





Guidelines For Estimating

Beef Cow-Calf Production Costs

Based on a 150 Head Cow Herd - Hay Ration

Date: September, 2024

This guide is designed to provide you with planning information and a format for calculating costs of production of a cow calf enterprise in Manitoba. General Manitoba Agriculture recommendations are assumed in using feed and veterinary inputs. These figures provide an economic evaluation of the livestock and estimated prices required to cover all costs. Costs include labour, investment and depreciation, but do not include management costs, nor do they necessarily represent the average cost of production in Manitoba.

These budgets may be adjusted by putting in your own figures. As a producer you are encouraged to calculate your own costs of production. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

This tool is available as an Excel worksheet at:



<u>The Farm Machinery Custom and Rental Rate Guide</u> is also available to help determine machinery costs.

Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224

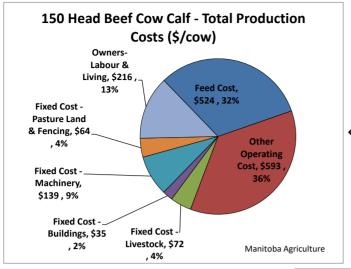
Note: This budget is only a guide and is not intended as an in-depth study of the cost of production of this industry. Interpretation and use of this information is the responsibility of the user. If you need help with a budget, contact a Farm Management Specialist.

Cow-Calf Production Costs - September, 2024 Based on a 150 Cow Herd							
A. Operating Costs 1. Feed Costs	Cost/Cow	<u>Total Cost</u>	Your Cost				
Grain and Concentrates	\$27.12	\$4,068					
Forages	\$408.36	\$61,254					
Salt & Minerals	\$47.09	\$7,063					
Extended Grazing Forages	\$41.65	\$6,248					
Total Feed Cost	\$524.22	\$78,633					
2. Other Operating Costs							
Straw	\$70.00	\$10,500					
Veterinary Medicine & Supplies	\$30.68	\$4,602					
Breeding Costs	\$46.42	\$6,963					
Fuel, Maintenance & Repairs	\$42.72	\$6,408					
Utilities	\$11.69	\$1,753					
Marketing & Transportation	\$39.60	\$5,940					
Death Loss	\$32.50	\$4,875					
Manure Removal	\$10.84	\$1,626					
Insurance	\$18.83	\$2,825					
Herd Replacement	\$148.50	\$22,275					
Pasture Rental	\$59.38	\$8,906					
Pasture Operating	\$34.77	\$5,215					
Labour - Hired	\$0.00	\$0					
Miscellaneous	<u>\$6.67</u>	<u>\$1,001</u>					
Subtotal Operating Costs	\$1,076.81	\$161,522					
Operating Interest	<u>\$40.38</u>	<u>\$6,057</u>					
Total Operating Costs	\$1,117.19	\$167,579					
B. Fixed Costs							
Livestock	\$72.37	\$10,855					
Buildings	\$35.07	\$5,260					
Machinery & Equipment	\$138.54	\$20,781					
Pasture Land & Fencing	<u>\$64.40</u>	<u>\$9,660</u>					
Total Fixed Costs	<u>\$310.38</u>	<u>\$46,556</u>					
C. Owners - Labour & Living	<u>\$216.00</u>	\$32,400					
Total Cost of Production	\$1,643.57	\$246,535.00					
Profitability and E	Breakeven Analys	sis					
Estimated Farmgate	Per Cow	<u>Total</u>	Per Acre				
Price (\$ per cwt)	\$365.65						
Calf weight (lbs)	575						
Gross Revenue / cow	\$1,997.36	\$299,604	\$343				
Operating Expense Ratio	55.9%		_				
Marginal Returns	64 470	#000 0 7 4	60=0				
Over Feed Costs	\$1,473	\$220,971	\$253				
Over Operating Costs	\$880 \$570	\$132,027	\$151				
Over Operating & Fixed Costs Over Total Costs (Net Profit)	\$370 \$354	\$85,470 \$53,070	\$98 \$61				
Over Total Costs (Net Front)	 \$354	\$53,070	Φ01				
	Price						
Breakeven (Lb. weaned calf)	<u>(\$/cwt)</u>						
Over Feed & Operating Costs	\$205						
Over Feed, Operating & Fixed Costs	\$261						
Over Total Costs	\$301						
Estimated Return on Investment (ROI)	21.5%						
Estimated Return on Asset (ROA)	7.8%						
	ry Per Cow Per D	ay					
Summer grazing (based on 135 days) Extended grazing (based on 35 days)	\$1.174 \$1.190						
Winter feed (based on 195 days)	\$1.190 \$2.461						
Yardage (based on 230 days)	\$2.461 \$2.099						
Total Overwinter Costs (based on 230 days)	\$4.367						
Note: This budget is only a guide and is not intended t		ly of the cost of production	of this industry.				

