

Budget Guidelines for a 120 Cow Dairy Enterprise Based on 100 Kgs of Daily Butterfat (BF) Quota

Date: November, 2005

The primary objective of this publication is to provide a budget format for determining costs to operate a dairy enterprise. The case herd used in this budgeting guide is larger than average and of a freestall/parlour design; however, the budgeting format can be applied to any Manitoba dairy. Adjustments to this guide due to herd size, production level and facility type will be necessary when applying the cost figures to more accurately reflect your enterprise.

In addition to the hard copy budgeting guidelines for both a dairy enterprise and raising replacement heifers, an Excel spreadsheet program of each is available free and can be downloaded from the Manitoba Agriculture, Food and Rural Initiatives web site.

All feeds including forages, concentrates and supplements are priced at current market values. By doing this, consistency is maintained in how key inputs (i.e. feeds; replacement heifers) are expensed and included in the dairy budget. The cost figures listed in this budget guideline are estimates based on accepted industry practices and current market conditions.

Disclaimer: This budget is only a guide and is not intended as an in-depth study of the cost of production of the Manitoba dairy industry. Interpretation and utilization of this information is the responsibility of the user. No liability for decisions based on this publication is assumed. If you require assistance with developing your individual budget, please contact your local MAFRI office.

Summary of Dairy Production Costs - November, 2005

A. Operating Costs	<u>\$/COW</u>	<u>\$/HL</u>	<u>Your Farm</u>
1. Feed Costs:			
1.01 Lactating Cows			
1.011 TMR Silage	\$707.54	\$7.78	_____
1.012 TMR Grain Mix	\$694.86	\$7.64	_____
1.013 TMR Salt,Min & Vitamins	\$33.29	\$0.37	_____
1.02 Dry Cows			
1.021 Far Away	\$155.93	\$1.71	_____
1.022 Close Up	<u>\$31.58</u>	<u>\$0.35</u>	_____
Total Feed Cost	\$1,623.20	\$17.85	_____
2. Other Operating Costs:			
2.01 Milk Recording & Registrations	\$40.70	\$0.45	_____
2.02 Bedding	\$100.00	\$1.10	_____
2.03 Vet. Medicine & Supplies	\$179.17	\$1.97	_____
2.04 Breeding Costs	\$55.00	\$0.60	_____
2.05 Dairy Supplies	\$100.00	\$1.10	_____
2.06 Marketing & Transportation	\$357.63	\$3.93	_____
2.07 Operating, Repair & Maintenance	\$175.58	\$1.93	_____
2.08 Utilities	\$123.33	\$1.36	_____
2.09 Insurance	\$53.44	\$0.59	_____
2.10 Manure Removal	\$73.00	\$0.80	_____
2.11 Herd Replacement	\$226.25	\$2.49	_____
2.12 Administrative Costs	\$41.67	\$0.46	_____
2.13 Property Taxes	\$83.93	\$0.92	_____
2.14 Miscellaneous	<u>\$20.00</u>	<u>\$0.22</u>	_____
Subtotal Operating Costs	\$3,252.90	\$35.77	_____
2.15 Operating Interest	<u>\$8.13</u>	<u>\$0.09</u>	_____
Total Operating Costs	\$3,261.03	\$35.86	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings & Storage	\$366.96	\$4.03	_____
3.02 Machinery & Equipment	\$86.75	\$0.95	_____
4. Investment			
4.01 Land, Buildings & Storage	\$174.72	\$1.92	_____
4.02 Machinery & Equipment	\$24.93	\$0.27	_____
4.03 Livestock	<u>\$56.00</u>	<u>\$0.62</u>	_____
Total Fixed Costs	\$709.36	\$7.79	_____
TOTAL OPERATING AND FIXED COSTS	\$3,970.39	\$43.65	_____
C. Labour Cost	\$1,095.50	\$12.04	_____
TOTAL COST OF PRODUCTION	\$5,065.89	\$55.68	_____

