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# Cow/Calf and Backgrounding Cost of Production



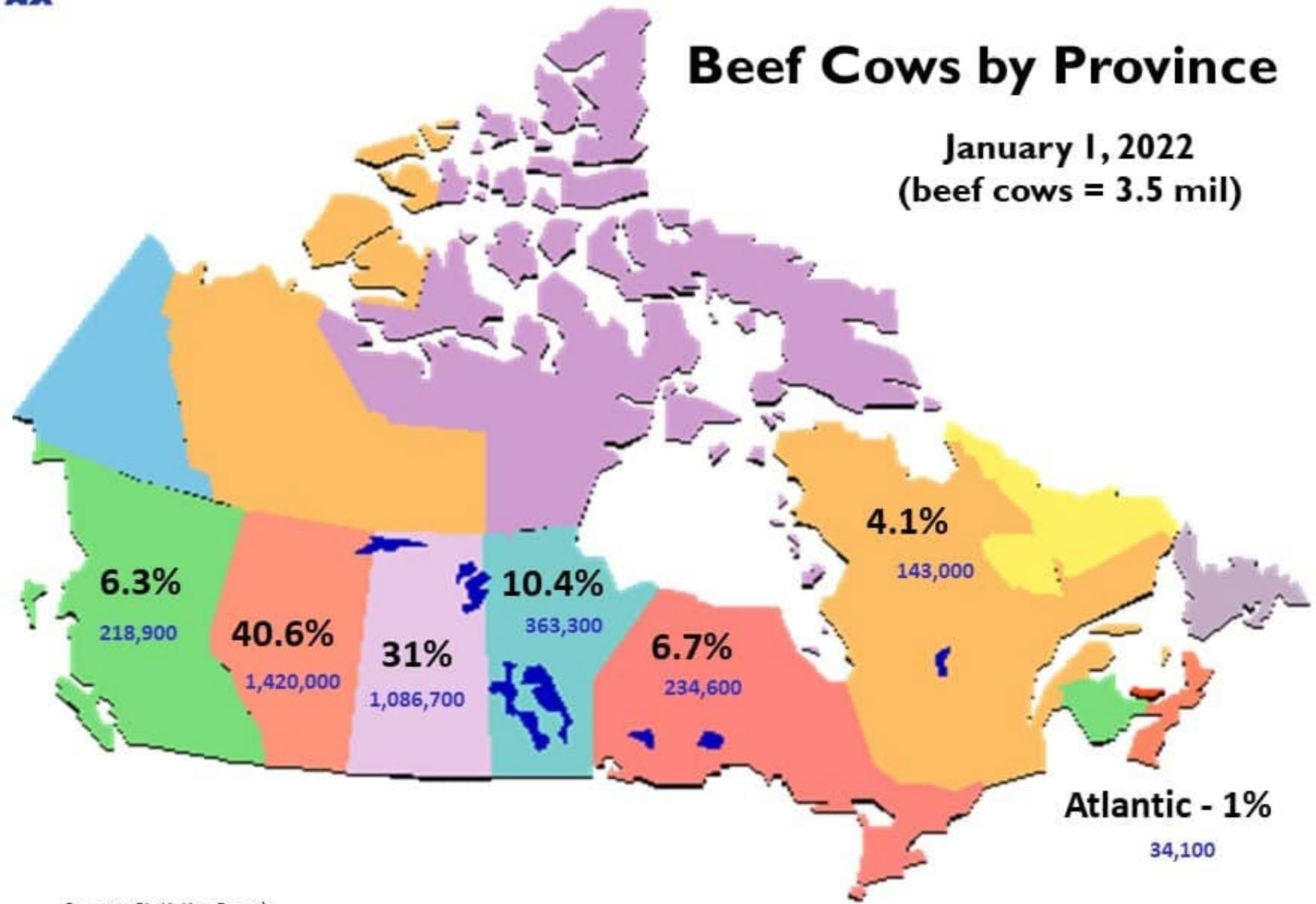
**Ben Hamm, P.Ag.  
Farm Management Specialist  
Manitoba Agriculture**

**December 2022**

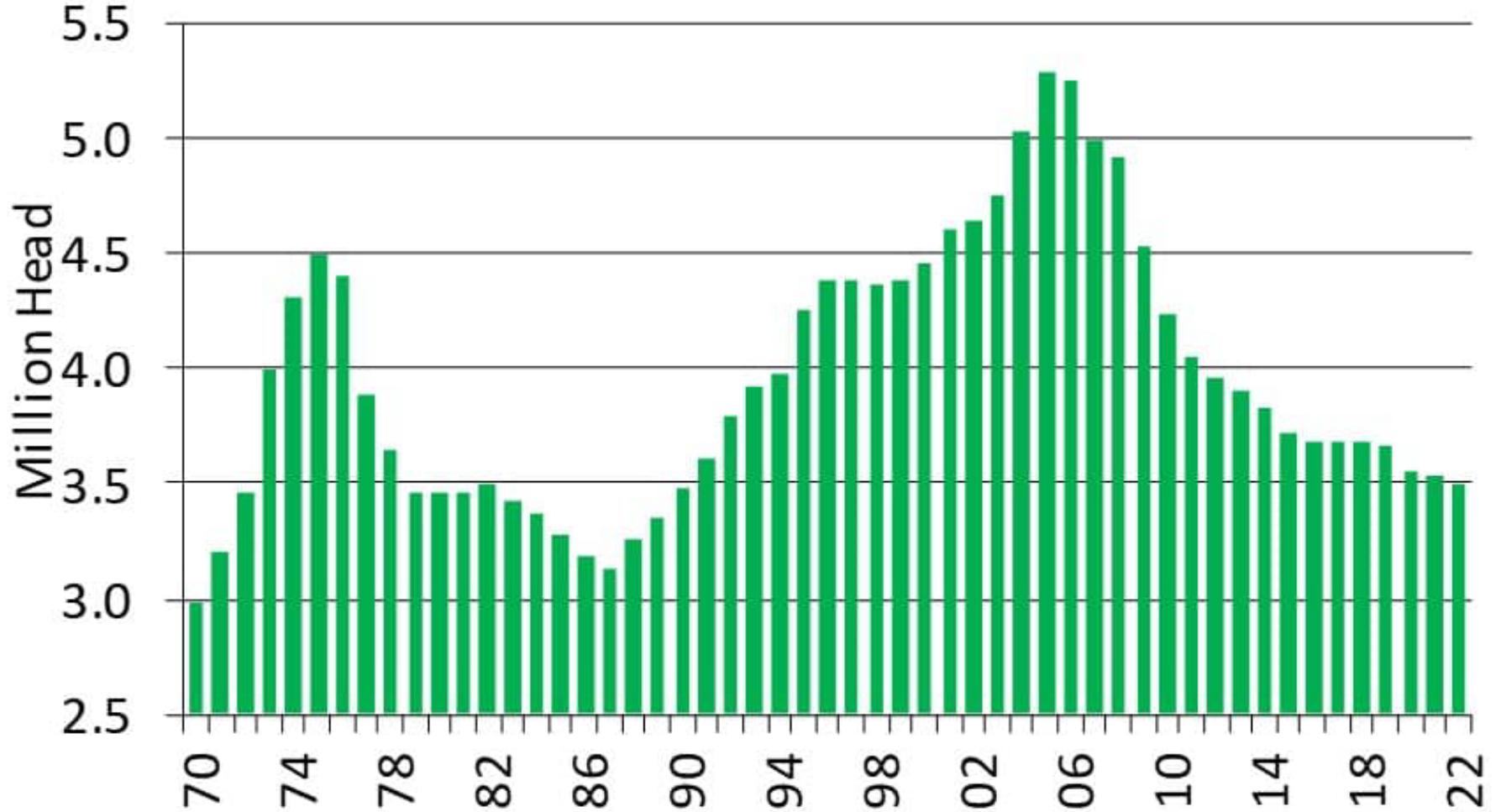


# Beef Cows by Province

January 1, 2022  
(beef cows = 3.5 mil)

