

Guidelines for Estimating Cost of Raising Dairy Heifers Based on 100 head

Date: July, 2002

The following budget is an estimate of the cost of production for raising large breed dairy heifers from birth to first calving. The purpose of this budget is to assist Manitoba producers in calculating their own costs, which also take into consideration factors that should be included when budgeting to determine the total rearing costs. To assist in developing their own budgets an Excel spreadsheet is available on the Manitoba Agriculture and Food website.

Dairy replacement heifers are the future foundation of a dairy herd and represent the primary source of genetics for improved production and conformation. Replacing heifers constitutes a significant financial investment. Total rearing cost is typically the third largest expense of a dairy operation after feed and labour costs. With the exception of a few heifers sold as culls or breeding stock prior to first calving, heifers do not generate any revenue until they enter the milking

The primary objectives of any heifer rearing program should include cost control and attaining average daily gains that result in heifers calving by 23 to 24 months of age at body weights of 1200 to 1250 pounds (after calving) for large breeds and 700 to 725 pounds (after calving) for small breeds.

This budget assumes a total confinement system from birth to calving; however, input fields are included to allow the entry of pasture costs in those situations where heifers are pastured part of the year.

This budget, which can be used by dairy producers as well as custom heifer growers, assumes heifer rearing as a separate enterprise from the dairy operation. Current market values are applied to heifer calves at birth, which will vary due to herd genetic differences and market conditions.

Disclaimer: Since economics and animal performance will vary among farms due to differences in environment, management, nutrition, health, sanitation and biosecurity, Manitoba Agriculture and Food (MAF) will not be responsible for individual farm results that may differ from those assumed in this budget.

Dairy Heifer Raising Costs - July, 2002
Based on 100 Head

A. OPERATING COSTS	<u>\$/Heifer</u>	<u>Total</u>	<u>Your Farm</u>
1. Feed Costs:			
1.01 Colostrum	\$3.00	\$300	_____
1.02 Milk Replacer	\$73.70	\$7,370	_____
1.03 Milk	\$0.00	\$0	_____
1.04 20% Calf Starter	\$14.40	\$1,440	_____
1.05 TMR	\$0.00	\$0	_____
1.06 Hay	\$434.12	\$43,412	_____
1.07 Silage	\$0.00	\$0	_____
1.08 Grower Ration	\$96.00	\$9,600	_____
1.09 Grain (barley)	\$130.68	\$13,068	_____
1.10 Protein (canola)	\$10.41	\$1,041	_____
1.11 Salt/Minerals/Vitamins	\$19.00	\$1,900	_____
1.12 Pasture	<u>\$0.00</u>	<u>\$0</u>	_____
Total Feed Cost	\$781.31	\$78,131	_____
2. Other Operating Costs:			
2.01 Heifer Cost	\$400.00	\$40,000	_____
2.02 Breeding Cost	\$77.00	\$7,700	_____
2.03 Veterinary Medicine & Supplies	\$49.32	\$4,932	_____
2.04 Registration Fee	\$15.00	\$1,500	_____
2.05 Bedding	\$45.12	\$4,512	_____
2.06 Utilities	\$18.05	\$1,805	_____
2.07 Manure Removal	\$20.05	\$2,005	_____
2.08 Repairs & Maintenance	\$40.11	\$4,011	_____
2.09 Insurance	\$23.02	\$2,302	_____
2.10 Miscellaneous	\$15.04	\$1,504	_____
2.11 Death Loss	<u>\$56.52</u>	<u>\$5,652</u>	_____
Subtotal Operating Costs	\$1,540.54	\$154,054	_____
2.12 Operating Interest	<u>\$116.75</u>	<u>\$11,675</u>	_____
Total Operating Costs	\$1,657.29	\$165,729	_____
B. FIXED COSTS			
3. Depreciation			
3.01 Facilities	\$90.25	\$9,025	_____
3.02 Machinery & Equipment	\$46.79	\$4,679	_____
4. Investment			
4.01 Land	\$4.01	\$401	_____
4.02 Facilities	\$44.12	\$4,412	_____
4.03 Machinery & Equipment	<u>\$16.85</u>	<u>\$1,685</u>	_____
Total Fixed Costs	\$202.02	\$20,202	_____
Total Operating and Fixed Costs	\$1,859.31	\$185,931	_____
C. LABOUR	\$240.66	\$24,066	_____
TOTAL COST OF PRODUCTION	\$2,099.97	\$209,997	_____

Disclaimer: 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 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 MAF Office or the Farm Management Section in Winnipeg at 204-945-4937.