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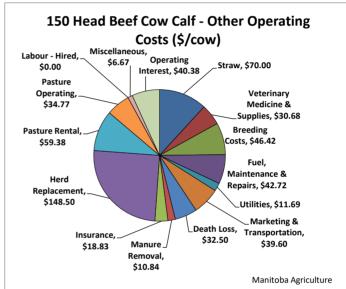
Cow-Calf Standardized			- September, 2024	
Base	ed on a 150 C	ow Herd		
	Per Cow		<u>Total</u>	Your Farm
= Revenue	\$1,997.36		\$299,604	
- Cost of Goods Sold (CoGS)				
Grain and Concentrates	\$27.12	1.4%	\$4,068	
Forages	\$408.36	20.4%	\$61,254	
Salt & Minerals	\$47.09	2.4%	\$7,063	
Extended Grazing Forages	\$41.65	2.1%	\$6,248	
Pasture Operating Straw	\$34.77 \$70.00	1.7% 3.5%	\$5,215 \$10,500	
Veterinary Medicine & Supplies	\$30.68	1.5%	\$4,602	
Death Loss	\$32.50	1.6%	\$4,875	
Herd Replacement	\$148.50	7.4%	\$22,275	
Breeding Costs	\$46.42	2.3%	\$6,963	
Manure Removal	\$10.84	0.5%	\$1,626	
	\$897.93	45.0%	\$134,689	
= Gross Margin (GM)	\$1,099.44	55.0%	\$164,915	
- Direct Operating Expenses (DOE)				
Labour - Hired	\$0.00	0.0%	\$0	
Owners - Labour & Living	\$216.00	10.8%	\$32,400	
Fuel, Maintenance & Repairs	\$42.72	2.1%	\$6,408	
Utilities	\$11.69	0.6%	\$1,753	
Marketing & Transportation	<u>\$39.60</u>	2.0%	<u>\$5,940</u>	
	\$310.00	15.5%	\$46,501	
= Contribution Margin (CM)	\$789.43	39.5%	\$118,414	
- Operating Overheads (OH)				
Insurance	\$18.83	0.9%	\$2,825	
Miscellaneous	<u>\$6.67</u>	0.3%	<u>\$1,001</u>	
	\$25.50	1.3%	\$3,826	
= Earnings Before Interest Taxes Depreci				g Income
EBITDAR	\$763.93	38.2%	\$114,588	
- Cost of Capital (CoC) or Depreciation/A	mortization/Lea	se/Rent		
Owned Cows Amortization Costs	\$55.71	2.8%	\$8,357	
Owned Cows Opportunity Cost	\$0.00	0.0%	\$0	
Pasture & Fencing Depreciation Costs	\$9.38	0.5%	\$1,407	
Pasture & Fencing Amortization Costs	\$29.57	1.5%	\$4,436	
Pasture & Fencing Opportunity Costs	\$0.00	0.0%	\$0	
Pasture Rental	\$59.38	3.0%	\$8,906	
Building Depreciation Cost	\$20.68	1.0%	\$3,102	
Building Amortization Costs	\$11.08	0.6%	\$1,662	
Building Opportunity Costs	\$0.00	0.0%	\$0	
Machinery & Eq. Depreciation Costs	\$94.64	4.7%	\$14,196	
Machinery & Eq. Amortization Costs	\$33.80	1.7%	\$5,070	
Machinery & Eq. Opportunity Costs	\$0.00	0.0%	<u>\$0</u>	
	\$314.24	15.7%	\$47,136	
= Earnings Before Interest Taxes (EBIT)	\$449.69	22.5%	\$67,452	
- Interest Expenses	4.0.00	0.004	40.053	
Operating Interest	\$40.38	2.0%	\$6,057	
Owned Cows Interest Cost	\$16.65	0.8%	\$2,498	
Pasture & Fencing Interest Costs	\$25.45	1.3%	\$3,817 \$407	
Building Interest Cost	\$3.31 \$10.10	0.2% 0.5%	\$497 \$1.515	
Machinery & Equipment Interest Costs	\$10.10 \$95.89	4.8%	<u>\$1,515</u> \$14,384	
= Earnings Before Taxes (EBT)	\$353.80	17.7%	\$53,068	

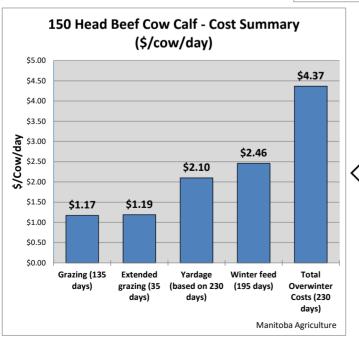
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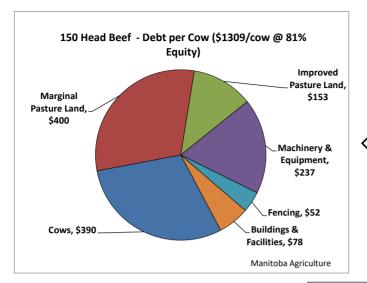
Winter feed is a significant cost for cow calf production. A balanced ration to minimize cost per head per day is an important step in Risk Management Planning.

Herd replacement / breeding and summer pasture are the most significant other cow calf production costs.



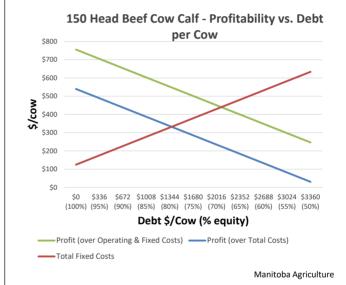


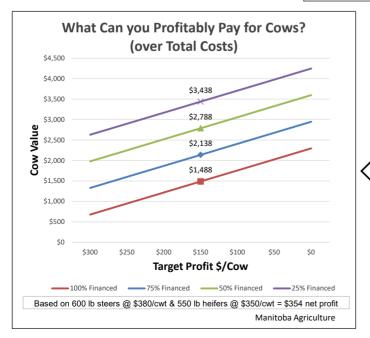
Knowing your total overwinter, winter feed and yardage costs are important in making pasture and extended grazing decisions or determining fair custom feeding rates and are an important step in Risk Management Planning.



Managing total debt per cow is a important step to maintain profitability in a cow calf production enterprise. Total P & I Cost = \$194/cow.

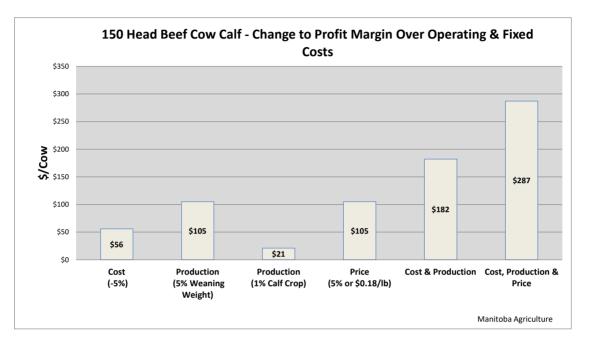
Cow calf profitability is significantly affected by both operating and fixed production costs.

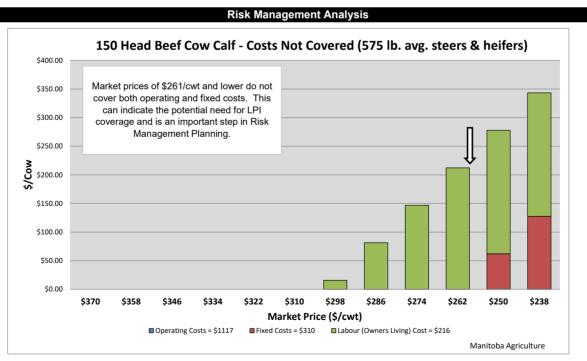




Knowing what you can pay for replacements to maintain your target profitability is an important step in managing beef cow enterprises.

