



Guidelines for Estimating Dairy Cow Production Costs 2017

in Manitoba



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

Date: May, 2017

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. Note: the cost of Quota is not included in this budget.

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.

This tool is available as an Excel worksheet at: www.manitoba.ca/agriculture
or at your local [Manitoba Agriculture GO office](#).
[The Farm Machinery Custom and Rental Rate](#) is also available to help
determine machinery costs.

Note: This budget is only a guide and is not intended as an in-depth study of the cost of production of this industry. Interpretation and use of this information is the responsibility of the user. If you need help with a budget, contact your local Manitoba Agriculture GO Office.

Summary of Dairy Production Costs - May, 2017
Based on 100 kg BF Quota and 99 dairy cow herd

A. Operating Costs	<u>\$/Cow</u>	<u>\$/HL</u>	<u>Your Farm</u>
1. Feed Costs:			
1.01 Lactating Cows			
1.011 TMR Silage	\$517.50	\$5.28	_____
1.012 TMR Grain Mix	\$1,719.48	\$17.55	_____
1.013 TMR Salt,Min & Vitamins	\$38.01	\$0.39	_____
1.02 Dry Cows			
1.021 Far Away	\$201.04	\$2.05	_____
1.022 Close Up	<u>\$60.10</u>	<u>\$0.61</u>	_____
Total Feed Cost	\$2,536.13	\$25.88	_____
2. Other Operating Costs:			
2.01 Milk Recording & Registrations	\$38.39	\$0.39	_____
2.02 Bedding	\$90.00	\$0.92	_____
2.03 Vet. Medicine & Supplies	\$175.18	\$1.79	_____
2.04 Breeding Costs	\$90.00	\$0.92	_____
2.05 Dairy Supplies	\$199.49	\$2.04	_____
2.06 Marketing & Transportation	\$551.74	\$5.63	_____
2.07 Operating, Repair & Maintenance	\$291.62	\$2.98	_____
2.08 Utilities	\$173.10	\$1.77	_____
2.09 Insurance	\$167.53	\$1.71	_____
2.10 Manure Removal	\$160.60	\$1.64	_____
2.11 Herd Replacement	\$381.31	\$3.89	_____
2.12 Administrative Costs	\$50.51	\$0.52	_____
2.13 Property Taxes	\$169.08	\$1.73	_____
2.14 Miscellaneous	<u>\$26.26</u>	<u>\$0.27</u>	_____
Subtotal Operating Costs	\$5,100.94	\$52.07	_____
2.15 Operating Interest	<u>\$9.56</u>	<u>\$0.10</u>	_____
Total Operating Costs	\$5,110.50	\$52.17	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings & Storage	\$815.26	\$8.32	_____
3.02 Machinery & Equipment	\$182.43	\$1.86	_____
4. Investment			
4.01 Land, Buildings & Storage	\$244.54	\$2.50	_____
4.02 Machinery & Equipment	\$27.25	\$0.28	_____
4.03 Livestock	<u>\$56.25</u>	<u>\$0.57</u>	_____
Total Fixed Costs	\$1,325.73	\$13.53	_____
TOTAL OPERATING AND FIXED COSTS	\$6,436.23	\$65.70	_____
C. Labour Cost	\$1,124.75	\$11.48	_____
TOTAL COST OF PRODUCTION	\$7,560.98	\$77.17	_____

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Dairy Production Costs - Input

A. Herd Management Profile

Breed of Herd	Holstein
Herd Identification	Registered
On a DHI Milk Recording Program	Yes
Daily Kgs BF Quota Holding:	
Kgs BF for the herd	100.0 Kgs
Kgs BF/Lactating Cow	1.21 Kgs
Herd Size:	
Lactating Cows	83 Cows
Dry Cows	17 Cows
Total Lactating & Dry	99 Cows
Milking Herd Composition:	
1st Lactation Animals (26% of herd)	26 Cows
2nd Lactation+ Animals (74% of herd)	73 Cows
Performance Statistics for Milking Herd:	
Litres Milk/Cow/Lactation Period	9,800 Litres
Kgs BF/Cow/Lactation Period	377 Kgs
Kgs BF/hl Milk	3.85 Kgs
Kgs Protein/hl Milk	3.30 Kgs
Average Calving Interval	14.0 Months
Average Days Lactation	345 Days
Average Days Dry	85 Days
Average Milk Bacteria Count (IBC)	<10,000
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	\$2,500
Average Value of Replacement Stock	\$3,000
Average Value of Cull Cows (slaughter & dairy)	\$1,400
Average Value of Heifer Calves at 2 weeks	\$300
Average Value of Bull Calves at 2 weeks	\$50

B. Feed Requirements and Costs

Based on a 14-month calving interval (CI) comprised of a 345-day lactation period and a 85-day dry period.