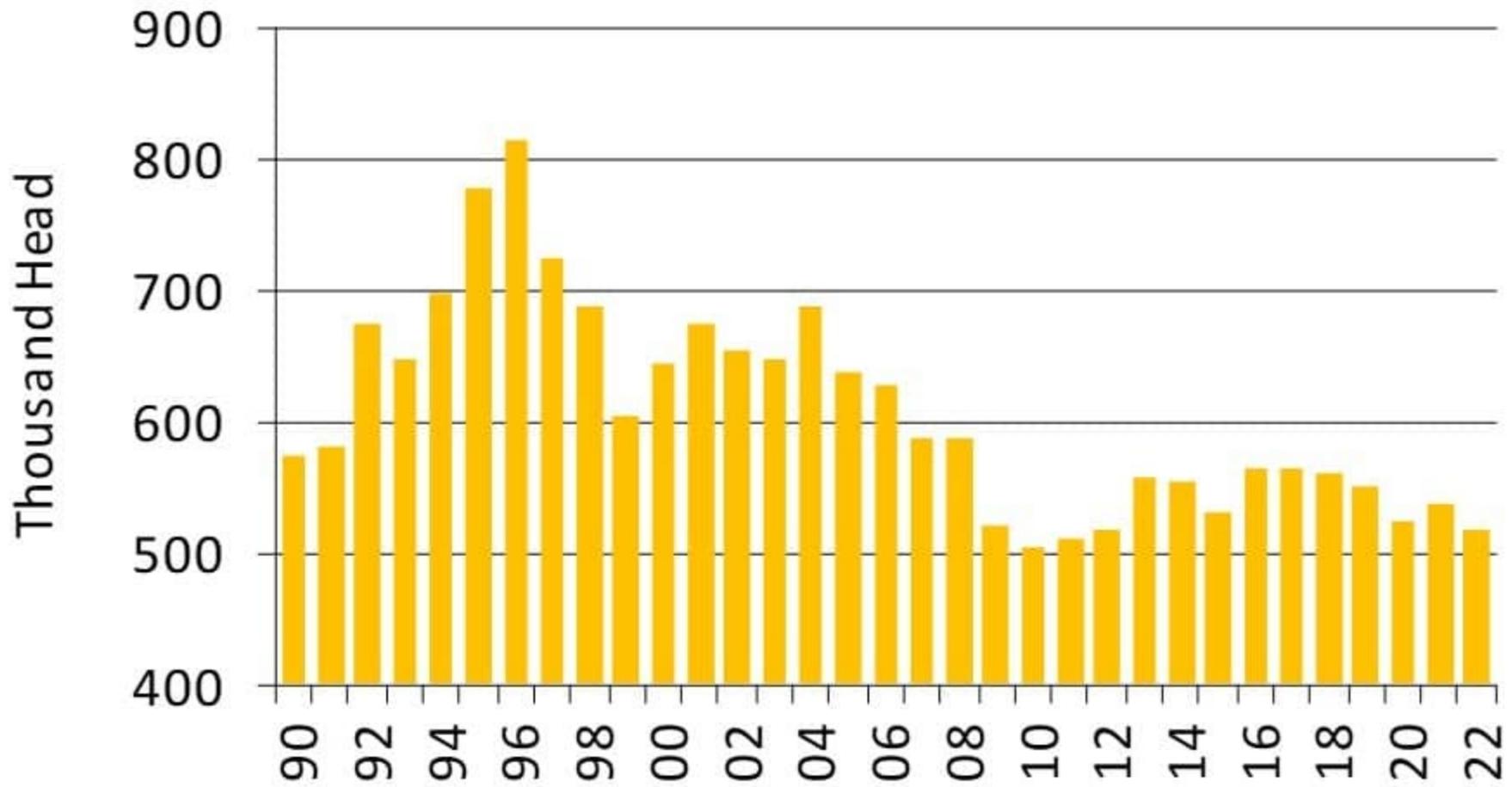


# Canadian Beef Cow Numbers January 1





# Canadian Beef Heifers (Breeding) January 1

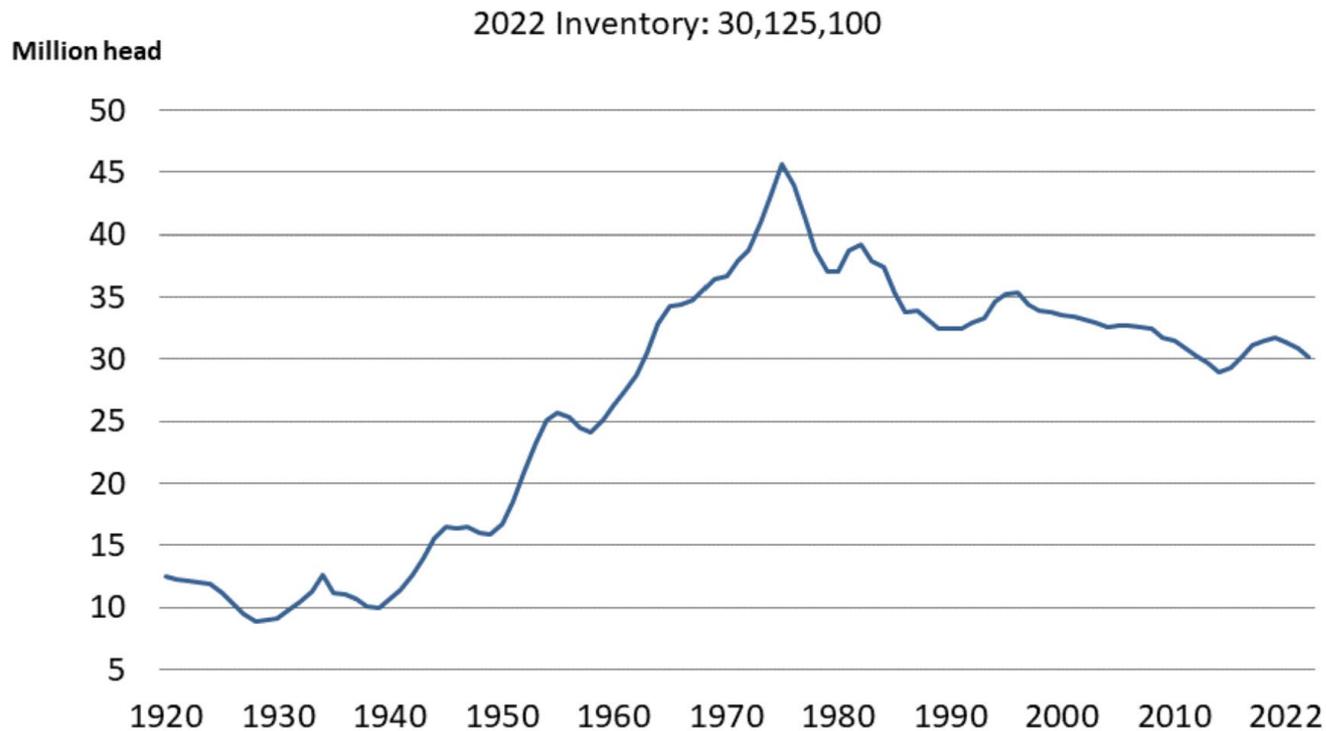