	Ris	k & Sensitiv	ity Analysis (Stress To	est)	
	Percent Change	Per Head	Change from Baseline Value	Change in Profit/Cow	Change in Total Profit
Operating Costs	(5.0%)	\$1,061	(\$56)	\$56	\$8,379
Sale Price (\$ per cwt)	5.0%	\$384	\$18	\$105	\$15,769
Calf Weaning Weight (lbs)	5.0%	604	29	\$105	\$15,769
Calf Crop %	1.0%	96	1	<u>\$21</u>	<u>\$3,154</u>
		•		\$287	\$43,070





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Cow-Calf Production Costs - Herd Input

Assumptions

- 1. This budget outlines the cost of production for a cow-calf operation.
- 2. Buildings and equipment are valued at new cost.
- 3. All feed is purchased.
- 4. Manure removal is contracted out.
- 5. Replacement heifers are valued at fair market value
- 6. This budget assumes an average weaning weight of 575 lbs. (steer calves 600 lbs and heifer calves 550 lbs.)

Cow-Calf Production Costs - Herd Profile					
	<u>Total</u>				
Number of Cows	150 head				
Average Cow Weight	1,350 lbs				
Number of Bulls	5 bulls				
Calf Crop	95 %				
Steer Calf Weight	600 lbs				
Steer Calf Market Price	\$380 /cwt				
Heifer Calf Weight	550 lbs				
Heifer Calf Market Price	\$350 /cwt				
Average Calf Weight	575 lbs				
Weighted Average Calf Market Price	\$365.65 /cwt				

Cow-Calf Production Costs - Herd Replacement

Herd Replacement (Cows)

Average Value/Cow \$2,600 (bred cow to steer calf price ratio = 1.14)

(bred cow to steer calf price ratio range is often 1.1 to 1.5 = estimated cow value range of \$2,508 to \$3,420)

Cull Cow Market Price \$175 /cwt
Cow Mortality Rate \$1.25 %

Herd Replacement (Cows)

Replacement Cost/Heifer \$3,600

Cull Cow Market Value - \$2,362.50

(1350lb cow / 100 x \$175/cwt cull price = \$2362.50)

Cow replacement rate (%) x 12.0

= \$148.50 /cow

Cow-Calf Production Costs - Breeding Breeding Costs Cost Per Cow Feed for Bulls Good Quality (tons/yr) 4.00 Hay Hay Price (\$/ton) Х 115 Number of Bulls 5 Х 150 cows = \$15.33**Barley** Per Bull (lbs/day) 7.00 Days/Year on Barley 120 Х Pounds per bushel 48 Barley Price (\$/bu) \$4.50 Χ Number of Bulls Х 5 150 cows = \$2.63 = Total \$17.96

Straw for Bull	ls				
	Number of Tons/Bull/Year		1.0	tons/bull/ye	ear
	Hay Price (\$/ton)	Х	70 /	/ton	
	Number of Bulls	Х	5	bulls	
		÷	150	cows =	\$2.33
Vet & Medicin					
	Semen Test		\$60.00		
	Health Management Costs	+	\$10.00		
	Number of Bulls	Х		bulls	
		÷	150	cows =	\$2.33
Herd Replace	` '				
	Original Cost/Bull		\$5,000		
	Price Received/Cull Bull	-	\$3,500		
	Bull Replacement Rate (%)	Х	25		
	Number of Bulls	Х		bulls	
		÷	150	cows =	\$12.50
Investment in			45.000		
	Original Cost/Bull		\$5,000		
	Price Received/Cull Bull	+	\$3,500		
	Average - charged on 1/2	÷	2		
	Investment Rate	Х	4.00		
	Number of Bulls	Х	5		A.F. 0.
D4 04-	o for Della	÷	150	cows =	\$5.67
Pasture Costs			#400 70	/ 4	4
	Pasture Cost (\$/season) Number of Bulls			/bull pastur	e cost
	Number of Buils	X ÷	150	bulls	¢E CO
Other Breedin	a Altornativos	-	150	cows =	\$5.63
	ng Alternatives				
Artificial Ins			60.00		
	Cost/Cow or Heifer Exposed		\$0.00		
	Number Inseminated	X	0		# 0.00
0	D	÷	150	cows =	\$0.00
Community			00.00		
	Cost/Cow or Heifer Exposed		\$0.00		
	Number of Cows placed in Pasture		0		# 0.00
		÷	150	cows =	\$0.00
				= Total	\$46.42

Cow-Calf Production Costs - Facilities

Waterers	Cows per waterer Cost per waterer	100 \$2,000	= Total	\$4,000
Windbreak Fence	Feet per Cow Cost per Foot	1.5 \$25	= Total	\$5,813
Feedlot Fence/Bunk	Feet per Cow Cost per Foot	2.0 \$15	= Total	\$4,650
Calf Shelters	Calves per shelter Cost per shelter	50 \$3,000	= Total	\$9,300