Feed requirements and feed cost of production guideline calculations are based on meeting the nutrient requirements of a herd with an 9800 L/cow milk production average (or 31.5 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	14 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 87% DM hay @	\$120.00 tonne
= 3.1 tonne of 46% DM alfalfa balage @	\$50.00 tonne

Lactating Cows

Assuming a body weight of 1375 lbs producing 9800 L milk/lactation with a composition of 3.85 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 Consumed Per Cow/Day</u>	<u>Days on Feed</u>	<u>TMR Storage Loss %</u>	<u>Loss %</u>
TMR Silage		\$50	26.1	345	5	10
TMR Grain Mix		\$445	11.0	345	2	0
TMR Salt, Min & Vit	\$0.40	\$950	0.27	345	2	0
		\$172.77	37.4			

Dry Cows

Average body weight of 1485 lbs with a dry period length of 85 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)		\$120	13.0	70	20
Dry Cow Grain Mix		\$500	2.0	70	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)		\$120	4.0	15	20
Dry Cow Grain Mix		\$500	4.2	15	0
TMR Lactating Ration		\$172.77	7.0	15	10

C. Replacement Cost

	<u>Heifers</u>	<u>Bulls</u>
Calves Born	47	47
Transfer % to Heifer Enterprise	100.0%	0.0%
Mortality on Calves	4.0%	4.0%
Available for sale	45	47
Calf Value	\$300	\$50
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)		26
Value of Cull Cows sold for dairy & slaughter		\$1,400.00

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	\$8,500.00
Regular Herd Health Program	
Total Hours/Visit	2.00
Number of Yearly Visits	12
Charge per Hour	\$141.00
Mileage allowance per kilometer	\$0.85
Emergency Calls, Surgeries & Hoof Trimming	\$5,000.00
Number of Yearly Visits	6
Mileage allowance per kilometer	\$0.85
Total Kilometers (one way trip)	30

Other Operating Costs

Milk Recording & Registration : see also

<http://www.canwestdhi.com/fee%20calculator.htm>

Herd Fee	payments	2	
	\$/payment	\$125	\$250.00
Call Fee	# of tests	5	
	\$/test	\$57.50	\$287.50
Milking Cow Fee	# of tests	11	
	\$/test	\$2.55	\$2,316.93
Hourly Fee	# of tests	5	
	hours	2	
	\$/test	\$31	\$228.75
SCC Fee (Option)	# of tests	10	
	\$/cow	\$0.32	\$316.80
Registration fees/head		\$6.10	\$2.83
Breed Association fee total			\$120.00

Bedding

Number of Tonnes/Cow/Year	2.00
Cost per Tonne	\$45.00

Breeding

Price/Vial of Semen	\$36.00
Service Charge per Visit	\$0.00
Number of Services/Conception	2.50

Dairy Supplies

Chlorine, Filters, Soap, Acid, Udder Wash, Teat Dip, etc.	(\$/year)	\$19,750.00
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Transportation, Administration

Transportation (\$/hl)	\$2.78
DFM Administration (\$/hl)	\$1.280
Product promotion fee (\$/hl)	\$1.540
DHI Fee (\$/hl)	\$0.030
Volume Charge (\$/hl)	\$0.00
Stop Charge every 2nd day	\$0.00

Operating, Maintenance & Repairs

Diesel Fuel Cost	\$0.85 /litre
Machinery Fuel Costs - Feeding	
Tractor with Loader PTO hp	120
Tractor Hours Per Day (average)	2.25 hours
Annual Repairs & Maintenance	