Source: Statistics Canada

## Charts and Maps

### Beef Cows: Inventory on January 1 by Year, US

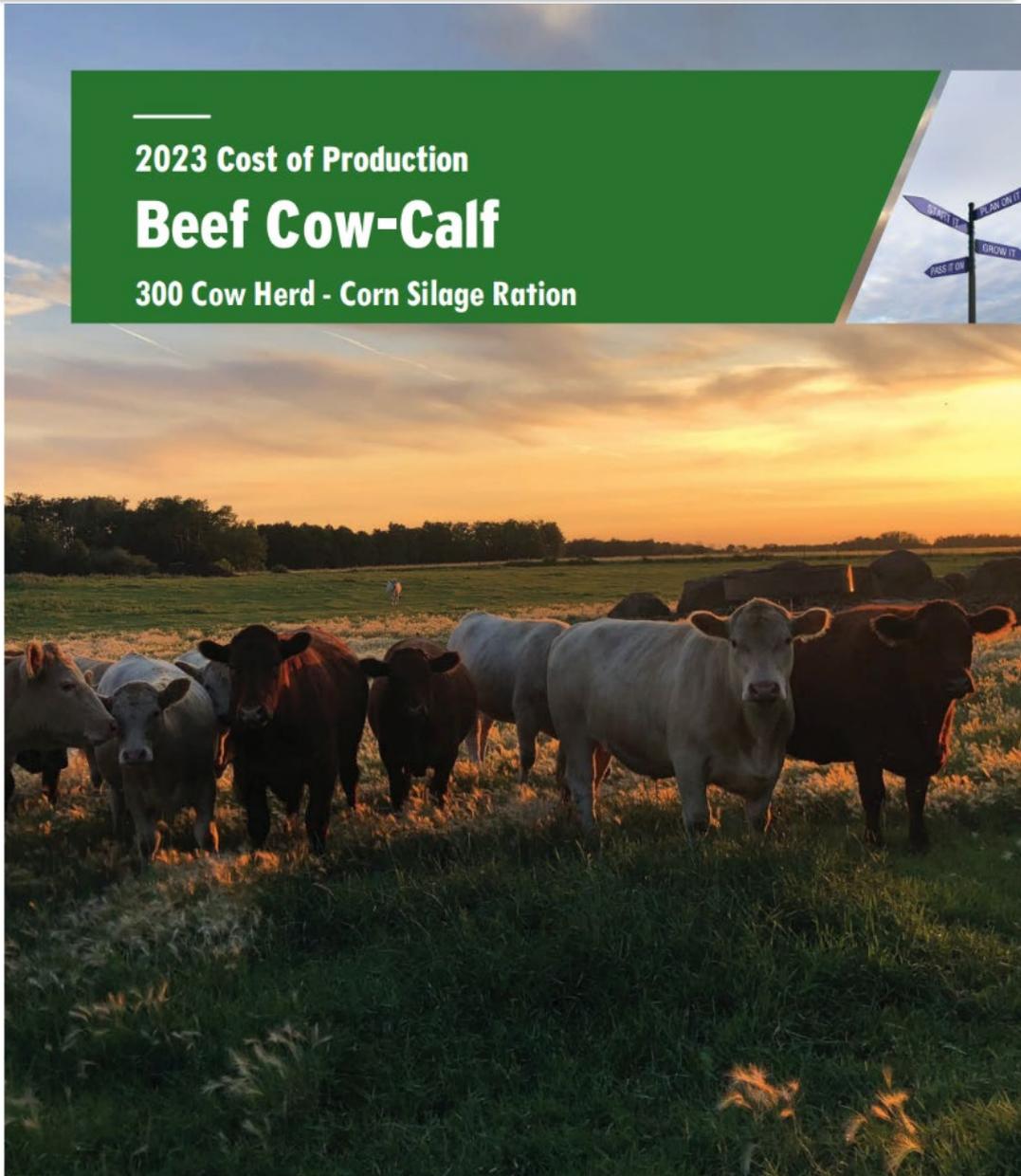
#### Beef Cow Inventory – United States: January 1