Cow-C	alf Produc	tion Co	sts - O	pera	ting	
Veterinary Medicine & Supplies Calf Medication						Cost Per Cow
Blackleg (8 way vaccine)		\$1.00	/head	x 95%	calf crop =	
Tags (CCIA & ID)					calf crop =	
Cow Medication						
5-Way fetal protection						\$5.00
Scourguard						\$5.00
Internal/external parasite control	, antibiotics,	etc.				\$4.00
Vitamin A & D						\$0.50
Herd Health Program Professional Services			hours /	a		
Rate	Х	\$180.00	hours (w		
Nate	÷		cows =			\$9.60
Transportation		100	00110			ψ0.00
Total Kilometers (round trip)		80	km			
Rate	x	\$1.00	/km			
Number of yearly visits		2				
	÷	150	cows =			<u>\$1.07</u>
					= Total	\$30.68
Other Operating Costs						
Straw		\$70.00				
Cost (\$/Ton) Number of Tons/Cow/Year		\$70.00 1.0				
Number of Tons/Cow/Tear		1.0				
Fuel, Oil, Repairs & Maintenance						
Machinery Fuel Cost						Cost Per Cow
Tractor with Loader PTO hp				120		
Average HP required		÷		2.5		
Litres fuel / Hour / HP		Х		35576		
Tractor Hours Per Day (avg) Diesel Fuel Cost / litre		X		1.5		
Days on feed		X		\$1.10 195		
Annual fuel cost		<u>x</u>		72.32		
, unidar idor ooot		÷		150	cows =	\$17.15
Machinery repair & maintenance						•
Machinery capital cost			\$17	7,500		
Machinery Repair (% of investment	cost)	<u>X</u>		1.20	%	
Oil, repairs & maintenance		=	Ψ=, .	30.00		644.00
Building repair & maintenance		÷		150	cows =	\$14.20
Building capital cost			\$7	7,513		
Building maintenance (% of inv.cos	t)	<u>x</u>		2.20		
Repairs & maintenance	,	=		05.28		
		÷		150	cows =	<u>\$11.37</u>
					= Total	\$42.72
Other Operating Costs Utilities						Coot Box Cow
Hydro Rate (\$/k	(Wh)		\$0.0	9587		Cost Per Cow
25 kWh per θ	,	=		59.51		
2 1000 wat				93.80		
	Total I	Hydro =	\$1,1	53.32		
		÷		150	cows =	\$7.69
Telephone				00.00		44.00
		÷		150	cows =	\$4.00 \$4.60
					= Total	\$11.69
Marketing & Transportation						Cost Per Cow
Trucking						<u> </u>
Calves: Number marketed pe	r year			143		
Truck Capacity (lbs/lo	•		5	4,000		
Number of head per l	load - calves			94		
Loads		=		2.00		
Distance (miles) Rate / Loaded Mile		X X		75 7.00\$		
Nate / Ludueu Wille		×		150	cows =	\$7.00
				100	55 VV3 -	Ψ1.00

Cull cows:	Number per year Number cows died Number of head per load - ct Loads Distance (miles) Rate / Loaded Mile	ull cows	- = X X	18.00 2.00 40 1.00 75.00 \$7.00		
MPD Lover col	lling commission & incuren		÷	150.00	cows =	\$3.50
	Iling commission & insurand MBP/NCO Levy (\$/Head)	ce	+	\$5.50		
	WLPIP Insurance Premium (\$/cwt)		\$0.00		
	Average Calf Weight (cwt)		Х	5.75		
+	WLPIP Insurance Premium Insurance per Head		=	\$0.00 \$1.75		
	Commission on Calves			\$20.00		
	Number marketed per year		х	143		
			÷	150.00	cows =	\$25.98
Cull Cows	MBP/NCO Levy (\$/Head)			\$5.50		
	Insurance per Head Commission on Cows		+	\$1.75		
	Number marketed per year		х	\$22.00 16		
			<u>÷</u>	150.00	cows = = Total	<u>\$3.12</u> \$39.60
Death Loss						Cost Per Cow
	Cow investment (\$/Head)		х	\$2,600	-	
	Cow Mortality Rate (%)		Х	1.25	=	\$32.50
Manure Remov	val					Cost Per Cow
Number winter				195	-	
	winter feeding - feed delivere		-	130		
Non-confined values of the Days confined	winter feeding - bale grazing		<u>-</u> =	<u>0</u> 65		
	e produced (m³/cow/day)		_ x	0.034		
Manure volume	· _ · · · · · · · · · · · · · · · · · ·		=	2.21		
	e shrinkage (%)		х	75		
Conversion - ye	d ³ per m ³		х	1.30795		
Manure remova	al & application (\$/yd ³)		х	\$15.00	=	\$10.84
Insurance						Cost Per Cow
Cow Investme	nt (\$/Head)			\$2,600	-	COSt Fer COW
Cost per \$100	Livestock		Х	\$0.45		
			÷	100.00	=	\$11.70
Buildings & Ed	quipment Investment			\$255,013		
Cost per \$100	·_ ·	:		\$0.40		
	÷			100.00		***
	÷	•		150.00	cows =	\$6.80
Additional cov	verage for liability			\$49.00		
	÷			150.00	cows =	<u>\$0.33</u>
					= Total	\$18.83
Miscellaneous						Cost Per Cow
	Total office expenses			\$1,000	-	
			÷	150.00	cows =	\$6.67
Operating Inte	rest					
	Subtotal operating costs			\$1,076.81		
	Average - charged on 1/2		÷	2.00		
	Operating Interest Rate		Х	7.50	= Total	\$40.38
Labour Costs	Labour Data (All			* 0= *0	<u> </u>	Cost Per Cow
	Labour Rate (\$/hour) Hired - Labour Hours/Cow/Yo	ear		\$27.00 0.00	=	\$0.00
	Owner - Labour Hours/Cow/Y			8.00	=	\$0.00 \$216.00
					= Total	\$216.00

Annual Days on Pasture and Winter Feeding						
Total Days Per Year			365			
Pasture Grazing		minus	135 days	4.5	months	
Extended Grazing		minus	35 days	3		
Total Winter Feeding	(see Ration Worksheet for more detail)	=	195 days	3		
Non-confined winter fee	eding (feed delivered to pasture)	minus	130 days	3		
Non-confined winter fee	eding (bale grazing)	minus	0 days	3		
Confined winter feeding	- feed delivered	=	65 days	3		

365 Total Days	
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	Past	ure Optio	ns - Input			
Land Base		Marginal Pasture	Improved Pasture	Crown Lands	Community Pasture	Rented Pasture
Number of cows pastured/season		150	150	150	150	
Number of cows/quarter		32	94	12	-	32
Number of pasture acres/head		5.0	1.7	13.3	-	5.0
Total Acres Required		750	255	2000	-	750
Rental Rate (\$/quarter)		-	-	\$662	-	\$4,750
Rate (\$/cow/day)		-	-	-	\$0.90	-
Rate (\$/calf/season)		-	-	-	\$55.00	-
Pasture Land Value						
(\$/acre, excl. fence, water, facilities)		\$800	\$1,800	-	-	-
Owned Land Equity	75%					
Land Financed	25%					
Land Opportunity Cost (Investment Rate	0.00%					
Land cost (\$/acre)						
Finance Rate & Term 6.500%	25	years				
Principle & Interest Cost		\$16.40	\$36.89	-	-	-
Owned Land Opportunity Cost		\$0.00	<u>\$0.00</u>	-	-	-
Total Cost (\$/acre)		\$16.40	\$36.89	-	-	-
	Past	ure Fenci	ng - Input			
			e Cost Per M			