Rate on building investment	1.00%	\$18,930
Rate on machinery investment	2.00%	\$4,360
Utilities		
Hydro	2,030 kWh per dairy cow @	\$0.0793 / kWh
Telephone Costs		\$1,200.00
Insurance		
Cost per \$100 Capital Invested in		
a). Livestock		\$0.70
b). Building & Equipment		\$0.70
b). Business Interruption		\$0.45
Milk Price/hl		\$0.79
Estimated operating costs per hl		\$40.00
Additional Coverage for liability (\$/yr)		\$50.00
Manure Removal		
Daily manure produced (gallons/cow)		22
Removal cost \$/gallon		\$0.020
Annual Cost for Removal		\$15,899.40
Administrative Costs		
Total yearly expense including expenses relating to farm records & admin.		\$5,000.00
Property Taxes		
Dairy Barn		
Value		\$1,600,000
Percentage taxed		30.0%
Mill rate		0.031201
House		
Value		\$100,000
Percentage taxed		45.0%
Mill rate		0.039151
Miscellaneous		
Small tools, hardware etc.		\$2,600
Operating Interest Rate		4.50%
Investment Rate		2.25%
LABOR COSTS		
Hours/Cow/Year		50
Hourly Rate		\$22.00
Dairy Relief Milker Cost		\$2,450

CAPITAL INVESTMENT
Buildings, Equipment, Machinery & Cows
 Buildings & equipment assumed new for a 99 cow herd

	<u>Total</u>	Salvage Value (%)	Useful Life (YRS)
<u>Land, Buildings & Storage</u>			
Land	\$100,000		
Barn	\$725,000	10%	20
Milking Parlour	\$725,000	10%	20
Dry Cow/Heifer Facility	\$50,000	10%	20
Earthen Manure Storage	\$175,000	0%	25
Bulk Tank	\$50,000	10%	15
Silage storage	\$30,000	0%	20
Hay Shed	\$18,000	10%	20
Steel Grain Bin	\$20,000	10%	20
Total Buildings	\$1,893,000		
<u>Barn Equipment</u>			
Portable Mixer Wagon	\$42,000	10%	15
Miscellaneous Machinery	\$10,000	0%	15
Total	\$52,000	10%	15
<u>Machinery</u>			
Other equipment (shredder)	\$22,000	10%	10
Truck (dairy portion \$60,000 @80%)	\$48,000	10%	10
Tractor & Loader (dairy portion \$120,000 @80%)	\$96,000	10%	10
Total	\$166,000	10%	10
Total Building, Equipment, Machinery per cow	\$2,111,000 \$21,323		
Dairy Cow Investment per cow	\$247,500 \$2,500		
Total Capital Investment per cow	\$2,358,500 \$23,823		

Dairy Production Cost Worksheet

A. OPERATING COSTS

Your Farm

1. Feed Costs:

1.01 Lactating Cows

1.011 TMR Silage

		26.1	kgs silage consumed/cow/day	_____
	+	1.3	kg TMR silage wastage loss	_____
	+	2.6	kg TMR silage storage loss	_____
	x	345	days on silage	_____
	÷	1000	kgs/tonne	_____
	<u>x</u>	<u>\$50.00</u>	<u>/tonne</u>	_____
	=	\$517.50	/cow/year	_____

1.012 TMR Grain Mix

		11.0	kgs grain mix/cow/day	_____
	+	0.2	kg TMR grain mix wastage loss	_____
	x	345	days on grain mix	_____
	÷	1000	kgs/tonne	_____
	<u>x</u>	<u>\$445.00</u>	<u>/tonne</u>	_____
	=	\$1,719.48	/cow/year	_____

1.013 Salt, Min & Vitamins

		0.27	kgs salt,min,vit/cow/day	_____
	+	0.0054	kg TMR salt/min/vit wastage loss	_____
	x	345	days on salt,min,vit	_____
	<u>x</u>	<u>\$0.40</u>	<u>\$/kg</u>	_____
	=	\$38.01	/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	70	days on forage	_____
	÷	1000.0	kgs/tonne	_____
	<u>x</u>	<u>\$120.00</u>	<u>/tonne</u>	_____
	=	\$131.04	/cow/year	_____