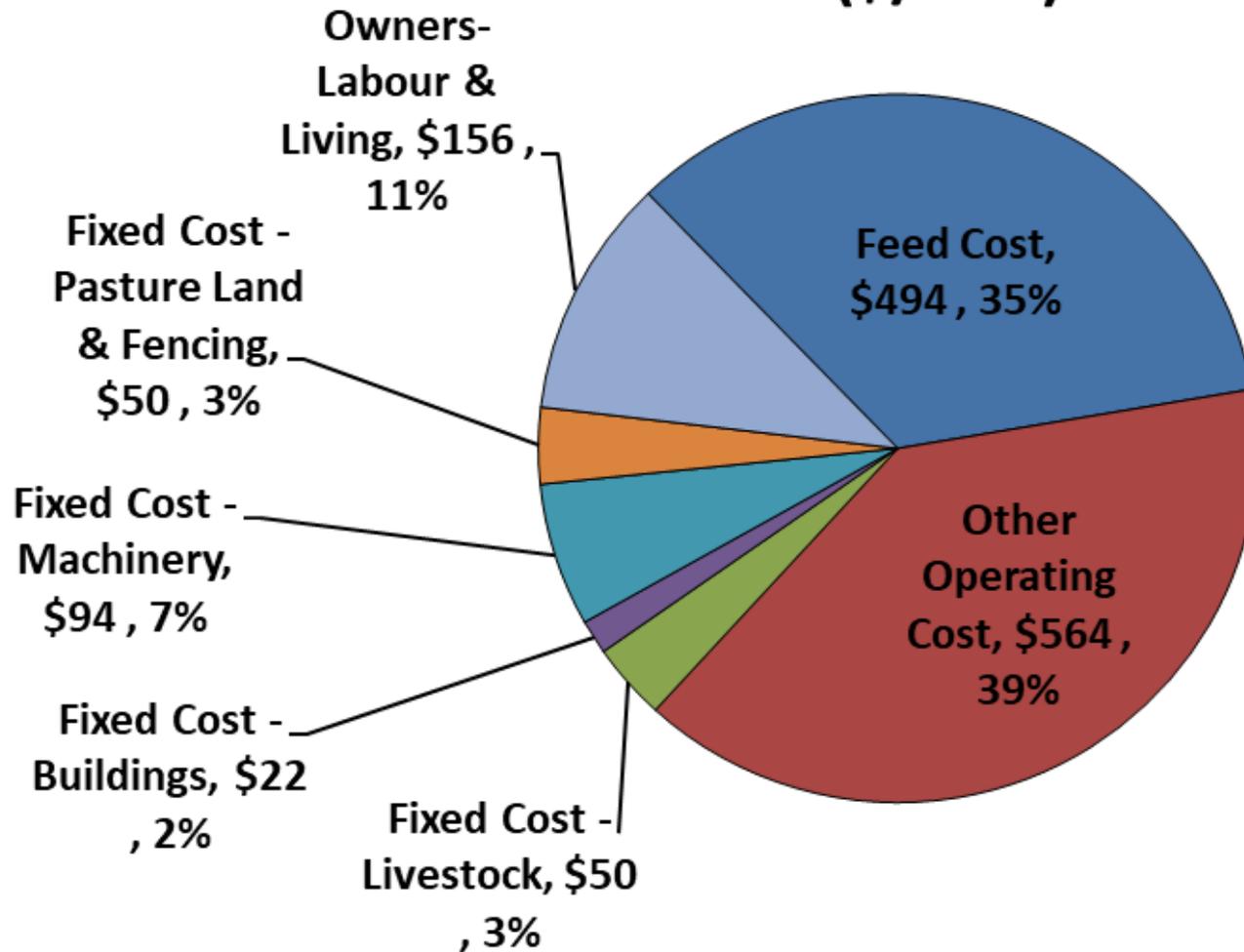
2023 Cost of Production

# Beef Cow-Calf

300 Cow Herd - Corn Silage Ration



## 300 Head Beef Cow Calf - Total Production Costs (\$/cow)



## A. Operating Costs

### 1. Feed Costs

Grain and Concentrates

\$101.87

Forages

\$311.02

Salt & Minerals

\$39.47

Extended Grazing Forages

\$41.46

**Total Feed Cost**

**\$493.82**

### Pre Calving - Cows

	Ration Number			#1	#2	#3	#4	#5	#6	#7	#8	#9	Total lbs /cow	Total Cost /cow <sup>2</sup>
	Days on Feed			0	0	135	0	0	0	0	0	0		
Feed Type	\$/unit	lbs/Unit	\$/lb	Ration - Feed Per Day (lbs based on 1400 lb cow)										
Alfalfa Hay	\$160.00	2,000	0.080	0	0	0	0	0	0	0	0	0	0	\$0.00
Alfalfa Grass Hay	\$120.00	2,000	0.060	35	0	0	0	16	0	10	0	0	0	\$0.00
Grass Hay	\$100.00	2,000	0.050	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	2,473	\$86.57
Barley Greenfeed	\$120.00	2,000	0.060	0	0	0	0	19	0	0	0	0	0	\$0.00
Corn Silage	\$45.00	2,000	0.023	0	0	47	0	0	0	32	0	0	6,118	\$137.66
Barley Silage	\$55.00	2,000	0.028	0	48	0	0	0	0	0	0	0	0	\$0.00
Barley Grain	\$6.00	48	0.125	0	0	0	11	0	10	0	0	0	0	\$0.00
32% Feedlot Suppl.	\$625	2,205	0.283	0	0.5	0.5	1	0	0	0	0	0	65	\$18.45
32% Liquid Suppl.	\$475	2,205	0.215	0	0	0	0	0	2.9	0	0	0	0	\$0.00
20% Grain Pellets	\$500	2,205	0.227	0	0	0	0	0	0	0	14	0	0	\$0.00
1:1 Mineral	\$50.00	55	0.909	0.12	0	0.00	0	0	0	0	0	0	0	\$0.00
2:1 Mineral	\$50.00	55	0.909	0	0.06	0.06	0.06	0.12	0.2	0.2	0.06	0	8	\$7.10
Limestone	\$5.50	55	0.100	0	0	0.00	0	0	0.2	0	0.2	0	0	\$0.00
Blue Salt	\$7.75	55	0.141	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0	9	\$1.28
			<b>\$/head/day</b>	<b>\$2.22</b>	<b>\$2.12</b>	<b>\$1.93</b>	<b>\$2.53</b>	<b>\$2.22</b>	<b>\$2.89</b>	<b>\$2.04</b>	<b>\$4.06</b>	<b>\$0.00</b>		<b>\$251.07</b>

<b>Extended Grazing Options - Costs</b>					
	<u>Corn Grazing</u>	<u>Stockpiled Forage</u>	<u>Swath Grazing</u>	<u>Crop Residue</u>	
<b>Standing Forage Cost (\$/lb)</b>	n/a	<b>\$0.025</b>	n/a	<b>\$0.015</b>	
<b>Input Costs (\$/acre)</b>					
Seed	<b>\$96.00</b>		<b>\$32.00</b>		
Fertilizer (incl. applic.)	<b>\$209.00</b>		<b>\$114.00</b>		
Herbicide	<b>\$16.00</b>		<b>\$16.00</b>		
Custom tillage	<b>\$12.00</b>		<b>\$12.00</b>		
Custom seeding	<b>\$25.00</b>		<b>\$25.00</b>		
Custom spraying	<b>\$9.00</b>		<b>\$9.00</b>		
Miscellaneous	<b>\$7.75</b>		<b>\$7.75</b>		
Land taxes	<b>\$10.00</b>		<b>\$10.00</b>		
Land Costs	<b>\$71.26</b>		<b>\$71.26</b>		
<u>Labour</u>	\$19.50		\$19.50		
<b>Subtotal</b>	<b>\$475.51</b>	<b>\$50.00</b>	<b>\$316.51</b>	<b>\$7.50</b>	
<b>Fencing Costs</b>					
Estimated miles of fence required	0.350	2.950	0.588	11.550	
Fence Investment Cost/acre	\$1.07	\$1.07	\$1.07	\$1.07	
Fence Depreciation Cost/acre	\$1.64	\$1.64	\$1.64	\$1.64	
<b>Total cost per acre</b>	<b>\$478.21</b>	<b>\$52.70</b>	<b>\$319.21</b>	<b>\$10.20</b>	
<b>Extended Grazing Options - Yields &amp; Cost Comparison</b>					
<b>Grazing Yield (wet tons/acre)</b>	<b>15.00</b>	<b>1.00</b>	<b>7.50</b>	<b>0.25</b>	
<b>% moisture</b>	<b>50</b>	<b>10</b>	<b>40</b>	<b>8</b>	
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	
<b>Acres Req'd for Option</b>	<b>28</b>	<b>236</b>	<b>47</b>	<b>924</b>	
<b>Total Extended Grazing Cost</b>	<b>\$13,390.02</b>	<b>\$12,438.37</b>	<b>\$15,003.10</b>	<b>\$9,429.39</b>	
<b>Cost per cow</b>	<b>\$44.63</b>	<b>\$41.46</b>	<b>\$50.01</b>	<b>\$31.43</b>	
<b>Cost/cow/day (based on 35 days)</b>	<b>\$1.28</b>	<b>\$1.18</b>	<b>\$1.43</b>	<b>\$0.90</b>	