	Fence Cost Per Mile							
	Materials	Labour I	Equipment	Total				
Barbed Wire (4 strand)	\$4,812	\$1,118	\$1,514	\$7,444				
Electric Wire (4 strand)	\$2,389	\$500	\$635	\$3,524				
Electric Wire (2 strand)	\$2,042	\$412	\$561	\$3,015				
Electric Wire (1 strand)	\$1,730	\$370	\$523	\$2,623				
Page Wire (w/optional top wire)	\$9,139	\$1,974	\$2,527	\$13,640				
	Marginal	Improved	Crown					
	Pasture Pasture	Pasture	Lands					
	Fence Mile	s per Quarte	r (160 ac)					
Barbed Wire (4 strand)	2.00	0.00	1.00					
Electric Wire (4 strand)	0.00	0.00	0.00					
Electric Wire (2 strand)	0.00	0.00	0.00					
Electric Wire (1 strand)	0.00	4.00	0.00					
Page Wire (w/optional top wire)	0.00	0.00	0.00					
	Cost Per	Quarter (16	0 acres)					
Barbed Wire (4 strand)	\$14,888	\$0	\$7,444					
Electric Wire (4 strand)	\$0	\$0	\$0					
Electric Wire (2 strand)	\$0	\$0	\$0					
Electric Wire (1 strand)	\$0	\$10,492	\$0					
Page Wire (w/optional top wire)	\$0	\$0	\$0					
	\$14,888	\$10,492	\$7,444					

Planned number of cows

Acres Required

Total Fence Cost			\$69,788	\$16,722	\$93,050
Total Fence Investment (S	(acre)		\$93.00	\$66.00	\$47.00
Residual Value (End of Use	eful Life)		10%	10%	10%
Useful Life (years)		20			
Owned Fence Equity		75%			
Fence Financed		25%			
Fencing Cost (\$/acre)					
Finance Rate & Term	7.000%	7 y	ears		
Principle & Interest Cost			\$4.31	\$3.06	\$2.18
Fencing Depreciation Cost			\$4.19	\$2.97	\$2.12
Owned Fence Opportunity	Cost		<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>
Total Cost			\$8.50	\$6.03	\$4.30

Fence Maintenance (% of investment cost) 2.00%

Pasture	Options -	Cost Sum	marv			
	Marginal	Improved	Crown	Community	Rented	
A. Operating Costs	Pasture	Pasture	Lands	Pasture	Pasture	
Land Development (\$/acre)	\$0.00	\$17.75	-	-	-	
Fertilizer - Annual (\$/acre)	\$0.00	\$20.00	-	-	-	
Herbicide (\$/acre)	\$1.00	\$1.00	\$0.00	-	\$0.00	
Fence Maintenance (\$/acre)	\$1.86	\$1.32	\$0.94	-	\$0.00	
Pasture Rental	-	-	\$4.14	-	\$29.69	
Taxes (\$/acre)	\$6.00	\$10.00	-	-	-	
Miscellaneous (\$/acre)	<u>\$0.00</u>	<u>\$0.00</u>	\$0.00	-	<u>\$0.00</u>	
Total Operating Costs (\$/acre)	\$8.86	\$50.07	\$5.08	-	\$29.69	
B. Fixed Costs						
Land (\$/acre)	\$16.40	\$36.89	-	-	-	
Fencing (\$/acre)	<u>\$8.50</u>	<u>\$6.03</u>	<u>\$4.30</u>	-	-	
Total Fixed Costs (\$/acre)	\$24.90	\$42.92	\$4.30	-	\$0.00	
Total Operating and Fixed (\$/acre)	\$33.76	\$92.99	\$9.37	-	\$29.69	
Total Operating and Fixed (\$/year)	\$25,317	\$23,713	\$18,746	\$26,090	•	
	•		-	•	-	
Cost per cow (135 days pasture)	\$168.78	\$158.29	\$124.97	\$173.93	-	
Cost per cow per day (135 days pasture)	\$1.25	\$1.17	\$0.93	\$1.29	\$1.10	
Pasture Options - 0	Carrying C	apacity an	d AUM A	nalysis		
Carrying Capacity						
Number of head pastured/acre	0.200	0.588	0.08	-	0.20	
Metabolic Animal Unit Value	1.25	1.25	1.25	1.25	1.25	
AUM Analysis						
Total Animal Unit Months (AUM's)	844	844	844	844	844	
Total AUM's - Available Per Acre	1.13	3.31	0.42		1.13	
Pasture Investment per AUM	\$711	\$544	-	_	-	
Total Pasture Cost Per AUM	\$30.00	\$28.10	\$22.21	\$30.91	\$26.38	
Desture Efficiency Analysis						
Pasture Efficiency Analysis Pounds liveweight per acre	270	794	108		270	
Pourius liveweight per acre	270	194	100	-	270	
Pasture Investment per Cow on Pasture	\$4,000	\$3,060	-	-	-	
Pasture	Options -	Usage Pla	nner			
	Marginal	Improved	Crown	Community	Rented	
	Pasture	Pasture	Lands	Pasture	Pasture	Total

Winter Feed Costs & Requirements Worksheet

Total Winter Feeding = 195 days

Enter your days on feed for each selected ration number in the "blue" numbers in the "gray" shaded area

	Pre Calving - Cows													
		Ration N	lumber	#1	#2	#3	#4	#5	#6	#7	#8	#9	Total	Total
		Days o	n Feed	135	0	0	0	0	0	0	0	0	lbs	Cost
Feed Type	\$/unit	lbs/Unit	\$/lb	Ra	tion - F	eed Pe	r Day (lbs bas	sed on	1400	lb cow)	/cow	/cow ²
Alfalfa Hay	\$155.00	2,000	0.078	0	0	0	0	0	0	0	0	0	0	\$0.00
Alfalfa Grass Hay	\$115.00	2,000	0.058	35	0	0	0	16	0	10	0	0	4,556	\$261.98
Grass Hay	\$95.00	2,000	0.048	0	0	0	0	0	0	0	0	0	0	\$0.00
Barley Straw	\$70.00	2,000	0.035	0	17	19	23	0	23	15	23	0	0	\$0.00
Barley Greenfeed	\$115.00	2,000	0.058	0	0	0	0	19	0	0	0	0	0	\$0.00
Corn Silage	\$40.00	2,000	0.020	0	0	47	0	0	0	32	0	0	0	\$0.00
Barley Silage	\$50.00	2,000	0.025	0	48	0	0	0	0	0	0	0	0	\$0.00
Barley Grain	\$4.50	48	0.094	0	0	0	11	0	10	0	0	0	0	\$0.00
32% Feedlot Suppl.	\$550	2,205	0.249	0	0.5	0.5	1	0	0	0	0	0	0	\$0.00
32% Liquid Suppl.	\$500	2,205	0.227	0	0	0	0	0	2.9	0	0	0	0	\$0.00
20% Grain Pellets	\$300	2,205	0.136	0	0	0	0	0	0	0	14	0	0	\$0.00
1:1 Mineral	\$50.00	55	0.909	0.12	0	0	0	0	0	0	0	0	16	\$14.20
2:1 Mineral	\$50.00	55	0.909	0.00	0.06	0.06	0.06	0.12	0.2	0.2	0.06	0	0	\$0.00
Limestone	\$20.00	55	0.364	0.00	0	0	0	0	0.2	0	0.2	0	0	\$0.00
Blue Salt	\$10.00	55	0.182	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0	9	\$1.66