		2.0	kgs dry cow grain mix/cow/day	_____
	+	0.00	kg storage/wastage loss	_____
	x	70	days on grain mix	_____
	÷	1000.0	kgs/tonne	_____
	<u>x</u>	<u>\$500.00</u>	<u>/tonne</u>	_____
	=	\$70.00	/cow/year	_____

			Total	_____
	=	\$201.04	/cow/year	_____

1.022 Close Up Dry Cow

		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>\$120.00</u>	<u>/tonne</u>	
	=	\$8.64	/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>\$500.00</u>	<u>/tonne</u>	
	=	\$31.50	/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>\$172.77</u>	<u>/tonne</u>	
	=	\$19.96	/cow/year	
Total	=	\$60.10	/cow/year	

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	+	\$250.00	semi annual fee \$125 x 2	
call fee	+	\$287.50	call fee \$57.5 x 5 tests	
milking cow fee	+	\$2,316.93	11 tests x 99 cows x \$2.55/cow	
hourly fee	+	\$228.75	5 tests x 1.5 hours x \$30.5/hour	
SCC fee	+	\$316.80	10 tests x 99 cows x \$0.320/cow	
registration fee	+	\$280.17	\$2.83/head x 46 heifers	
association fee	+	\$120.00	breed association fee	
	÷	<u>99</u>	<u>milking cows</u>	
	=	\$38.39	/cow/year	

2.02 Bedding

		2.00	tonnes/cow/year	
	<u>x</u>	<u>\$45.00</u>	<u>/tonne</u>	
	=	\$90.00	/cow/year	

2.03 Veterinary Medicine & Supplies

Drugs/Vaccines/ Vet Supplies		\$8,500.00	total for herd	
Herd Health		\$141.00	/hour charge	
	<u>x</u>	<u>24</u>	<u>hours (12 visits x 2 hrs/visit)</u>	
	=	\$3,384.00	total for herd	
Mileage(Herd Health)		\$0.85	rate/km	
	x	30	kilometers (one way)	
	<u>x</u>	<u>12</u>	<u>visits</u>	
	=	\$306.00	total for herd	

Emergency Calls	=	\$5,000.00	total for herd	_____
Mileage (Emergency)		\$0.85	rate/km	_____
	x	30	kilometers (one way)	_____
	<u>x</u>	<u>6</u>	<u>visits</u>	_____
	=	\$153.00	total for herd	_____
Total	=	\$17,343.00	sum of sub-totals	_____
	<u>÷</u>	<u>99</u>	<u>milking cows</u>	_____
	=	\$175.18	/cow/year	_____

2.04 Breeding Costs

Semen		\$36.00	/vial of semen	_____
	<u>x</u>	<u>2.5</u>	<u>services/conception</u>	_____
	=	\$90.00	/cow/year	_____
Services		\$0.00	/visit service charge	_____
	<u>x</u>	<u>2.5</u>	<u>services/conception</u>	_____
	=	\$0.00	/cow/year	_____
Total	=	\$90.00	/cow/year	_____

2.05 Dairy Supplies

		\$19,750.00	total yearly cost	_____
	<u>÷</u>	<u>99</u>	<u>milking cows</u>	_____
	=	\$199.49	/cow/year	_____

2.06 Marketing & Transportation

		\$2.78	transportation (\$/hl)	_____
	+	\$1.280	MMP admin (\$/hl)	_____
	+	\$1.540	product promo (\$/hl)	_____
	+	<u>\$0.030</u>	<u>DHI fee (\$/hl)</u>	_____
	=	\$5.630	/hl	_____
	<u>x</u>	<u>98.0</u>	<u>hl/cow</u>	_____
	=	\$551.74	/cow/year	_____

2.07 Operating, Maintenance & Repairs

Machinery fuel cost - Tractor with Loader				_____
		120	PTO hp	_____
	<u>÷</u>	<u>2.5</u>	<u>avg HP required</u>	_____
	x	0.1665576	litres fuel/hour/hp	_____
	x	2.25	hours per day	_____
	x	\$0.85	diesel / litre	_____
	<u>x</u>	<u>365</u>	<u>days on feed</u>	_____
		\$5,580.85	annual fuel cost	_____
	+	\$18,930.00	building repairs,mtnce 1%	_____
	+	\$4,360.00	machinery repairs,mtnce 2 %	_____
	<u>÷</u>	<u>99</u>	<u>milking cows</u>	_____
	=	\$291.62	/cow/year	_____