## 2. Other Operating Costs

Straw	\$70.00
Veterinary Medicine & Supplies	\$21.90
Breeding Costs	\$54.29
Fuel, Maintenance & Repairs	\$42.39
Utilities	\$9.48
Marketing & Transportation	\$37.76
Death Loss	\$21.88
Manure Removal	\$10.84
Insurance	\$12.51
Herd Replacement	\$85.80
Pasture Rental	\$60.58
Pasture Operating	\$41.71
Labour - Hired	\$52.00
Miscellaneous	<u>\$3.33</u>
Subtotal Operating Costs	\$1,018.28
Operating Interest	<u>\$39.46</u>
<b>Total Operating Costs</b>	<b>\$1,057.73</b>

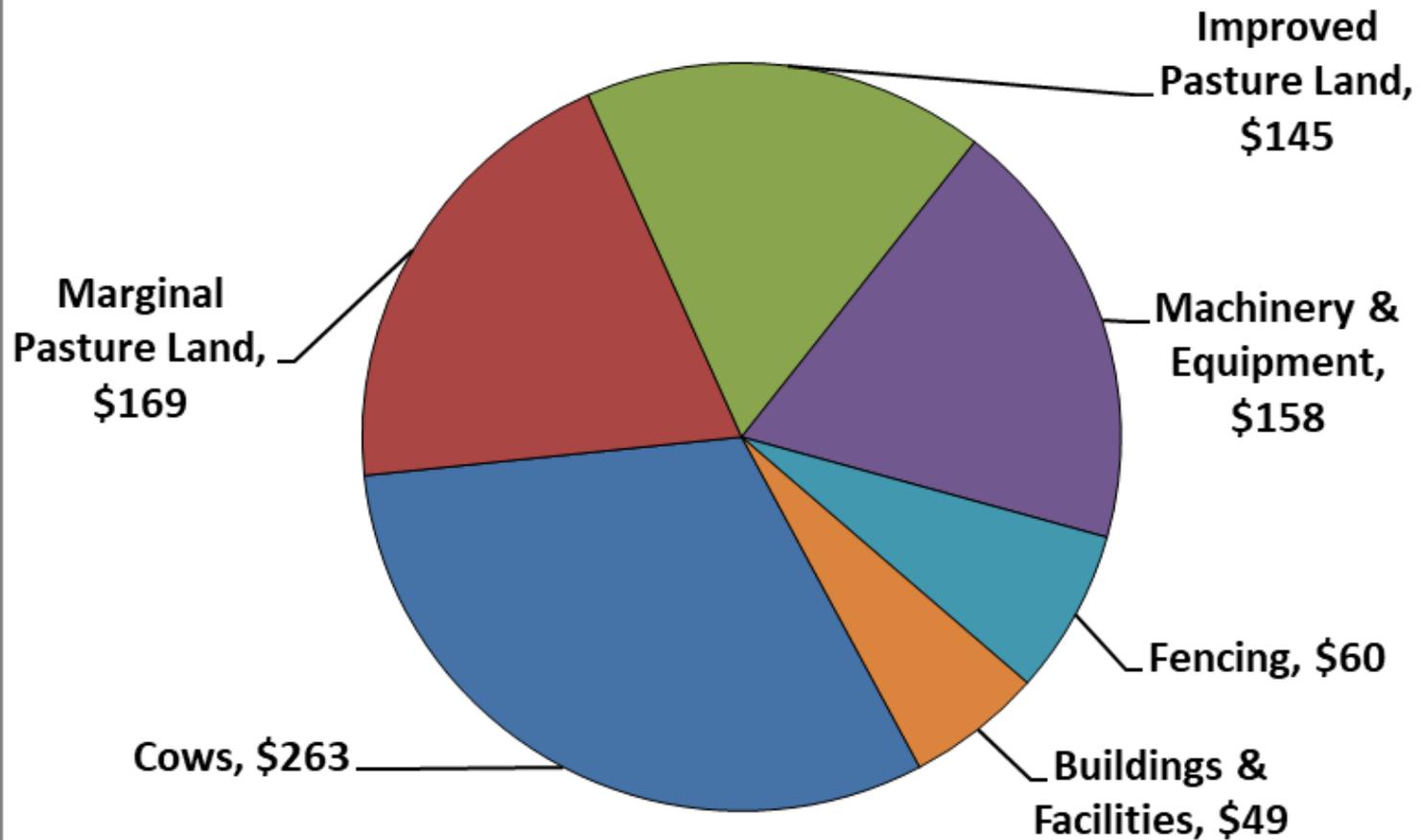
## **B. Fixed Costs**

Livestock	\$49.99
Buildings	\$22.35
Machinery & Equipment	\$93.52
Pasture Land & Fencing	<u>\$49.80</u>
<b>Total Fixed Costs</b>	<b><u>\$215.67</u></b>

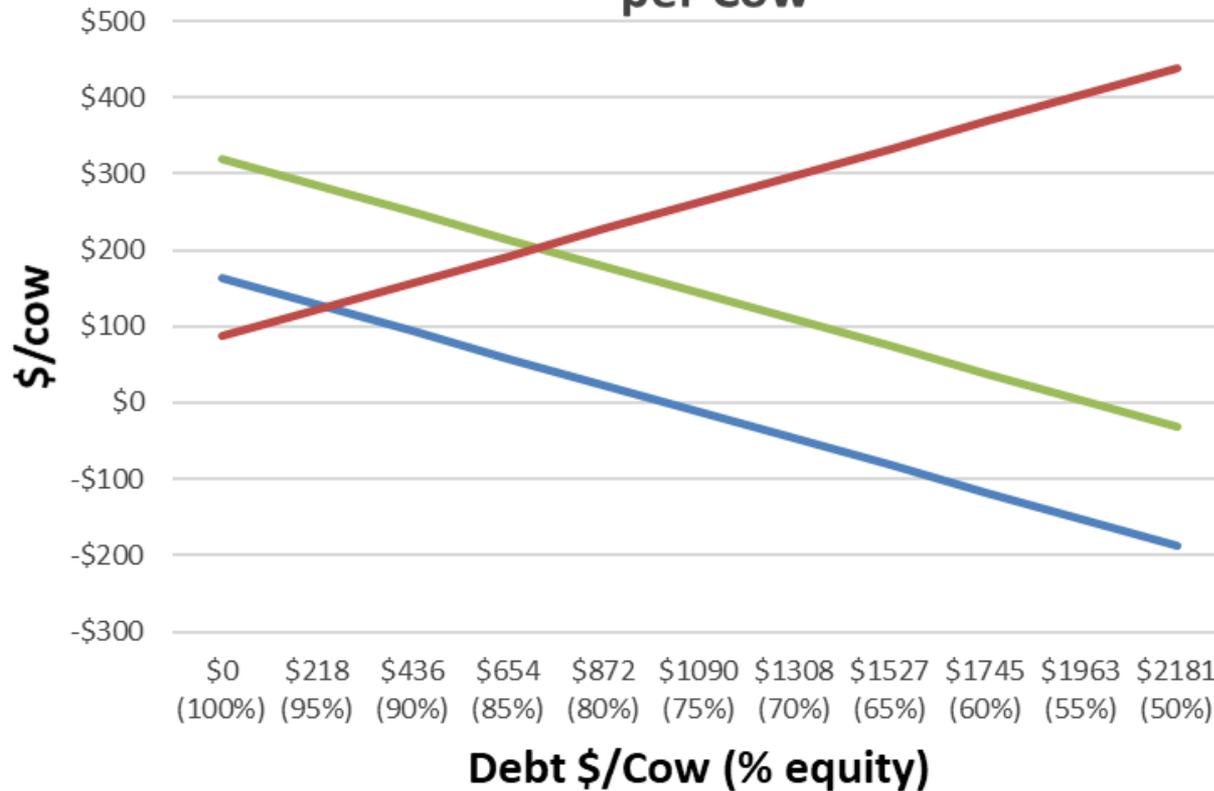
**C. Owners - Labour & Living** **\$156.00**