DAIRY HEIFER REPLACEMENT COST

Heifer Enterprise Profile

Number of replacements		100 head
Mortality rate (%)		6.0% mortality
Calf market price (\$/head)		\$400 /head
Months birth to first calving	24.0 months.....	732 days
Individually housed (weaned at 45 days + 15 days transition)...		60 days
Group housed (from weaning transition period to 1st calving)...		672 days
Birth weight (lbs)		100 lbs
Weight at end of post weaning 15 day transition period		150 lbs
First calving weight:		
Pre-calving weight (lbs)		1,375 lbs
Post-calving weight (lbs)		1,225 lbs

Rearing Periods

To more closely estimate the cost of raising a replacement heifer to first calving, (for this budget we assumed 24.0 months of age), the rearing program was separated into eight periods. They are:

Period 1 Birth - 2 months	60 days	birth-150 lbs
Period 2 2 - 4 months	60 days	150 - 260 lbs
Period 3 4 - 6 months	60 days	260 - 370 lbs
Period 4 6 - 9 months	90 days	370 - 540 lbs
Period 5 9 - 12 months	90 days	540 - 700 lbs
Period 6 12 - 16 months	120 days	700 - 925 lbs
Period 7 16 - 20 months	120 days	925 - 1,150 lbs
Period 8 20 mo - calving	132 days	1,150 - 1,375 lbs

Milk Replacer - Assume that colostrum then transition milk is fed the first 3 days (6 feedings), then the calf is switched to a good quality all milk protein based milk replacer containing 18-20% fat and 18-20% CP up to weaning at 45 days. Other possible liquid feeds include whole milk or waste milk; however, this budget assumed the use of a milk replacer.

Calf Starter - A palatable, commercial 18-20% CP calf starter is introduced in very minute quantities by the end of the first week and gradually increased to about 1.8 lbs/day at weaning at 45 days (6 weeks). For about 15 days following weaning the calf continues to receive calf starter but this is gradually reduced to zero as it is replaced by a **16-18% CP Grower Ration**.

Energy/Protein Feeds - For the first 6 months this budget assumes that a commercial calf starter is fed up until shortly after weaning at which time the calf is switched to a farm-mixed grower ration. Due to the variation in possible rations that can be fed to growing heifers from 6 months onward, this budget substitutes barley supplemented with canola meal for the 16-18% grower ration. Some producers may want to continue feeding a mixed grower ration from 6 months onwards in place of separate amounts of barley and canola meal. This budget provides the user with the flexibility to vary the concentrate and protein feeds fed from 6 months of age to first calving.

Coccidiostat or Ionophore - To provide animals with added protection from contracting coccidiosis and to improve feed efficiency, growth rates and general health, it is assumed that a coccidiostat or ionophore is included in the grain ration beginning with the calf starter. A nutritionist should be consulted to develop a feeding program that incorporates a coccidiostat or ionophore in the correct concentrations beginning at about one week of age.

Hay - Assumed that a fine-stemmed, grassy:legume hay with 15% crude protein (CP) and a Relative Feed Value (RFV) of 140 is fed as the sole forage to all age groups. A wastage factor of 10% is included in the amount of hay fed/head/day across all age groups. Users of this budget may replace part or all of the hay with silage or pasture following 6 months of age; however, a nutritionist should be consulted to ensure that total daily dry matter intake is not reduced due to feeding excess silage or pasture to animals particularly in the 6 to 9 months of age group.

Salt/Minerals/Vitamins - Typically the amount of salt, minerals and vitamins fed will vary from about 1.0 to 2.5 ounces/head/day among the various age groups. Assume that a total of 34 kgs (76 lbs) of salt/mineral/vitamins is fed per head over the total rearing period. NOTE: This amount would be less if a grower ration including salt/mineral/vitamins is fed.