Assumptions

A. Herd Management Profile

Breed of Herd	Holstein
Herd Identification	Registered
On a DHI Milk Recording Program	Yes
Herd Size:	
Total Lactating & Dry	120 Cows
Lactating Cows	95 Cows
Dry Cows	25 Cows
Milking Herd Composition:	
1st Lactation Animals (26% of herd)	31 Cows
2nd Lactation+ Animals (74% of herd)	89 Cows
Daily Kgs BF Quota Holding:	
Kgs BF for the herd	100.0 Kgs
Kgs BF/Lactating Cow	1.05 Kgs
Performance Statistics for Milking Herd:	
Litres Milk/Cow/Lactation Period	9,100 Litres
Kgs BF/Cow/Lactation Period	328 Kgs
Kgs BF/hl Milk	3.60 Kgs
Kgs Protein/hl Milk	3.30 Kgs
Average Calving Interval	13.5 Months
Average Days Lactation	317 Days
Average Days Dry	88 Days
Average Milk Bacteria Count (PLC)	<7,500
Average Milk Somatic Cell Count (SCC)	<150,000
Average Dry Cow Bodyweight (lbs)	1,485 lbs
Average Lactating Cow Bodyweight (lbs)	1,375 lbs
Other Herd Management Parameters:	
Regular Herd Health Program	Yes
Complete Herd Vaccination Program	Yes
Average % Culling Rate on Milking Herd	30.0%
Average Death Loss % on Milking Herd	4.0%
Calving %	94.0%
Market Value of Animals:	
Average Value of Milking Herd	\$1,400
Average Value of Replacement Stock	\$1,200
Average Value of Cull Cows (slaughter & dairy)	\$300
Average Value of Heifer Calves at 2 weeks	\$100
Average Value of Bull Calves at 2 weeks	\$25

B. Feed Requirements and Costs

Based on a 13.5-month calving interval (CI) comprised of a 317-day lactation period and a 88-day dry period.

Feed requirements and feed cost of production guideline calculations are based on meeting the nutrient requirements of a herd with an 9100 L/cow milk production average (or 29.4 L/day). A single total mixed ration (TMR) was balanced and fed for a production level 30% higher than the herd average daily production.

Nutrient Description of Forage

	<u>Lactating Cows</u>	<u>Dry Cows</u>
Dry Matter	40 %	85 %
Net Energy of Lactation	1.45 Mcal/kg	1.25 Mcal/kg
Total Digestible Nutrients	64 TDN	57 TDN
Crude Protein	20 CP	12 CP
Acid Detergent Free	30 ADF	40 ADF
Neutral Detergent Free	40 NDF	55 NDF
Relative Feed Value	150 RFV	100 RFV

Approximate dry matter (DM) equivalents for hay, legume silage and corn silage

1.0 tonne of 85% DM hay @	\$85.00 tonne
= 2.1 tonne of 40% DM legume silage @	\$40.00 tonne
= 2.4 tonne of 35% DM corn silage @	\$35.00 tonne

Lactating Cows

Assuming a body weight of 1375 lbs producing 9100 L milk/lactation with a composition of 3.6 kgs BF, 3.30 kgs Protein and 9.00 kgs Solids Non-Fat (SNF)/hl of milk.

<u>Lactating Cows</u>	<u>\$/kg</u>	<u>\$/tonne</u>	<u>Kgs</u>	<u>Days on</u>	<u>TMR Storage</u>	
			<u>Consumed</u>		<u>Feed</u>	<u>Loss %</u>
TMR Silage		\$60	32.4	317	5	10
TMR Grain Mix		\$160	13.0	317	5	0
TMR Salt, Min & Vit	\$0.40	\$400	0.25	317	5	0
		\$90.34	45.7			

Dry Cows

Average body weight of 1485 lbs with a dry period length of 88 days.