**Total Cost of Production** **\$1,429.40**

### 300 Head Beef - Debt per Cow (\$843/cow @ 81% Equity)



### 300 Head Beef Cow Calf - Profitability vs. Debt per Cow



— Profit (over Operating & Fixed Costs) 
 — Profit (over Total Costs) 
 — Total Fixed Costs

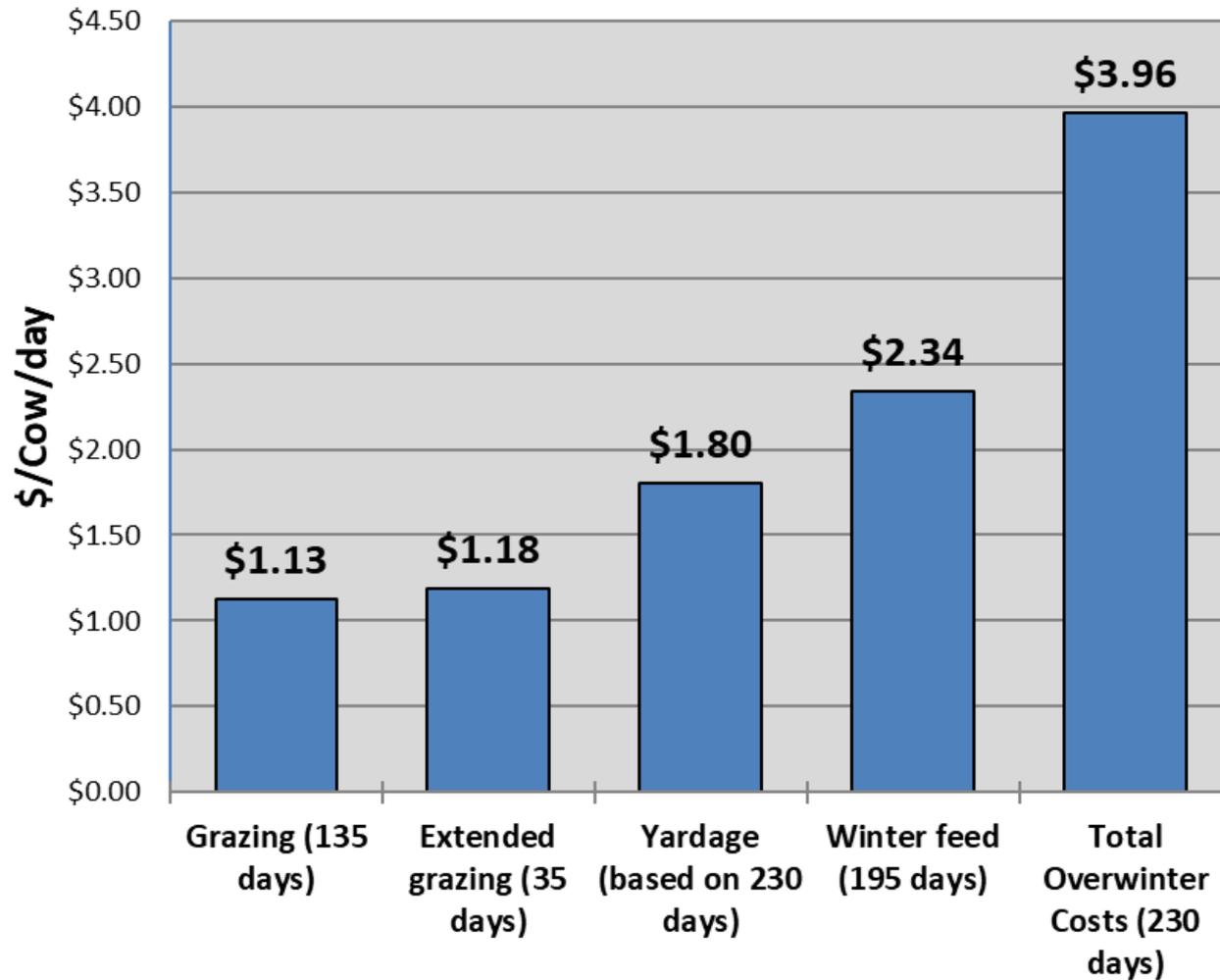
### What Can you Profitably Pay for Cows? (15% financed)