FOOTNOTE: Pasturing of heifers less than six months of age is not recommended, therefore, for budgeting purposes we restrict the allocation of pasture costs to those period groups from six months of age onwards (or periods 4 through 8).

Pasture Details

Pasture Cost	\$0.00 /head/day	
Average Number of Heifers on Pasture	0 head	
Average Months on Pasture per Year	0.0 mo.	0 days
Average age at calving	0.0 mo.	0 days
Ave. Months on Pasture to Calving Age	0.0 mo.	0 days
Distribution of Pasture vs Confinement (Periods 4-8)		
Pasture	0 days	0 %
Confinement	552 days	100 %
Total Days	552 days	100 %

Per Period Feeding Days

<u>Period</u>	<u>Confined</u> (Periods 1-8)	<u>Pasture</u>	<u>Total</u>
1	60	0	60
2	60	0	60
3	60	0	60
4	90	0	90
5	90	0	90
6	120	0	120
7	120	0	120
<u>8</u>	<u>132</u>	<u>0</u>	<u>132</u>
Total	732	0	732

Feed Requirements and Days on Feed

	<u>Period Age</u> <u>Group (Months)</u>	<u>Period</u> <u>Days</u>	<u>Body</u> <u>Weight (lbs)</u>	<u>Feed</u> <u>Lbs/Day</u>	<u>Days</u> <u>Fed</u>	<u>Total</u> <u>Lbs Fed</u>
Period 1	Birth - 2 months	60	birth-150			
Colostrum				10.0	3	30
Milk Replacer				1.3	42	55
Milk				0.0	0	0
20% Calf Starter				1.3	55	72
Grower Ration				0.0	0	0
Hay				0.75	30	23
Period 2	2 - 4 months	60	150 - 260			
TMR				0.0	0	0
Hay				2.0	60	120
Silage				0.0	0	0
Grower Ration				4.5	60	270
Grain (barley)				0.0	0	0
Protein (canola)				0.0	0	0
Salt/Minerals/Vitamins (ounces)				0.0	0	0
Period 3	4 - 6 months	60	260 - 370			
TMR				0.0	0	0
Hay				5.0	60	300
Silage				0.0	0	0
Grower Ration				5.5	60	330
Grain (barley)				0.0	0	0
Protein (canola)				0.0	0	0
Salt/Minerals/Vitamins (ounces)				0.0	0	0
Period 4	6 - 9 months	90	370 - 540			
TMR				0.0	0	0
Hay				9.0	90	810
Silage				0.0	0	0
Pasture					0	0
Grower Ration				0.0	0	0
Grain (barley)				5.0	90	450
Protein (canola)				0.5	90	45
Salt/Minerals/Vitamins (ounces)				2.2	90	12
Period 5	9 - 12 months	90	540 - 700			
TMR				0	0	0
Hay				12.0	90	1,080
Silage				0.0	0	0
Pasture					0	0
Grower Ration				0.0	0	0
Grain (barley)				5.0	90	450
Protein (canola)				0.4	90	36
Salt/Minerals/Vitamins (ounces)				2.2	90	12

	<u>Period Age Group (Months)</u>	<u>Period Days</u>	<u>Body Weight (lbs)</u>	<u>Feed Lbs/Day</u>	<u>Days Fed</u>	<u>Total Lbs Fed</u>
Period 6	12 - 16 months	120	700 - 925			
TMR				0	0	0
Hay				16.0	120	1,920
Silage				0.0	0	0
Pasture					0	0
Grower Ration				0.0	0	0
Grain (barley)				5.0	120	600
Protein (canola)				0.3	120	36
Salt/Minerals/Vitamins (ounces)				2.2	120	17
Period 7	16 - 20 months	120	925 - 1,150			
TMR				0	0	0
Hay				22	120	2,640
Silage				0	0	0
Pasture					0	0
Grower Ration				0	0	0
Grain (barley)				4	120	480
Protein (canola)				0	0	0
Salt/Minerals/Vitamins (ounces)				2.2	120	17
Period 8	20 mo - calving	132	1,150 - 1,375			
TMR				0	0	0
Hay				30	132	3,960
Silage				0	0	0
Pasture					0	0
Grower Ration				0	0	0
Grain (barley)				3	132	396
Protein (canola)				0	0	0
Salt/Minerals/Vitamins (ounces)				2.2	132	18
Total Days		732				

FOOTNOTE: The quantity of salt/mineral/vitamins fed per day is expressed in OUNCES, whereas the total quantity fed each period is presented in TOTAL LBS.

