arrangements.

Facilities

- Free-stall barn (loose housing system)
 - 120 stalls (100 cows + buffer)
 - Sand bedding or mattresses
- Milking parlor: 2×8 herringbone or rotary system

- Milk storage room: 2000–3000 L cooling tank
- Feed storage: TMR (Total Mixed Ration) storage, silage bunkers
- Calf pens: Individual hutches or group pens
- Heifer barn
- Waste management: Slurry pit, composting area, or biogas unit
- Office & staff quarters
- Water system: Borehole + storage tanks

Herd Composition

Type	Size
Lactating cows	100
Dry cows	10-15
Heifers	25-30
Calves	20-25
Bulls (if necessary)	0-2 (otherwise use AI* exclusively)

**AI - Artificial Insemination*

Dairy Production System

- Milking frequency: 2–3 times daily
- Milk yield: Average 25–30 liters/cow/day = ~2,750 liters/day
- Annual milk output: ~1,000,000 liters
- Breeding: Artificial Insemination (AI) using elite semen
- Health management: Routine vaccinations, deworming, mastitis control
- Record keeping: Digital farm management software

Feeding System

Feed Components

- Forage: Maize silage, hay, grass
- Concentrates: Dairy meal (16–18% CP), mineral mix
- By-products: Brewer's grain, cottonseed, molasses
- Supplements: Vitamin-mineral premix

Feeding System

- Total Mixed Ration (TMR)
- Individual feeding during milking (optional)

Estimated Feed Cost

- \$2–3 per cow/day = \$200–\$300/day = \$6,000–\$9,000/month

Staffing

- Farm Manager (1 position)
Oversees all operations.
 - Herdsman
Feeding, animal care, milking, barn hygiene
 - Milking Technician (if necessary)
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Focus on milking and udder hygiene

- Veterinarian (part time)
- Nutritionist (part time consultant)
- Accountant and Admin

Finances, reporting, payroll, sales, taxes, procurement, record keeping and other administrative roles

Training and Continuous Improvement

- Animal welfare
- Hygiene & milk handling
- Health detection & reproduction
- Record keeping

Improved Sustainability

- **Manure use:** Compost or biogas production
- **Water recycling:** Cleaning and irrigation
- **Energy:** Solar power + grid backup
- **Carbon reduction:** Reforestation offsets, enteric methane reduction through feed additives

Financial Planning

Startup Capital Expenditure

Item	Estimated cost in USD
Buildings & barn setup	\$150,000
Milking system & storage tanks	\$40,000
Animal purchase (100 cows)	\$150,000
Equipment (TMR, tractor)	\$30,000
Feed storage & silos	\$20,000
Calf and heifer facilities	\$15,000
Water system	\$10,000
Office & computer systems	\$5,000
TOTAL CAPITAL EXPENSES	\$420,000

Operating Expenses (Annual)

Item	Estimated cost (USD)
Feed & supplements	\$90,000
Salaries & wages	\$60,000
Veterinary & breeding	\$10,000
Utilities	\$12,000
Maintenance & repairs	\$8,000
Transportation & logistics	\$5,000
Insurance & admin costs	\$5,000
TOTAL OPERATING COSTS	\$190,000

Estimated Revenue

1,000,000 liters/year × \$0.50/liter = \$500,000

Estimated Net Profit

Gross profit = \$500,000 – \$190,000 = \$310,000

ROI on CAPEX in 1.5–2 years (excluding depreciation, taxes)

Risk Management

- Disease Outbreaks: Vaccination, biosecurity, isolation pens
- Feed shortages: On-farm silage, contracts with suppliers
- Price fluctuation: Long-term contracts with processors
- Power failures: Backup generator, solar energy
- Climate issues: Fully indoor to mitigate weather extremes

Expansion and Value Addition (Opportunities)

- On-farm pasteurization and packaging
- Yogurt and cheese processing
- Organic branding
- Agritourism and school visits
- Genetic improvement (embryo transfer)