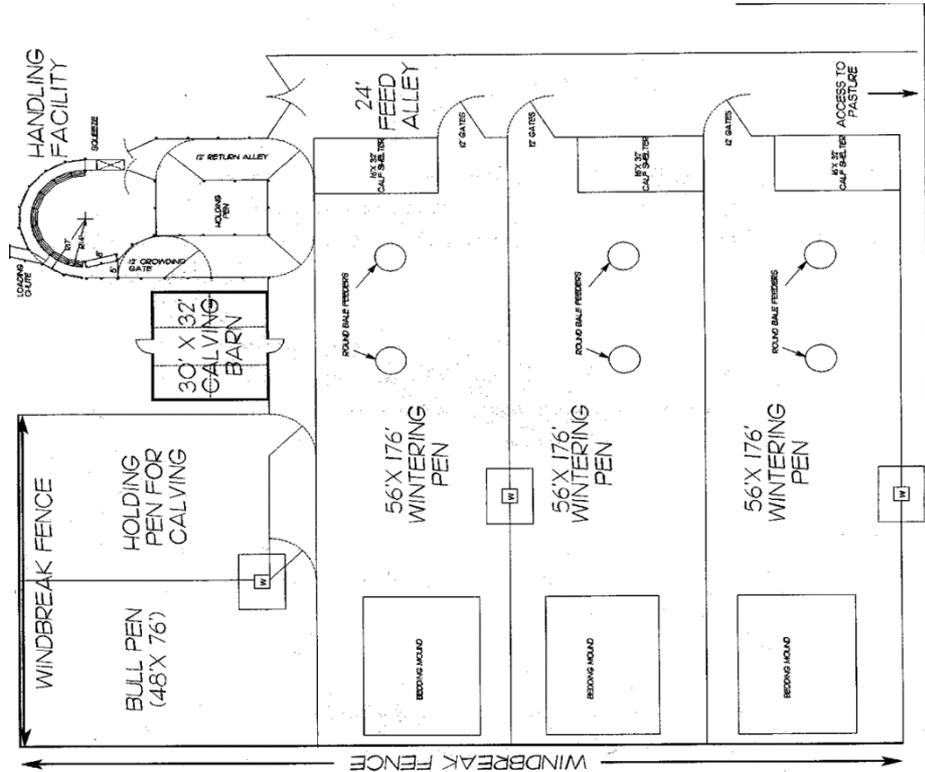
## Profitability and Breakeven Analysis

<b>Estimated Farmgate</b>	<b><u>Per Cow</u></b>
Price (\$ per cwt)	<b>\$268.04</b>
Calf weight (lbs)	<b>575</b>
Gross Revenue / cow	<b>\$1,464.17</b>
<b>Operating Expense Ratio</b>	<b>72.2%</b>
<hr/>	
<b>Marginal Returns</b>	
Over Feed Costs	<b>\$970</b>
Over Operating Costs	<b>\$406</b>
Over Operating & Fixed Costs	<b>\$191</b>
Over Total Costs (Net Profit)	<b>\$35</b>
	<b>Price</b>
<b>Breakeven (Lb. weaned calf)</b>	<b><u>(\$/cwt)</u></b>
Over Feed & Operating Costs	<b>\$194</b>
Over Feed, Operating & Fixed Costs	<b>\$233</b>
Over Total Costs	<b>\$262</b>

## 300 Head Beef Cow Calf - Cost Summary (\$/cow/day)



# Yardage Calculation



**Capital Value**

	Market	Cow-calf			Market	Cow-calf	
<u>Buildings &amp; Facilities</u>	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>	<u>Machinery &amp; Equipment</u>	<u>Value</u>	<u>Usage %</u>	<u>Allocation</u>
Windbreak Fence	\$9,360	100%	\$9,360	Miscellaneous Machinery	\$10,000	100%	\$10,000
Feedlot Fence	\$9,360	100%	\$9,360	Tractor & Loader	\$175,000	50%	\$87,500
Calf Shelters	\$17,325	100%	\$17,325	Bale Shredder	\$25,000	100%	\$25,000
Handling Facilities	\$15,000	100%	\$15,000	Tractor & Feed Wagon (silage)	\$60,000	100%	\$60,000
Calving Facility	\$12,500	100%	\$12,500	Stock Trailer	\$25,000	100%	\$25,000
Waterers	\$8,000	100%	\$8,000	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
<b>Total</b>	<b>\$0</b>	<b>0%</b>	<b>\$97,795</b>	<b>Total</b>	<b>\$0</b>	<b>100%</b>	<b>\$227,500</b>
<b>Total Facilities per cow</b>	<b>\$325.98</b>			<b>Total Machinery per cow</b>	<b>\$758.33</b>		

<b>5. Other Operating Costs:</b>		<b>\$/cow/yr</b>	<b>tons/cow/yr</b>			<b>Total Cost</b>	<b>\$/cow/day</b>
<b>Bedding (straw)</b>		<b>\$70.00</b>	/ton*	<b>1</b>	<b>300</b> tons	<b>\$21,000</b>	<b>\$0.304</b>
Veterinary Medicine & Supplies:						<b>\$0.00</b>	<b>\$0.000</b>
Specialized Vet Services						<b>\$0.00</b>	<b>\$0.000</b>
Fuel * see fuel tab						<b>\$15,928.57</b>	<b>\$0.231</b>
Utilities						<b>\$2,843.00</b>	<b>\$0.041</b>
Equipment repairs						<b>\$5,005.00</b>	<b>\$0.073</b>
Building and fences repair						<b>\$1,173.54</b>	<b>\$0.017</b>
Building and equipment insurance						<b>\$823.50</b>	<b>\$0.012</b>
Manure Removal						<b>\$3,252.00</b>	<b>\$0.047</b>
<b>Miscellaneous</b>						<b>\$999.00</b>	<b>\$0.014</b>
<b>Total Other Operating Costs</b>						<b>\$51,025</b>	<b>\$0.739</b>
<b>Subtotal Operating Costs</b>							
<b>Operating Interest</b>						<b>\$7,782</b>	<b>\$0.113</b>
<b>Total Operating Costs for Winter Period</b>						<b>\$58,807</b>	<b>\$0.852</b>
<b>B. Fixed Costs:</b>							
		<b>Facilities</b>		<b>Equipment</b>			
Original Value		<b>\$97,795</b>		<b>\$227,500</b>			
Salvage Value		<b>\$0</b>		<b>\$23,750</b>			
Useful Life		<b>20</b> yrs		<b>10</b> yrs			
Interest Rate		<b>3.00%</b>		<b>3.00%</b>		<b>Total Cost</b>	<b>\$/cow/day</b>
<b>Total Fixed Costs Per Cow</b>		<b>\$21.19</b>		<b>\$80.48</b>		<b>\$30,500</b>	<b>\$0.442</b>
<b>C. Labour Costs:</b>							
						<b>Total Cost</b>	<b>\$/cow/day</b>
Feeding, bedding		<b>5.00</b>	hr/cow	<b>\$26.00</b>	/hr (45.7 hrs per week)	<b>\$39,000</b>	<b>\$0.565</b>
Optional Calving Management Fee				<b>\$0.00</b>	/cow	<b>\$0</b>	<b>\$0.000</b>
Calf Crop Bonus		<b>100%</b>	/rate	<b>\$0.00</b>	/calf	<b>\$0</b>	<b>\$0.000</b>
<b>Total Labour Costs for Winter Period</b>						<b>\$39,000</b>	<b>\$0.565</b>
<b>Total Cost</b>							
<b>Yardage Cost (Operating, &amp; Fixed)</b>						<b>\$89,307</b>	<b>\$1.294</b>
<b>Yardage Cost (Labour)</b>						<b>\$39,000</b>	<b>\$0.565</b>
<b>Yardage Cost (Operating, &amp; Fixed&amp; Labour)</b>						<b>\$128,307</b>	<b>\$1.86</b>