Far Away Dry Cows (from drying off to 16 days before calving)

	<u>\$/kg</u>	<u>\$/tonne</u>	<u>Kgs Consumed Per Cow/Day</u>	<u>Days on Feed</u>	<u>Storage/ Feeding Loss %</u>
Forage (Hay)		\$110	13.0	73	20
Dry Cow Grain Mix		\$210	2.0	73	0

Close-Up Dry Cows (from 15 days prior to calving up to calving)

	<u>\$/kg</u>	<u>\$/tonne</u>	<u>Kgs Consumed Per Cow/Day</u>	<u>Days on Feed</u>	<u>Storage/ Feeding Loss %</u>
Forage (Hay)		\$110	4.0	15	20
Dry Cow Grain Mix		\$210	4.2	15	0
TMR Lactating Ration		\$90.34	7.0	15	10

C. Replacement Cost

	<u>Heifers</u>	<u>Bulls</u>
Calves Born	56	56
Transfer % to Heifer Enterprise	100.0%	100.0%
Mortality on Calves	4.0%	4.0%
Available for sale	54	54
Calf Value	\$100	\$25
replacement heifer number/year	46	
Milk Herd Culling Rate (includes 4% death loss)		30.0%
Death Loss on Milk Herd		4.0%
Cull Cows sold (dairy & slaughter)		31
Value of Cull Cows sold for dairy & slaughter		\$300.00

D. Herd Health and Veterinary Medicine

The herd is enrolled on a scheduled herd health veterinary program with reproductive and routine health screening done each month.

Drugs, vaccines, vet supplies	\$10,000.00
Regular Herd Health Program	
Total Hours/Visit	3.00
Number of Yearly Visits	12
Charge per Hour	\$135.00
Mileage allowance per kilometer	\$2.00
Emergency Calls, Surgeries & Hoof Trimming	\$4,000.00
Number of Yearly Visits	10
Mileage allowance per kilometer	\$2.00
Total Kilometers (one way trip)	60

Other Operating Costs

Milk Recording & Registration

Herd Fee	payments	2	
	\$/payment	\$100	\$200.00
Call Fee	# of tests	10	
	\$/test	\$46.92	\$469.20
Milking Cow Fee	# of tests	9	
	\$/test	\$2.45	\$2,646.00
Hourly Fee	# of tests	10	
	hours	2	
	\$/test	\$26	\$520.00
SCC Fee (Option)	# of tests	9	
	\$/cow	\$0.30	\$324.00
Registration fees/head		\$14.00	\$5.37
Breed Association fee total			\$80.00

Bedding

Number of Tonnes/Cow/Year	4.00
Cost per Tonne	\$25.00

Breeding

Price/Vial of Semen	\$25.00
Service Charge per Visit	\$0.00
Number of Services/Conception	2.20

Dairy Supplies

Chlorine, Filters, Soap, Acid, Udder Wash, Teat Dip, etc.	(\$/year)	\$12,000.00
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Transportation, Administration

Transportation (\$/hl)		\$2.08
MMP Administration (\$/hl)		\$0.680
Product promotion fee (\$/hl)		\$1.140
DHI Fee (\$/hl)		\$0.030
Volume Charge (\$/hl)		\$0.00
Stop Charge every 2nd day	\$0.00	\$0.00

Operating, Maintenance & Repairs

Annual Operating (Fuel) Cost		\$6,000.00
Annual Repairs & Maintenance		
Rate on building investment	1.0%	\$9,630
Rate on machinery investment	4.0%	\$5,440

Utilities

Hydro		\$13,000.00
Telephone Costs		\$1,800.00

Insurance

Cost per \$100 Capital Invested in		
a). Livestock		\$0.50
b). Building & Equipment		\$0.50
b). Business Interruption		\$0.45
Milk Price/hl		\$0.60
Estimated operating costs per hl		\$37.00
Additional Coverage for liability (\$/yr)		\$48.00

Manure Removal

Daily manure produced (gallons/cow)		20
Removal cost \$/gallon		0.01

Annual Cost for Removal **\$8,760.00**

Administrative Costs

Total yearly expense including expenses relating to farm records & admin. **\$5,000.00**

Property Taxes

Dairy Barn

Value **\$963,000**

Percentage taxed **30.0%**

Mill rate **0.031201**

House

Value **\$60,000**

Percentage taxed **45.0%**

Mill rate **0.039151**

Miscellaneous

Small tools, hardware etc. **\$2,400**

Operating Interest Rate **6.0%**

Investment Rate **4.0%**

LABOR COSTS

Hours/Cow/Year **77**

Hourly Rate **\$14.00**

Dairy Relief Milker Cost **\$2,100**

CAPITAL INVESTMENT
Buildings, Equipment, Machinery & Cows
Buildings & equipment assumed new for a 120 cow herd