\$/head/day	\$2.13	\$1.99	\$1.80	\$2.15	\$2.13	\$2.67	\$1.93	\$2.85	\$0.00	\$277.84

		Post Calving - Cows												
		Ration N	lumber	#1	#2	#3	#4	#5	#6	#7	#8	#9	Total	Total
		Days o	n Feed	60	0	0	0	0	0	0	0	0	lbs	Cost
Feed Type	\$/unit	lbs/Unit	\$/lb	Ra	tion - F	eed Pe	r Day	lbs ba	sed on	1400	lb cow	r)	/cow	/cow ²
Alfalfa Hay	\$155.00	2,000	0.078	0	0	0	0	0	0	0	0	0	0	\$0.00
Alfalfa Grass Hay	\$115.00	2,000	0.058	44	0	0	0	20	0	20	15	0	2,546	\$146.38
Grass Hay	\$95.00	2,000	0.048	0	0	0	0	0	0	0	0	0	0	\$0.00
Barley Straw	\$70.00	2,000	0.035	0	12	12	24	0	23	8	11	0	0	\$0.00
Barley Greenfeed	\$115.00	2,000	0.058	0	0	0	0	16	0	0	0	0	0	\$0.00
Corn Silage	\$40.00	2,000	0.020	0	0	48	0	0	0	40	0	0	0	\$0.00
Barley Silage	\$50.00	2,000	0.025	0	45	0	0	0	0	0	0	0	0	\$0.00
Barley Grain	\$4.50	48	0.094	5	12	7	15	5	15	0	0	0	289	\$27.12
32% Feedlot Suppl.	\$550	2,205	0.249	0	0	2	2.5	0	0	0	0	0	0	\$0.00
32% Liquid Suppl.	\$500	2,205	0.227	0	0	0	0	0	3.5	0	0	0	0	\$0.00
20% Grain Pellets	\$300	2,205	0.136	0	0	0	0	0	0	0	15	0	0	\$0.00
1:1 Mineral	\$50.00	55	0.909	0.18	0	0	0	0	0	0	0	0	10	\$9.47
2:1 Mineral	\$50.00	55	0.909	0.00	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0	0	\$0.00
Limestone	\$20.00	55	0.364	0.00	0.1	0.1	0.1	0	0.3	0	0.1	0	0	\$0.00
Blue Salt	\$10.00	55	0.182	0.10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	6	\$1.05

\$/head/day \$3.18 \$2.89 \$2.75 \$3.09 \$2.72 \$3.30 \$2.41 \$3.51 \$0.00 \$184.02

Winter Feed Summary											
	Total Days on Feed ¹	Average Cost/Day	Feed Cost per Cow ²								
Pre Calving - Cows	135	\$2.06	\$277.84								
Post Calving - Cows	60	\$3.07	\$184.02								
	195	\$2.37	\$461.86								

- 1. Total Days on Feed Must = 195 Days (as calculated on Input worksheet)
- 2. Feed Cost Per Cow Based on 1350 lb Cow

Note: The suggested feed rations above were formulated using Cowbytes Beef Ration Balancer software with no included allowance for wastage during feeding. Feed ration quantity and costs should be adjusted accordingly. If you need help with a ration, contact a Manitoba Agriculture Livestock Specialist.

		Fixed Costs	
0			
Cows (#/hand)	¢2.000	Machinery & Equipment	
Cow value (\$/head) Owned Cow Equity	\$2,600 <mark>85</mark> %	Total Investment (\$/cow) \$1,183	
Cows Financed (\$390 per head)	15%	Residual Value (End of Useful Life) 20% Useful Life (years) 10	
Cow Opportunity Cost (Investment Rate)	0.00%	Owned Machinery Equity 80%	
	0.00%	Machinery Financed (\$237 per head) 20%	
Cow cost (\$/head) Finance Rate & Term 7.000%	7 \	Years Machinery Opportunity Cost (Investment Rate 0.00%	
Principle & Interest Cost	\$72.37	Machinery & Equipment Cost (\$/cow)	
Owned Cows Opportunity Cost	\$0.00		ears
Total Cost	\$72.37		ears
Total Cost	\$12.31	,	
		Machinery Depreciation Cost \$94.64 Owned Machinery Opportunity Cost \$0.00	
Marsinal Dastrus Land		, , , , , , , , , , , , , , , , , , , ,	
Marginal Pasture Land	#000	Total Cost \$138.54	
Average Land value (\$/acre)	\$800	Duttelling 0 Facilities	
Pasture acres	300	Buildings & Facilities	
Owned Land Equity	75%	Total Investment (\$/cow) \$517	
Land Financed (\$200 per acre)	25%	Residual Value (End of Useful Life) 20%	
Land Opportunity Cost (Investment Rate)	0.00%	Useful Life (years) 20	
Land cost (\$/acre)	05.	Owned Building Equity 85%	
Finance Rate & Term 6.500%		Years Building Financed (\$78 per head) 15%	
Principle & Interest Cost	\$16.40	Building Opportunity Cost (Investment Rate) 0.00%	
Owned Land Opportunity Cost	\$0.00	Building & Water System Cost (\$/cow)	
Total Cost	\$16.40		ears
		Principle & Interest Cost \$14.39	
		Building Depreciation Cost \$20.68	
		Owned Building Opportunity Cost \$0.00	
Improved Pasture Land	04.000	Total Cost \$35.07	
Average Land value (\$/acre)	\$1,800		
Pasture acres	51	Fencing Table 1 (2)	
Owned Land Equity	75%	Total Investment (\$/cow) \$208	
Land Financed (\$450 per acre)	25%	Residual Value (End of Useful Life) 10%	
Land Opportunity Cost (Investment Rate)	0.00%	Useful Life (years) 20	
Land cost (\$/acre)	\	Owned Fence Equity 75%	
Finance Rate & Term 6.500%		Years Fence Financed (\$52 per head) 25%	
Principle & Interest Cost	\$36.89	Fence Opportunity Cost (Investment Rate) 0.00%	
Owned Land Opportunity Cost	<u>\$0.00</u>	Fencing Cost (\$/cow)	
Total Cost	\$36.89	Finance Rate & Term 7.000% 7	
	A.A	Principle & Interest Cost \$9.67	
Total Principle & Interest Cost (\$/cow)	\$193.61	Fence Depreciation Cost \$9.38	
Total Principle & Interest Cost (150 cows)	\$29,042	Owned Fence Opportunity Cost \$0.00	
		Total Cost \$19.05	