Summary and Cost of Feeds Used

Feed Costs			
Feed	Cost per Unit	Amount per Unit	Cost per Pound
Colostrum	\$0.10	1 lb	\$0.10 /lb
Milk Replacer	\$59.00	20 kg	\$1.34 /lb
Milk	\$0.60	1 liter	\$0.26 /lb
20% Calf Starter	\$10.75	25 kg	\$0.20 /lb
TMR	\$100.00	2,000 lbs	\$0.050 /lb
Hay	\$80.00	2,000 lbs	\$0.040 /lb
Silage	\$30.00	2,000 lbs	\$0.015 /lb
Grower Ration	\$8.75	25 kg	\$0.160 /lb
Grain (barley)	\$120.00	2,205 lbs	\$0.055 /lb
Protein (canola)	\$195.00	2,205 lbs	\$0.089 /lb
Salt/Minerals/Vitamins	\$13.75	25 kg	\$0.250 /lb

	Rearing Periods - total lbs of feed consumed								Total
	1	2	3	4	5	6	7	8	
Colostrum	30								30
Milk Replacer	55								55
Milk	0								0
20% Calf Starter	72								72
TMR		0	0	0	0	0	0	0	0
Hay	23	120	300	810	1,080	1,920	2,640	3,960	10,853
Silage		0	0	0	0	0	0	0	0
Grower Ration	0	270	330	0	0	0	0	0	600
Grain (barley)		0	0	450	450	600	480	396	2,376
Protein (canola)		0	0	45	36	36	0	0	117
Salt/Minerals/Vitamins		0	0	12	12	17	17	18	76

Per Period Feed Costs \$/Head

Confinement	\$92.02	\$48.00	\$64.80	\$64.16	\$74.15	\$117.25	\$136.25	\$184.68
Pasture	0	0	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total	\$92.02	\$48.00	\$64.80	\$64.16	\$74.15	\$117.25	\$136.25	\$184.68

Per Period Feed Costs \$/Head/Day

Total Feed \$/Day	\$1.53	\$0.80	\$1.08	\$0.71	\$0.82	\$0.98	\$1.14	\$1.40
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FOOTNOTE: The quantity of salt/mineral/vitamins in each rearing period is TOTAL LBS.

Other Costs

Breeding:

Cost per vial of semen	\$25.00
Number of vials of semen	1.75
Breeding service	\$19.00
Number of services	1.75

Veterinary Medicine and Supplies

Regular Herd Health Program

Total Hours/Visit	1.50
Number of Yearly Visits	4
Charge per Hour	\$90.00
Mileage allowance per kilometer	\$1.20

Emergency Calls, Surgeries & Hoof Trimming

Charge per call	\$200.00
Number of Yearly Visits	2
Mileage allowance per kilometer	\$1.95
Total Kilometers (one way trip)	60

Supplies (drugs, vaccines, etc.) **\$2,000.00**

Registration fee

Cost per heifer	\$15.00
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Straw

Number of tonnes/heifer/year	0.75
Cost/tonne	\$30.00

Repairs & Maintenance (annual costs)

Fuel costs	\$1,000.00
Repairs	\$1,000.00

Manure Removal

Annual Cost	\$1,000.00
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Utilities (annual costs)

Hydro	\$700.00
Water	\$100.00
Telephone	\$100.00

Interest Rates

Investment Rate (%)	4.0%
Operating Loan Interest Rate (%)	6.0%

Insurance	
Cost per \$100 Capital Invested in	
a) Livestock	\$0.40
b) Buildings & Equipment	\$0.50
Add'l Coverage for Liability (\$/year)	\$48.00
Average Value of Heifer	\$1,000.00
Miscellaneous (per year)	
Office Expenses	\$250
Taxes	\$500