	<u>Total</u>	Salvage Value (%)	Useful Life (YRS)
<u>Land, Buildings & Storage</u>			
Land	\$5,000		
Barn	\$300,000	10%	20
Milking Parlour	\$375,000	10%	20
Dry Cow/Heifer Facility	\$40,000	10%	20
Earthen Manure Storage	\$60,000	0%	25
Bulk Tank	\$50,000	10%	15
Bunker Silo	\$95,000	0%	20
Hay Shed	\$18,000	10%	20
Steel Grain Bin	\$20,000	10%	20
Total Buildings	\$963,000		
<u>Barn Equipment</u>			
Portable Mixer Wagon	\$35,000	10%	15
Roller Mill	\$6,000	10%	15
Other Equipment	\$20,000	0%	15
Total	\$61,000	10%	15
<u>Machinery</u>			
Truck (dairy portion)	\$25,000	10%	10
Tractor (dairy portion)	\$50,000	10%	10
Total	\$75,000	10%	10
Total Building, Equipment, Machinery	\$1,099,000		
per cow	\$9,158		
Dairy Cow Investment	\$168,000		
per cow	\$1,400		
Total Capital Investment	\$1,267,000		
per cow	\$10,558		
Quota Required			

DAIRY COST OF PRODUCTION WORKSHEET

A. OPERATING COSTS

Your Farm

1. Feed Costs:

1.01 Lactating Cows

1.011 TMR Silage

	32.4	kgs silage consumed/cow/day	
+	1.6	kg TMR silage wastage loss	
+	3.2	kg TMR silage storage loss	
x	317	days on silage	
÷	1000	kgs/tonne	
<u>x</u>	<u>\$60.00</u>	<u>/tonne</u>	
=	\$707.54	/cow/year	

1.012 TMR Grain Mix

	13.0	kgs grain mix/cow/day	
+	0.7	kg TMR grain mix wastage loss	
x	317	days on grain mix	
÷	1000	kgs/tonne	
<u>x</u>	<u>\$160.00</u>	<u>/tonne</u>	
=	\$694.86	/cow/year	

1.013 Salt, Min & Vitamins

	0.25	kgs salt,min,vit/cow/day	
+	0.0125	kg TMR salt/min/vit wastage loss	
x	317	days on salt,min,vit	
<u>x</u>	<u>\$0.40</u>	<u>\$/kg</u>	
=	\$33.29	/cow/year	

1.02 Dry Cows

1.021 Far Away Dry Cow

	13.0	kgs forage consumed/cow/day	
+	2.6	kg storage/wastage loss	
x	73	days on forage	
÷	1000.0	kgs/tonne	
<u>x</u>	<u>\$110.00</u>	<u>/tonne</u>	
=	\$125.27	/cow/year	

Dry Cow Grain Mix	2.0	kgs dry cow grain mix/cow/day	_____
+	0.00	kg storage/wastage loss	_____
x	73	days on grain mix	_____
÷	1000.0	kgs/tonne	_____
<u>x</u>	<u>\$210.00</u>	<u>/tonne</u>	_____
=	\$30.66	/cow/year	_____
Total	=	\$155.93	/cow/year

1.022 Close Up Dry Cow

Forage	4.0	kgs forage consumed/cow/day	_____
+	0.80	kg storage/wastage loss	_____
x	15	days on forage	_____
÷	1,000	kgs/tonne	_____
<u>x</u>	<u>\$110.00</u>	<u>/tonne</u>	_____
=	\$7.92	/cow/year	_____

Dry Cow Grain Mix	4.2	kgs dry cow grain mix/cow/day	_____
+	0.00	kg storage/wastage loss	_____
x	15	days on grain mix	_____
÷	1,000	kgs/tonne	_____
<u>x</u>	<u>\$210.00</u>	<u>/tonne</u>	_____
=	\$13.23	/cow/year	_____