			Capital	Value			
	Market	Cov	w-calf		Market	Cov	v-calf
Buildings & Facilities	<u>Value</u>	Usage %	Allocation	Machinery & Equipment	<u>Value</u>	Usage %	Allocation
Windbreak Fence	\$5,813	100%	\$5,813	Miscellaneous Machinery	\$10,000	100%	\$10,000
Feedlot Fence	\$4,650	100%	\$4,650	Tractor & Loader	\$175,000	50%	\$87,500
Calf Shelters	\$9,300	100%	\$9,300	Bale Shredder	\$25,000	100%	\$25,000
Handling Facilities	\$15,000	100%	\$15,000	Tractor & Feed Wagon (silage)	\$0	100%	\$0
Calving Facility	\$12,500	100%	\$12,500	Stock Trailer	\$25,000	100%	\$25,000
Waterers	\$4,000	100%	\$4,000	Truck	\$60,000	50%	\$30,000
Pasture Watering System	\$4,000	100%	\$4,000		\$0	100%	\$0
Pasture Water Source	\$3,000	100%	\$3,000		\$0	100%	\$0
Gates	\$1,450	100%	\$1,450		\$0	100%	\$0
Feeders	\$2,400	100%	\$2,400		\$0	100%	\$0
Well & Pressure System	\$8,000	100%	\$8,000		\$0	100%	\$0
Hydro (6 poles @ \$400)	\$2,400	100%	\$2,400		\$0	100%	\$0
Storage Bins	\$5,000	100%	\$5,000		\$0	100%	\$0
	\$0	100%	\$0		\$0	100%	\$0
	\$0	100%	\$0		\$0	100%	\$0
	\$0	0%	\$0		\$0	100%	\$0
	Total Inv	v. = \$77, <mark>51</mark> 3	3 (\$517/cow)		Total Inv. =	= \$177,500	(\$1183/cow)

Extended Grazing Costs & Requirements Worksheet

Extended Grazing Days 35
Number of Cows 150
Number of Cow Grazing Days 5,250

- Inditibel of Cow Crazing Days	3,230				
	Extended Gra	azing Options	- Costs		
	Corn	Stockpiled	<u>Swath</u>	<u>Crop</u>	
	<u>Grazing</u>	<u>Forage</u>	<u>Grazing</u>	<u>Residue</u>	
Standing Forage Cost (\$/lb)	n/a	\$0.025	n/a	\$0.015	
Input Costs (\$/acre)					
Seed	\$96.00		\$32.00		
Fertilizer (incl. applic.)	\$147.00		\$81.00		
Herbicide	\$16.00		\$16.00		
Custom tillage	\$12.00		\$12.00		
Custom seeding	\$25.00		\$25.00		
Custom spraying	\$9.00		\$9.00		
Miscellaneous	\$7.75		\$7.75		
Land taxes	\$15.00		\$15.00		
Land Costs	\$75.00		\$75.00		
<u>Labour</u>	\$20.25		\$20.25		
Subtotal	\$423.00	\$50.00	\$293.00	\$7.50	
	* :==:::	*******	+	*****	
Fencing Costs	0.475	4 475	0.000	F 77F	
Estimated miles of fence required	0.175	1.475	0.300	5.775	
Fence Investment Cost/acre	\$1.31	\$1.31 \$1.64	\$1.31 \$1.64	\$1.31 \$1.64	
Fence Depreciation Cost/acre	\$1.64	\$1.64	φ1.04	\$1.64	
Total cost per acre	\$425.95	\$52.95	\$295.95	\$10.45	
Extended (Grazing Option	ons - Yields &	Cost Compa	arison	
Grazing Yield (wet tons/acre)	15.00	1.00	7.50	0.25	
% moisture	50	10	40	8	
Yield (tons dry matter/acre)	7.5	0.9	4.5	0.23	
Total # cow grazing days/acre	370.4	44.4	222.2	11.4	
Acres Req'd for Option	14	118	24	462	
Total Futurdad Consider Cont	#E 000 04	#C 040 00	67 400 00	£4.000.00	
Total Extended Grazing Cost	\$5,963.31	\$6,248.20	\$7,102.82	\$4,828.30	
Cost per cow	\$39.76	\$41.65	\$47.35	\$32.19	
Cost/cow/day (based on 35 days)	\$1.14	\$1.19	\$1.35	\$0.92	
	Extended Gra	zing - Usage	Planner		
	<u>Corn</u>	Stockpiled	<u>Swath</u>	Crop	
	Grazing	<u>Forage</u>	Grazing	Residue	<u>Total</u>
Discussion of the desired states of the desi		0.5	•		0.5
Planned extended grazing days	0	35	0	0	35
Cost per cow	\$0.00	\$41.65	\$0.00	\$0.00	\$41.65
Cost/cow/day (based on 35 days)	Ψ0.00	ψ 1.00	Ψ0.00	Ψ0.00	\$1.19
					¥ · · · · ·

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 utilization of this information is the responsibility of the user.