CAPITAL COSTS

	Original <u>Value</u>	Salvage <u>Value</u>	Useful <u>Life</u>
Land Cost			
Acres	10		
Cost/Acre	\$500	\$5,000	
Dairy Heifer Facility (see schematic of facility design in appendix)			
Building 68'x80'=5440 ft ² @\$6.00	\$32,660		
Back & side walls, 5' planking w 1/8" puckboard	\$1,400		
Double layer vent curtain, 160', 4-5.5' openings	\$8,000		
Waterers, 6 @ \$300	\$1,800		
Posts, wire, cable	\$1,000		
Water line, from yard source	\$2,000		
Electrical to building and water	\$2,000		
Lights, 8 pulse-start metal halide, controls, timers	\$2,500		
Site prep, sloping, earthen manure storage, gravel, etc.	\$7,500		
Loading chute, handling area & chute	\$3,500		
Concrete floor & manure push area 7216 ft ² @ \$3.50	\$27,000		
Feedbunk epoxy coating 160'x3' wide @ \$5.50	\$2,640		
Metal panel gates	\$2,000		
Hutches, 18 @ \$333	\$6,000		
Total	\$100,000	10 %	20 years
Machinery & Equipment			
Tractor & Loader (25% share used)	\$15,000		
Feed Processing & Handling	\$5,000		
Feed Storage (bins)	\$5,000		
Truck (25% share used)	\$5,000		
Miscellaneous (tools, supplies, etc.)	\$5,000		
Total Machinery & Equipment	\$35,000	20 %	12 years

Total Capital Investment

140,000

LABOUR COSTS

Hours/Heifer/Year

12.00

Labour Rate/Hour

\$10.00

Responsibility rests with the user.

Dairy Heifer Raising Cost Worksheet

			<u>Your Cost</u>
A. OPERATING COSTS			
1. Feed Costs:			
1.01 Colostrum			
	30	lbs	
x	<u>\$0.10</u>	<u>\$/lb</u>	
=	\$3.00	/heifer	
1.02 Milk Replacer			
	55	lbs	
x	<u>\$1.34</u>	<u>\$/lb</u>	
=	\$73.70	/heifer	
1.03 Milk			
	0	lbs	
x	<u>\$0.26</u>	<u>\$/lb</u>	
=	\$0.00	/heifer	
1.04 20% Calf Starter			
	72.0	lbs	
x	<u>\$0.20</u>	<u>\$/lb</u>	
=	\$14.40	/heifer	
1.05 TMR			
	0.0	lbs	
x	<u>\$0.050</u>	<u>\$/lb</u>	
=	\$0.00	/heifer	
1.06 Hay			
	10,853	lbs	
x	<u>\$0.040</u>	<u>\$/lb</u>	
=	\$434.12	/heifer	
1.07 Silage			
	0	lbs	
x	<u>\$0.015</u>	<u>\$/lb</u>	
=	\$0.00	/heifer	

			<u>Your Cost</u>
1.08 Grower Ration			
	600	lbs	_____
<u>x</u>	<u>\$0.16</u>	<u>\$/lb</u>	_____
=	\$96.00	/heifer	_____
1.09 Grain (barley)			
	2,376	lbs	_____
<u>x</u>	<u>\$0.055</u>	<u>\$/lb</u>	_____
=	\$130.68	/heifer	_____
1.10 Protein (canola)			
	117	lbs	_____
<u>x</u>	<u>\$0.089</u>	<u>\$/lb</u>	_____
=	\$10.41	/heifer	_____
1.11 Salt/Minerals/Vitamins			
	76	lbs	_____
<u>x</u>	<u>\$0.25</u>	<u>\$/lb</u>	_____
=	\$19.00	/heifer	_____
1.12 Pasture Cost			
	0	total days on pasture to calving	_____
x	\$0.00	\$/head/day	_____
x	0	heifers on pasture	_____
<u>÷</u>	<u>100</u>	<u>total heifers</u>	_____
=	\$0.00	/heifer	_____
2. Other Operating Costs:			
2.01 Heifer Cost		\$400	/heifer