TMR Lactating Ration	7.0	kgs TMR mix/cow/day	_____
+	0.70	kg storage/wastage loss	_____
x	15	days on grain mix	_____
÷	1,000	kgs/tonne	_____
<u>x</u>	<u>\$90.34</u>	<u>/tonne</u>	_____
=	\$10.43	/cow/year	_____

Total	=	\$31.58	/cow/year
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2. Other Operating Costs:**2.01 Milk Recording & Registration (Publishable (P) 10 AP; 2 hours/milking)**

With each cow having a dry period of 6 to 8 weeks, this budget assumes that all cows will receive 9 of the 10 DHI tests conducted per year.

herd fee +	\$200.00	semi annual fee \$100 x 2	_____
call fee +	\$469.20	call fee \$46.92 x 10 tests	_____
milking cow fee +	\$2,646.00	9 tests x 120 cows x \$2.45/cow	_____
hourly fee +	\$520.00	10 tests x 2 hours x \$26/hour	_____
SCC fee +	\$324.00	9 tests x 120 cows x \$0.30/cow	_____
registration fee +	\$644.40	\$5.37/head x 46 heifers	_____
association fee +	\$80.00	breed association fee	_____
÷	<u>120</u>	<u>milking cows</u>	_____
=	\$40.70	/cow/year	_____

2.02 Bedding

	4.00	tonnes/cow/year	_____
x	<u>\$25.00</u>	<u>/tonne</u>	_____
=	\$100.00	/cow/year	_____

2.03 Veterinary Medicine & Supplies

Drugs/Vaccines/ Vet Supplies	\$10,000.00	total for herd	_____
Herd Health	\$135.00	/hour charge	_____
x	<u>36</u>	<u>hours (12 visits x 3 hrs/visit)</u>	_____
=	\$4,860.00	total for herd	_____
Mileage(Herd Health	\$2.00	rate/km	_____
x	60	kilometers (one way)	_____
x	<u>12</u>	<u>visits</u>	_____
=	\$1,440.00	total for herd	_____
Emergency Calls =	\$4,000.00	total for herd	_____
Mileage (Emergency	\$2.00	rate/km	_____
x	60	kilometers (one way)	_____
x	<u>10</u>	<u>visits</u>	_____
=	\$1,200.00	total for herd	_____
Total	= \$21,500.00	sum of sub-totals	_____
÷	<u>120</u>	<u>milking cows</u>	_____
=	\$179.17	/cow/year	_____

2.04 Breeding Costs

Semen		\$25.00	/vial of semen	_____
	X	<u>2.2</u>	<u>services/conception</u>	_____
	=	\$55.00	/cow/year	_____
Services		\$0.00	/visit service charge	_____
	X	<u>2.2</u>	<u>services/conception</u>	_____
	=	\$0.00	/cow/year	_____
Total	=	\$55.00	/cow/year	_____

2.05 Dairy Supplies

		\$12,000.00	total yearly cost	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$100.00	/cow/year	_____

2.06 Marketing & Transportation

		\$2.08	transportation (\$/hl)	_____
	+	\$0.680	MMP admin (\$/hl)	_____
	+	\$1.140	product promo (\$/hl)	_____
	+	<u>\$0.030</u>	<u>DHI fee (\$/hl)</u>	_____
	=	\$3.930	/hl	_____
	X	<u>91.0</u>	<u>hl/cow</u>	_____
	=	\$357.63	/cow/year	_____

2.07 Operating, Maintenance & Repairs

		\$6,000.00	annual fuel costs	_____
	+	\$9,630.00	building repairs,mtnce 1%	_____
	+	\$5,440.00	machinery repairs,mtnce 4 %	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$175.58	/cow/year	_____

2.08 Utilities

		\$13,000.00	hydro	_____
	+	\$1,800.00	telephone	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$123.33	/cow/year	_____

2.09 Insurance

Building & Equipment

	\$1,099,000	invest in bldg & equip	_____
÷	\$100.00	units of \$100	_____
x	\$0.50	insurance rate/\$100	_____
÷	<u>120</u>	<u>milking cows</u>	_____
=	\$45.79	/cow/year	_____