Assumptions

- 1. This budget outlines the cost of production for a cow-calf operation with 150 cows. 5 bulls and 95% calf crop weaned.
- 2. Building and equipment are valued at new cost.
- 3. Feed cost is a combined value of market price and on-farm production costs.
- 4. Manure removal is contracted out.
- 5. Replacement heifers are valued at fair market value.
- 6. This budget assumes an average weaning weight of 575 lbs. (steer calves 600 lbs and heifer calves 550 lbs.)

Capital and Debt Summary:										
Capital Summary	\$/cow	<u>Total</u>	Debt Summary	\$/cow	<u>Total</u>					
Breeding Herd Value	\$2,767	\$415,000	Cows	\$390	\$58,500					
Marginal Pasture Land	\$1,600	\$240,000	Marginal Pasture Land	\$400	\$60,000					
Improved Pasture Land	\$612	\$91,800	Improved Pasture Land	\$153	\$22,950					
Machinery & Equipment	\$1,183	\$177,500	Machinery & Equipment	\$237	\$35,490					
Fencing	\$208	\$31,260	Fencing	\$52	\$7,815					
Buildings & Facilities	<u>\$517</u>	<u>\$77,513</u>	Buildings & Facilities	<u>\$78</u>	\$11,633					
Total Capital Investment	\$6,887	\$1,033,072	Total Debt	\$1,309	\$196,387					

Debt/EBITDAR ratio = 1.71:1

Cow Calf Equity 81%

	Land Use Efficiency and Feed Security Analysis:										
				Acres/cow Total	al Acres						
Pasture (Marginal, Improved,	Crown Land and Rented	Pasture)	135 Days	4.34	651						
Extended Grazing (Corn, Sto	ckpiled, Swath and Crop F	Residue)	35 Days	0.79	118						
Planned forage & feed waste	amount 10%	1,500	pound bales								
Alfalfa Hay	0 Total Tons @	3.50	tons/acre (4.7 bales/ac)	0.00	0						
Alfalfa Grass Hay	586 Total Tons @	2.79	tons/acre (3.7 bales/ac)	1.40	210						
Grass Hay	0 Total Tons @	2.00	tons/acre (2.7 bales/ac)	0.00	0						
Barley Greenfeed	0 Total Tons @	2.83	tons/acre (3.8 bales/ac)	0.00	0						
Corn Silage	0 Total Tons @	15.0	tons/acre	0.00	0						
Barley Silage	0 Total Tons @	7.5	tons/acre	0.00	0						
Barley Grain	994 Total bu @	78	bu/acre	<u>0.08</u>	<u>13</u>						
				6.61	992						

Profitability and Breakeven Analysis:

Gross Revenue = calf weight (lbs) x $\frac{1997.36}{100}$ calf crop (eg. 575 x $\frac{3.66}{10}$ x $\frac{95\%}{100}$ = $\frac{1997.36}{100}$

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost

(eg. (\$1,997.36 - \$1,643.57) / \$1643.57 = 21.5%

Return on Asset (ROA) = (Margin Over Operating - Owners Labour - Building Depreciation - Machinery Depreciation - Fence Depreciation) / ((Building, Machinery & Equipment Investment + Pasture Investment + Breeding Herd Investment) / Herd Size) (eg. (\$880.18 - \$216.00 - \$20.68 - \$94.64 - \$9.38) / ((\$286,272 + \$331,800 + \$415,000) / 150) = 7.8%

Operating Expense Ratio = (operating cost ÷ gross revenue) x 100

(eg. ($$1117.19 \div 1997.36) x 100 = 56%)

Cost Summary:

Summer Grazing Cost Per Cow Per Day = pasture cost \div days (eg. \$158.54 \div 135 = \$1.17)

Extended Grazing Cost Per Cow Per Day = grazing cost ÷ days (eg. \$41.65 ÷ 35 = \$1.19)

Winter Feed Cost Per Cow Per Day = feed cost ÷ days (eg. \$479.82 ÷ 195 = \$2.46)

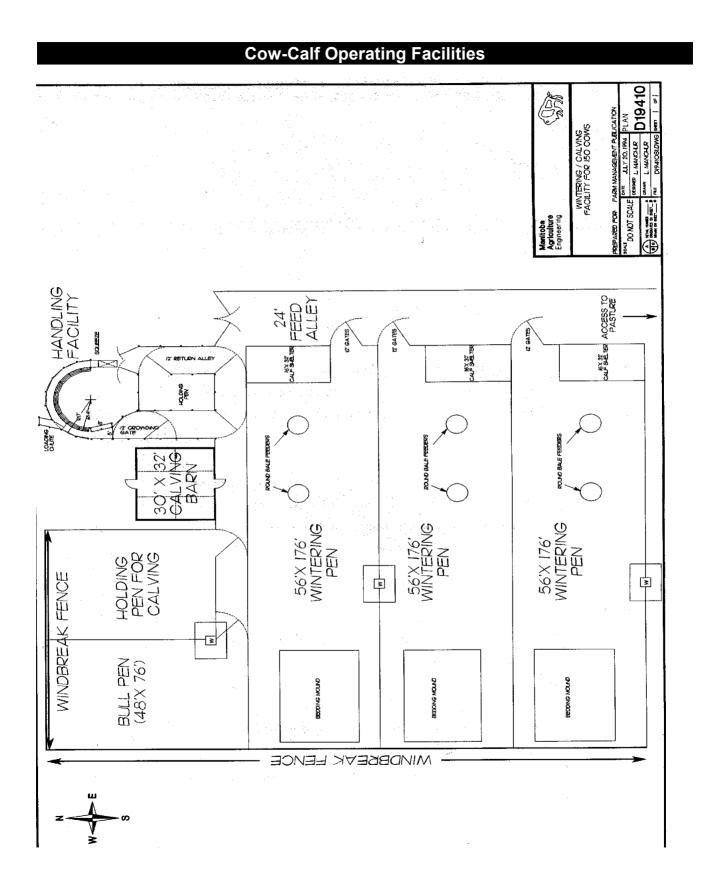
Yardage Cost Per Cow Per Day = (\$72.33 straw + \$42.72 fuel & repair + \$6.80 building insurance + \$11.69 utilities + \$10.84 manure removal + \$20.68 building depreciation + \$94.64 machinery depreciation + \$14.39 building investment + \$43.90 machinery investment + \$26.99 operating interest + \$4.21 misc. + \$135.00 labour) ÷ 230 days = \$2.099

September, 2024

Contact Us

For more information, contact a Farm Management Specialist.

- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224



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