2.02 Breeding Cost			
	\$25.00	semen cost	_____
<u>x</u>	<u>1.75</u>	<u>services/conception</u>	_____
=	\$43.75	/heifer	_____
	\$19.00	service cost	_____
<u>x</u>	<u>1.75</u>	<u>services/conception</u>	_____
=	\$33.25	/heifer	_____
Total =	\$77.00	/heifer	_____

			<u>Your Cost</u>
2.03 Veterinary Medicine & Supplies			
Herd Health	\$90.00	/hour charge	_____
x	1.5	hours/visit	_____
x	4	visits/year	_____
x	732	days rearing period	_____
÷	365	days/year	_____
≐	<u>100</u>	<u>heifers</u>	_____
=	\$10.83	/heifer	_____
Mileage (Herd Health)			
	\$1.20	rate/km charge	_____
x	60	km (one way)/visit	_____
x	4	visits/year	_____
x	732	days rearing period	_____
÷	365	days/year	_____
≐	<u>100</u>	<u>heifers</u>	_____
=	\$5.78	/heifer	_____
Emergency Calls			
	\$200.00	charge/call	_____
x	2	calls/year	_____
x	732	days rearing period	_____
÷	365	days/year	_____
≐	<u>100</u>	<u>heifers</u>	_____
=	\$8.02	/heifer	_____
Emergency Mileage			
	\$1.95	rate/km	_____
x	60	kms (one way)/visit	_____
x	2	visits/year	_____
x	732	days rearing period	_____
÷	365	days/year	_____
≐	<u>100</u>	<u>heifers</u>	_____
=	\$4.69	/heifer	_____
Supplies (drugs, vaccines, etc.)			
	\$2,000	total supplies	_____
÷	<u>100</u>	<u>heifers</u>	_____
=	\$20.00	/heifer	_____

			<u>Your Cost</u>	
Total	=	\$49.32	/heifer	_____
2.04 Registration Fee	=	\$15.00	/heifer	_____
2.05 Bedding				
		0.75	tonnes/heifer/year	_____
x		732	days rearing period	_____
÷		365	days/year	_____
<u>x</u>		<u>\$30.00</u>	<u>\$/tonne</u>	_____
=		\$45.12	/heifer	_____
2.06 Utilities				
		\$900.00	annual cost	_____
x		732	days rearing period	_____
÷		365	days/year	_____
<u>÷</u>		<u>100</u>	<u>heifers</u>	_____
=		\$18.05	/heifer	_____
2.07 Manure Removal				
		\$1,000.00	annual cost	_____
x		732	days rearing period	_____
÷		365	days/year	_____
<u>÷</u>		<u>100</u>	<u>heifers</u>	_____
=		\$20.05	/heifer	_____
2.08 Repairs & Maintenance				
		\$1,000	annual fuel cost	_____
+		\$1,000	oil, repairs & maintenance	_____
x		732	days rearing period	_____
÷		365	days/year	_____
<u>÷</u>		<u>100</u>	<u>heifers</u>	_____
=		\$40.11	/heifer	_____
2.09 Insurance				
		\$140,000	bldg. & equip. investment	_____
x		\$0.50	cost/\$100 capital	_____
÷		\$100	units of \$100	_____
x		732	days rearing period	_____
÷		365	days/year	_____
<u>÷</u>		<u>100</u>	<u>heifers</u>	_____
=		\$14.04	/heifer	_____

			<u>Your Cost</u>	
		\$1,000	average value of heifer	_____
x		\$0.40	insurance rate/\$100	_____
÷		\$100	units of \$100	_____
x		732	days rearing period	_____
÷		<u>365</u>	<u>days/year</u>	_____
=		\$8.02	/heifer	_____
		\$48.00	add'l coverage for liability	_____
x		732	days rearing period	_____
÷		365	days/year	_____
÷		<u>100</u>	<u>heifers</u>	_____
=		\$0.96	/heifer	_____
Total	=	\$23.02	/heifer	_____
2.10 Miscellaneous		\$750.00	total expenses/year	_____
x		732	days rearing period	_____
÷		365	days/year	_____
÷		<u>100</u>	<u>heifers</u>	_____
=		\$15.04	/heifer	_____
2.11 Death Loss				
		\$400.00	heifer cost	_____
+		\$542.01	half of feed & other costs	_____
x		<u>6.0%</u>	<u>mortality rate</u>	_____
=		\$56.52	/heifer	_____
2.12 Operating Interest				
		\$400.00	heifer cost	_____
+		\$570.27	half of feed & other costs	_____
x		6.0%	operating interest rate	_____
x		732	days rearing period	_____
÷		<u>365</u>	<u>days/year</u>	_____
=		\$116.75	/heifer	_____