Herd

	\$1,400	/cow average value	_____
÷	\$100.00	units of \$100	_____
x	<u>\$0.50</u>	<u>insurance rate/\$100</u>	_____
=	\$7.00	/cow/year	_____

Business Interruption

	\$0.60	\$/hl (average price of milk)	_____
x	91	hl/cow (production/cow)	_____
÷	100	units of \$100	_____
x	<u>\$0.45</u>	<u>insurance rate/\$100</u>	_____
=	\$0.25	/cow/year	_____

Liability

	\$48.00	additional coverage	_____
÷	<u>120</u>	<u>milking cows</u>	_____
=	\$0.40	/cow/year	_____

Total = \$53.44 /cow/year _____

2.10 Manure Removal

	\$8,760.00	annual removal cost	_____
÷	<u>120</u>	<u>milking cows</u>	_____
=	\$73.00	/cow/year	_____

2.11 Herd Replacement

Purchases

	\$1,200.00	heifer market value	_____
x	<u>36</u>	<u># of heifers purchased</u>	_____
=	\$43,200.00	total heifer cost	_____

Cull revenues

	\$300.00	cull cow value	_____
x	<u>31</u>	<u># of cows culled</u>	_____
=	\$9,300.00	total	_____

Bull Sales		\$25.00	bull calf value	_____
	x	<u>54</u>	<u># of bull calves sold</u>	_____
	=	\$1,350.00	total	_____
Heifer sales		\$100.00	heifer calf value	_____
	x	<u>54</u>	<u>transferred to heifer enterprise</u>	_____
	=	\$5,400.00	total	_____
		\$43,200.00	total purchase cost	_____
	-	<u>\$16,050.00</u>	<u>total sales</u>	_____
	=	\$27,150.00	net replacement cost	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
Total	=	\$226.25	/cow/year	_____

2.12 Administrative Costs

		\$5,000.00	total admin. costs	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$41.67	/cow/year	_____

2.13 Property Taxes

		\$963,000	building value	_____
	x	30.0%	percent taxed	_____
	x	0.031201	mill rate	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$75.12	/cow/year	_____

		\$60,000.00	house value	_____
	x	45.0%	percent taxed	_____
	x	0.039151	mill rate	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$8.81	/cow/year	_____

Total	=	\$83.93	/cow/year	_____
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2.14 Miscellaneous (small tools, hardware,etc.)

		\$2,400.00	total cost	_____
	÷	<u>120</u>	<u>milking cows</u>	_____
	=	\$20.00	/cow/year	_____

2.15 Operating Interest (Operating Interest is paid monthly on one-half of the subtotal operating cost.)

	\$3,252.90	subtotal operating costs	_____
÷	12	months	_____
÷	2	average	_____
x	<u>6.0%</u>	<u>interest rate</u>	_____
=	\$8.13	/cow/year	_____

Capital Costs Buildings & Equipment Assumed New for a 120 Cow Herd

Buildings & Storage

Land - Assumed 10 acres @ \$500/acre.	\$5,000
Barn - 120 Stall Freestall Barn (86 ft x 139 ft) fully equipped (including site excavation, concrete, shell, electrical, ventilation, automatic scrapers, manure pump, water). 120 stalls @ \$2,500/stall	\$300,000
Milking Parlour - Double 8 Parallel Parlour (56 ft x 76 ft) & milkhouse fully equipped (site excavation, concrete, shell, electrical, water, milkers, vacuum pump, automatic crowd gates, automatic take-offs, milk meters, complete fencing for holding area)	\$375,000
Dry Cow/Heifer Facility - includes open front loafing shed (32x48x12), sloping concrete apron, 16 ft gates, 2 water drinkers, hydro, manure storage, fenceline concrete bunker, loading chute.	\$40,000
Earthen Manure Storage - 12 month capacity	\$60,000
Bulk Tank - (3,000 U.S. gallon) and compressor completely installed.	\$50,000
Bunker Silo - (130' x 75' x10')	\$95,000
Hay Shed - (50' x 64')	\$18,000
Steel Grain Bin	<u>\$20,000</u>
Total Land & Buildings	\$963,000

Barn Equipment

Portable Mixer Wagon	\$35,000
Roller Mill	\$6,000
Other Equipment	<u>\$20,000</u>
Total Equipment	\$61,000