2.08 Utilities

		\$15,936.92	hydro	_____
	+	\$1,200.00	telephone	_____

	÷	99	milking cows	
	=	\$173.10	/cow/year	

2.09 Insurance

Building & Equipment

		\$2,111,000	invest in bldg & equip	
	÷	\$100.00	units of \$100	
	x	\$0.70	insurance rate/\$100	
	÷	99	milking cows	
	=	\$149.26	/cow/year	

Herd

		\$2,500	/cow average value	
	÷	\$100.00	units of \$100	
	x	\$0.70	insurance rate/\$100	
	=	\$17.50	/cow/year	

Business Interruption

		\$0.60	\$/hl (average price of milk)	
	x	98	hl/cow (production/cow)	
	÷	100	units of \$100	
	x	\$0.45	insurance rate/\$100	
	=	\$0.26	/cow/year	

Liability

		\$50.00	additional coverage	
	÷	99	milking cows	
	=	\$0.51	/cow/year	

Total	=	\$167.53	/cow/year	
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2.10 Manure Removal

		\$15,899.40	annual removal cost	
	÷	99	milking cows	
	=	\$160.60	/cow/year	

2.11 Herd Replacement

Purchases

		\$3,000.00	heifer market value	
	x	30	# of heifers purchased	
	=	\$90,000.00	total heifer cost	

Cull revenues

		\$1,400.00	cull cow value	
	x	26	# of cows culled	
	=	\$36,400.00	total	

Bull Sales

		\$50.00	bull calf value	
	x	47	# of bull calves sold	
	=	\$2,350.00	total	

Heifer sales

		\$300.00	heifer calf value	
	x	45	transferred to heifer enterprise	
	=	\$13,500.00	total	

		\$90,000.00	total purchase cost	
	-	<u>\$52,250.00</u>	<u>total sales</u>	

	=	\$37,750.00	net replacement cost	_____
	÷	99	<u>milking cows</u>	_____
Total	=	\$381.31	/cow/year	_____

2.12 Administrative Costs

		\$5,000.00	total admin. costs	_____
	÷	99	<u>milking cows</u>	_____
	=	\$50.51	/cow/year	_____

2.13 Property Taxes

		\$1,600,000	building value	_____
x		30.0%	percent taxed	_____
x		0.031201	mill rate	_____
	÷	99	<u>milking cows</u>	_____
	=	\$151.28	/cow/year	_____

		\$100,000.00	house value	_____
x		45.0%	percent taxed	_____
x		0.039151	mill rate	_____
	÷	99	<u>milking cows</u>	_____
	=	\$17.80	/cow/year	_____

Total	=	\$169.08	/cow/year	_____
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2.14 Miscellaneous (small tools, hardware, etc.)

		\$2,600.00	total cost	_____
	÷	99	<u>milking cows</u>	_____
	=	\$26.26	/cow/year	_____

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

		\$5,100.94	subtotal operating costs	_____
÷		12	months	_____
÷		2	average	_____
x		4.5%	<u>interest rate</u>	_____
	=	\$9.56	/cow/year	_____

Capital Costs Buildings & Equipment Assumed New for a 99 Cow Herd

Buildings & Storage

Land - Assumed 10 acres @ \$10000/acre. \$100,000

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 @ \$2,917/stall \$725,000

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) \$725,000

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.	\$50,000
Earthen Manure Storage - 12 month capacity	\$175,000
Bulk Tank - (3,000 U.S. gallon) and compressor completely installed.	\$50,000
Bunker Silo - (130' x 75' x10')	\$30,000
Hay Shed - (50' x 64')	\$18,000
Steel Grain Bin	<u>\$20,000</u>
Total Land & Buildings	\$1,893,000
<u>Barn Equipment</u>	
Portable Mixer Wagon	\$42,000
Other Equipment	<u>\$10,000</u>
Total Equipment	\$52,000
<u>Machinery</u>	
Other equipment (shredder)	\$22,000
Truck (dairy portion \$60,000 @80%)	\$48,000
Tractor & Loader (dairy portion \$120,000 @80%)	<u>\$96,000</u>
Total Machinery	\$144,000
 Total Building, Equipment, Machinery	 \$2,089,000
 Dairy Cow Herd Investment	 \$247,500
 Total Capital Investment	 \$2,336,500