Your Cost

CAPITAL COSTS

Land Cost

Acres	10		
Cost/Acre	\$500	\$5,000	_____

Dairy Heifer Facility (see schematic of facility design in appendix)

Building 68'x80'=5440 ft2 @\$6.00	\$32,660	_____
Back & side walls, 5' planking w 1/8" puckboard	\$1,400	_____
Double layer vent curtain, 160', 4-5.5' openings	\$8,000	_____
Waterers, 6 @ \$300	\$1,800	_____
Posts, wire, cable	\$1,000	_____
Water line, from yard source	\$2,000	_____
Electrical to building and water	\$2,000	_____
Lights, 8 pulse-start metal halide, controls, timers	\$2,500	_____
Site prep, sloping, earthen manure storage, gravel, et	\$7,500	_____
Loading chute, handling area & chute	\$3,500	_____
Concrete floor & manure push area 7216 ft2 @ \$3.50	\$27,000	_____
Feedbunk epoxy coating 160'x3' wide @ \$5.50	\$2,640	_____
Metal panel gates	\$2,000	_____
Hutches, 18 @ \$333	<u>\$6,000</u>	_____
Total	\$100,000	_____

Machinery & Equipment

Tractor & Loader (25% share used)	\$15,000	_____
Feed Processing & Handling	\$5,000	_____
Feed Storage (bins)	\$5,000	_____
Truck (25% share used)	\$5,000	_____
Miscellaneous (tools, supplies, etc.)	<u>\$5,000</u>	_____
Total Machinery & Equipment	\$35,000	_____

Total Capital Investment	\$140,000	_____
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Your Cost

B. FIXED COSTS

3. Depreciation: $\frac{\text{Original Value} - \text{Salvage Value}}{\text{Useful Life}}$

3.01 Facilities

	\$100,000	original value	_____
-	\$10,000	salvage value	_____
÷	20	years useful life	_____
x	732	days rearing period	_____
÷	365	days/year	_____
±	<u>100</u>	<u>heifers</u>	_____
=	\$90.25	/heifer	_____

3.02 Machinery & Equipment

	\$35,000	original value	_____
-	\$7,000	salvage value	_____
÷	12	years useful life	_____
x	732	days rearing period	_____
÷	365	days/year	_____
±	<u>100</u>	<u>heifers</u>	_____
=	\$46.79	/heifer	_____

4. Investn $\frac{\text{Original Value} + \text{Salvage Value}}{2} \times \text{Investment Rate}$

4.01 Land

	\$5,000	land cost	_____
x	4.0%	investment rate	_____
x	732	days rearing period	_____
÷	365	days/year	_____
±	<u>100</u>	<u>heifers</u>	_____
=	\$4.01	/heifer	_____

4.02 Facilities

	\$100,000	original value	_____
+	\$10,000	salvage value	_____
÷	2	average	_____
x	4%	investment rate	_____
x	732	days rearing period	_____
÷	365	days/year	_____
±	<u>100</u>	<u>heifers</u>	_____
=	\$44.12	/heifer	_____

			<u>Your Cost</u>
4.03 Machinery & Equipment			
	\$35,000	original value	
+	\$7,000	salvage value	
÷	2	average	
x	4.0%	investment rate	
x	732	days rearing period	
x	365	days/year	
÷	100	heifers	
=	\$16.85	/heifer	
C. Labour:			
	12.0	hours/heifer/year	
x	732	days rearing period	
÷	365	days/year	
<u>x</u>	<u>\$10.00</u>	<u>/hour</u>	
=	\$240.66	/heifer	

For further assistance contact you local Manitoba Agriculture and Food office.