Machinery

Truck (dairy portion)	\$25,000
Tractor (dairy portion)	<u>\$50,000</u>
Total Machinery	\$75,000

Total Building, Equipment, Machinery **\$1,099,000**

Dairy Cow Herd Investment **\$168,000**

Total Capital Investment **\$1,267,000**

B. FIXED COSTS

3. Depreciation:

$$\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$$

3.01 Buildings:

Barn		\$300,000	original value	_____
-		\$30,000	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$112.50	/cow/year	_____

Milking Parlour		\$375,000	original value	_____
-		\$37,500	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$140.63	/cow/year	_____

Dry Cow/Close Up Heifer Facility		\$40,000	original value	_____
-		\$4,000	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$15.00	/cow/year	_____

Manure Storage		\$60,000	original value	_____
-		\$0.00	salvage value	_____
÷		25	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$20.00	/cow/year	_____

Bulk Tank		\$50,000	original value	_____
-		\$5,000	salvage value	_____
÷		15	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$25.00	/cow/year	_____

Bunker Silo		\$95,000	original value	_____
-		\$0.00	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$39.58	/cow/year	_____
Hay Shed		\$18,000	original value	_____
-		\$1,800	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$6.75	/cow/year	_____
Steel Bins		\$20,000	original value	_____
-		\$2,000	salvage value	_____
÷		20	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$7.50	/cow/year	_____
Total	=	\$366.96	/cow/year	_____

3.02 Other Equipment & Machinery

Barn Equipment		\$61,000	original value	_____
-		\$6,100	salvage value	_____
÷		15	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$30.50	/cow/year	_____
Machinery		\$75,000	original value	_____
-		\$7,500	salvage value	_____
÷		10	years useful life	_____
÷		<u>120</u>	<u>cows</u>	_____
=		\$56.25	/cow/year	_____
Total	=	\$86.75	/cow/year	_____

4. Investment:

$$\frac{\text{Original Cost} + \text{Salvage Value}}{2} \times \text{Investment Rate}$$

4.01 Buildings:

Land		\$5,000	total value	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$1.67	/cow/year	_____

Barn		\$300,000	original value	_____
	+	\$30,000	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$55.00	/cow/year	_____

Milking Parlour		\$375,000	original value	_____
	+	\$37,500	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$68.75	/cow/year	_____

Dry Cow/Close Up Heifer Facility		\$40,000	original value	_____
	+	\$4,000	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$7.33	/cow/year	_____

Manure Storage		\$60,000	original value	_____
	+	\$0.00	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$10.00	/cow/year	_____

Bulk Tank		\$50,000	original value	_____
	+	\$5,000	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$9.17	/cow/year	_____

Bunker Silo		\$95,000	original value	_____
	+	\$0.00	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$15.83	/cow/year	_____

Hay Shed		\$18,000	original value	_____
	+	\$1,800	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$3.30	/cow/year	_____

Steel Bins		\$20,000	original value	_____
	+	\$2,000	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$3.67	/cow/year	_____

Total	=	\$174.72	/cow/year	_____
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4.02 Equipment & Machinery:

Barn Equipment		\$61,000	original value	_____
	+	\$6,100	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$11.18	/cow/year	_____

Machinery		\$75,000	original value	_____
	+	\$7,500	salvage value	_____
	÷	2	average	_____
	x	4.0%	investment rate	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$13.75	/cow/year	_____
Total	=	\$24.93	/cow/year	_____

4.03 Livestock:

		\$1,400	average value/cow	_____
	x	<u>4.0%</u>	<u>investment rate</u>	_____
	=	\$56.00	/cow/year	_____

C. Labour:

		77	hours/cow/year	_____
	x	<u>\$14.00</u>	<u>/hour</u>	_____
	=	\$1,078.00	/cow/year	_____
	+	\$2,100.00	Relief Milker	_____
	÷	<u>120</u>	<u>cows</u>	_____
	=	\$17.50	/cow/year	_____
	=	\$1,095.50	Total Labour	_____

For more information, contact your local Manitoba Agriculture and Food office.

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