B. FIXED COSTS

3. Depreciation:

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

3.01 Buildings:

Barn	\$725,000	original value	_____
-	\$72,500	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$329.55	/cow/year	_____
Milking Parlour	\$725,000	original value	_____
-	\$72,500	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$329.55	/cow/year	_____
Dry Cow/Close Up Heifer Facility	\$50,000	original value	_____
-	\$5,000	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$22.73	/cow/year	_____

Manure Storage	\$175,000	original value	_____
-	\$0.00	salvage value	_____
÷	25	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$70.71	/cow/year	_____
Bulk Tank	\$50,000	original value	_____
-	\$5,000	salvage value	_____
÷	15	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$30.30	/cow/year	_____
Bunker Silo	\$30,000	original value	_____
-	\$0.00	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$15.15	/cow/year	_____
Hay Shed	\$18,000	original value	_____
-	\$1,800	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$8.18	/cow/year	_____
Steel Bins	\$20,000	original value	_____
-	\$2,000	salvage value	_____
÷	20	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$9.09	/cow/year	_____
Total	= \$815.26	/cow/year	_____

3.02 Other Equipment & Machinery

Barn Equipment	\$52,000	original value	_____
-	\$5,200	salvage value	_____
÷	15	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$31.52	/cow/year	_____
Machinery	\$166,000	original value	_____
-	\$16,600	salvage value	_____
÷	10	years useful life	_____
÷	<u>99</u>	<u>cows</u>	_____
=	\$150.91	/cow/year	_____
Total	= \$182.43	/cow/year	_____

4. Investment:

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

4.01 Buildings:

Land		\$100,000	total value	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$22.73	/cow/year	_____
Barn		\$725,000	original value	_____
	+	\$72,500	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$90.63	/cow/year	_____
Milking Parlour		\$725,000	original value	_____
	+	\$72,500	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$90.63	/cow/year	_____
Dry Cow/Close Up Heifer Facility		\$50,000	original value	_____
	+	\$5,000	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$6.25	/cow/year	_____
Manure Storage		\$175,000	original value	_____
	+	\$0.00	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$19.89	/cow/year	_____
Bulk Tank		\$50,000	original value	_____
	+	\$5,000	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$6.25	/cow/year	_____
Bunker Silo		\$30,000	original value	_____
	+	\$0.00	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$3.41	/cow/year	_____
Hay Shed		\$18,000	original value	_____
	+	\$1,800	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____

	=	\$2.25	/cow/year	_____
Steel Bins		\$20,000	original value	_____
	+	\$2,000	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$2.50	/cow/year	_____
Total	=	\$244.54	/cow/year	_____

4.02 Equipment & Machinery:

Barn Equipment		\$52,000	original value	_____
	+	\$5,200	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$6.50	/cow/year	_____

Machinery		\$166,000	original value	_____
	+	\$16,600	salvage value	_____
	÷	2	average	_____
	x	2.3%	investment rate	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$20.75	/cow/year	_____

Total	=	\$27.25	/cow/year	_____
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4.03 Livestock:

		\$2,500	average value/cow	_____
	x	<u>2.3%</u>	<u>investment rate</u>	_____
	=	\$56.25	/cow/year	_____

C. Labour:

		50	hours/cow/year	_____
	x	<u>\$22.00</u>	<u>/hour</u>	_____
	=	\$1,100.00	/cow/year	_____

	+	\$2,450.00	Relief Milker	_____
	÷	<u>99</u>	<u>cows</u>	_____
	=	\$24.75	/cow/year	_____

	=	\$1,124.75	Total Labour	_____
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Created and maintained by [Manitoba Agriculture Farm Management](#) May, 2017

For more information, contact your local [Manitoba Agriculture GO Office](#) or:

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A decorative graphic at the top of the page features a green square on the left, a dark blue horizontal bar in the center, and an orange square on the right. From the bottom edge of the blue bar, several dashed orange lines curve downwards and outwards across the page.

For more information

- Contact your local Manitoba Agriculture, Growing Opportunities (GO) Office.
- Visit us at manitoba.ca/agriculture.