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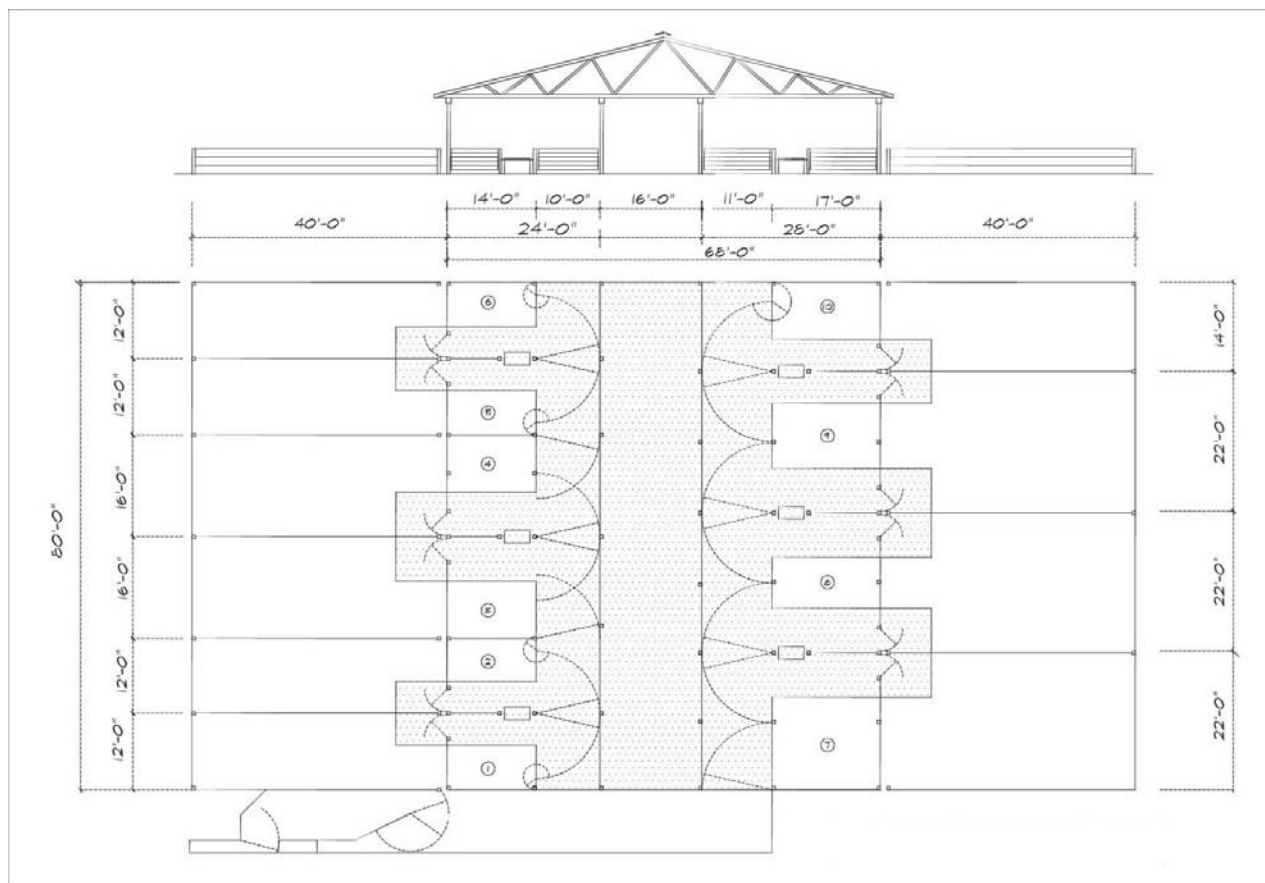
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Appendix: Dairy Heifer Facility



<u>Pen</u>	<u>Age Months</u>	<u>Number Animals</u>	<u>Sq. Ft. per head</u>	<u>Bunk Space inches/head</u>
1	2-4	9	32.0	16.0
2	4-6	9	32.0	16.0
3	6-9	12	32.0	16.0
4	9-12	12	32.0	16.0
5	close up heifers	8	36.0	18.0
6	close up dry cows	6	48.0	24.0
7	12-16	16	38.5	16.5
8	16-20	16	38.5	16.5
9	20-24	16	38.5	16.5
10	dry cows	10	39.2	16.8