*Sherri Grant*

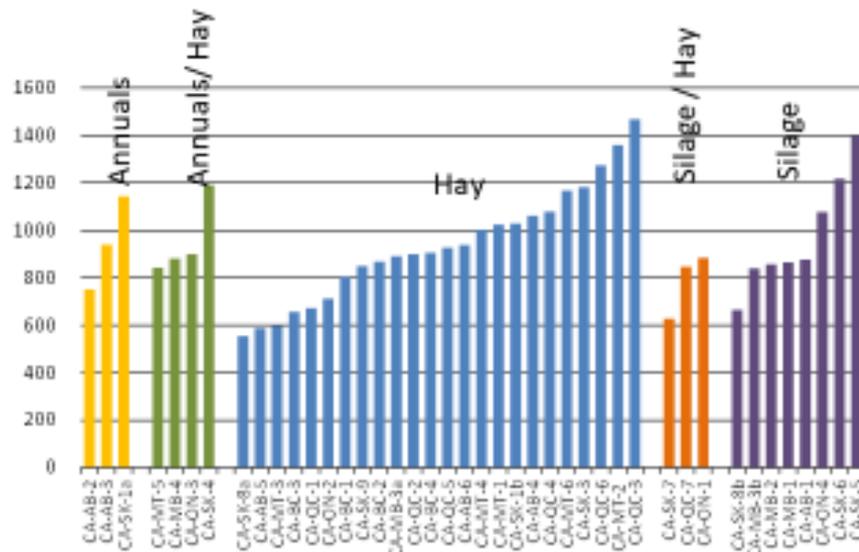


# CANADIAN COW-CALF COST OF PRODUCTION NETWORK

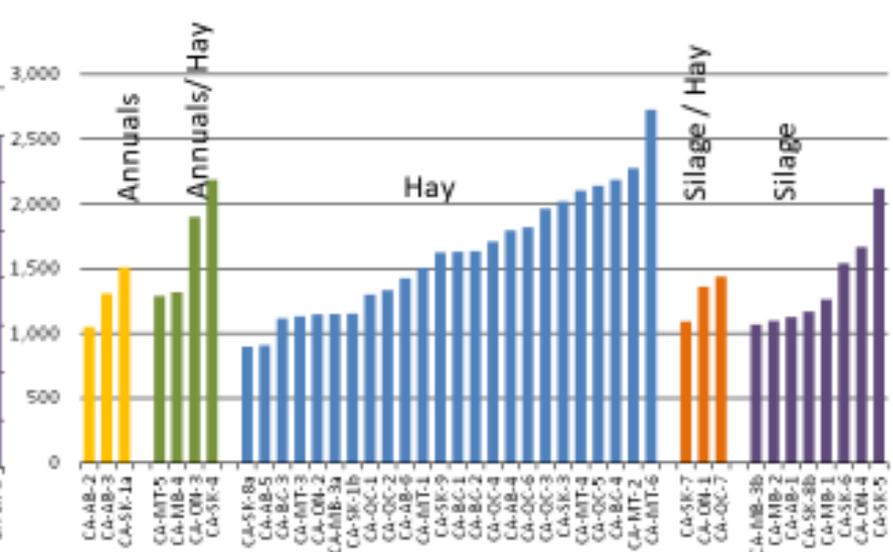
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Canfax Research Services and  
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# Costs by Winter Feed

Cash Cost per cow, 2021

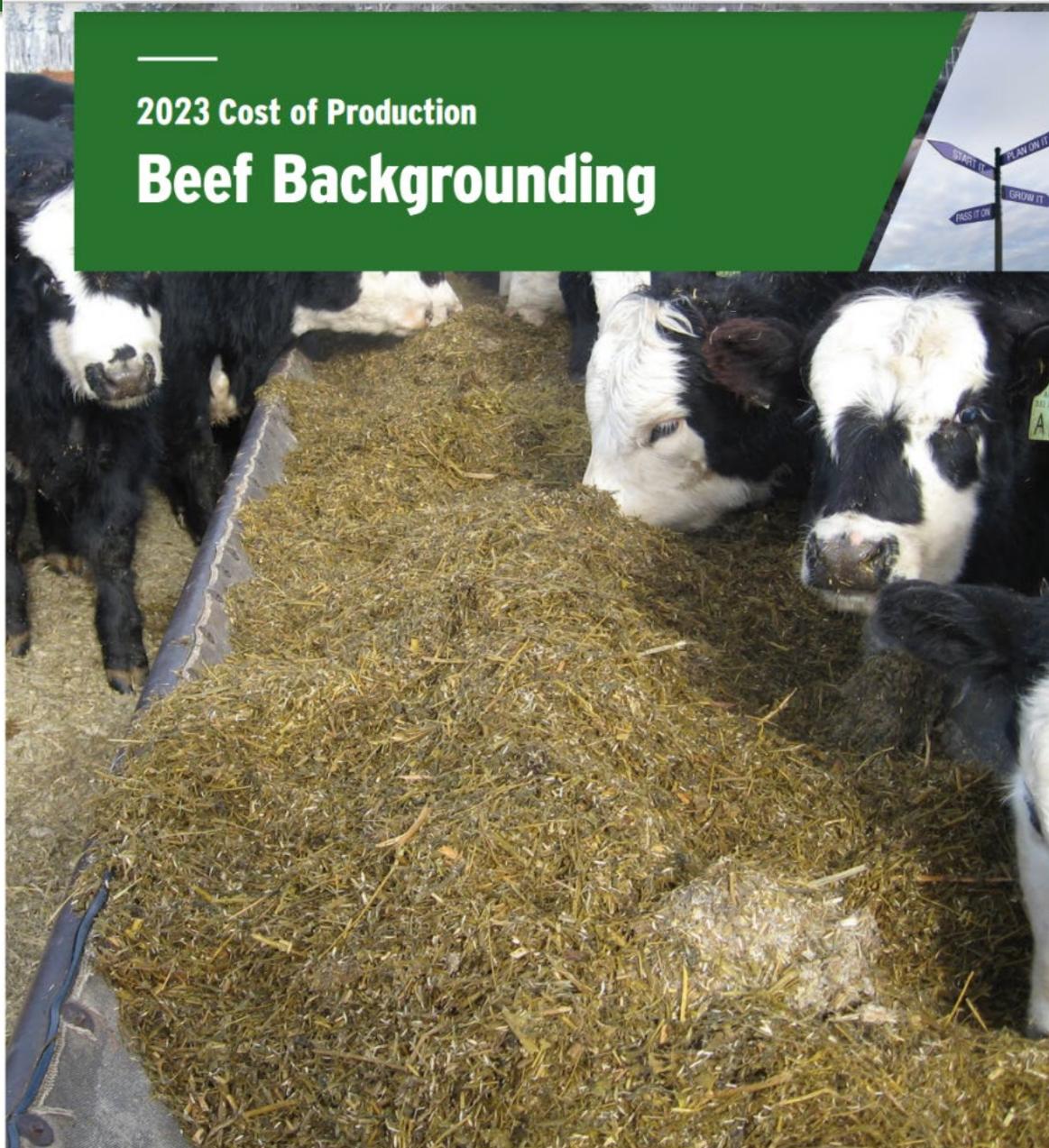


Total Cost per cow, 2021



2023 Cost of Production

# Beef Backgrounding



## Backgrounding Cattle Production Cost Summary - September, 2022

Based on 500 feeders, weight range 500 to 900 lbs, Corn Silage ration @ 2.5 lbs. ADG

<b>A. Operating Costs</b>	<b><u>Cost/Head</u></b>
<b>1. Feed Costs</b>	
1.01 Alfalfa Grass Hay (57.8 % TDN, 13.7 % CP)	\$48.00
1.02 Corn Silage (65.2 % TDN, 8.7 % CP)	\$91.77
1.03 Barley Silage (63 % TDN, 11 % CP)	\$0.00
1.04 Barley Grain (83.1 % TDN, 12.5 % CP)	\$106.60
1.05 Greenfeed	\$0.00
1.06 Straw	\$0.00
1.07 32-20% Feedlot Suppl. (61.7%TDN, 35.6%CF)	\$0.00
1.08 DDGS Corn/Wheat (77 % TDN, 33.9 % CP)	\$22.36
1.09 1:1 Premix	\$0.00
1.10 2:1 Premix	\$40.91
1.11 Limestone	\$1.40
1.12 Other	<u>\$0.00</u>
<b>Total Feed Costs</b>	<b>\$311.04</b>

# Backgrounding Economics

## Feed Summary - 160 Days

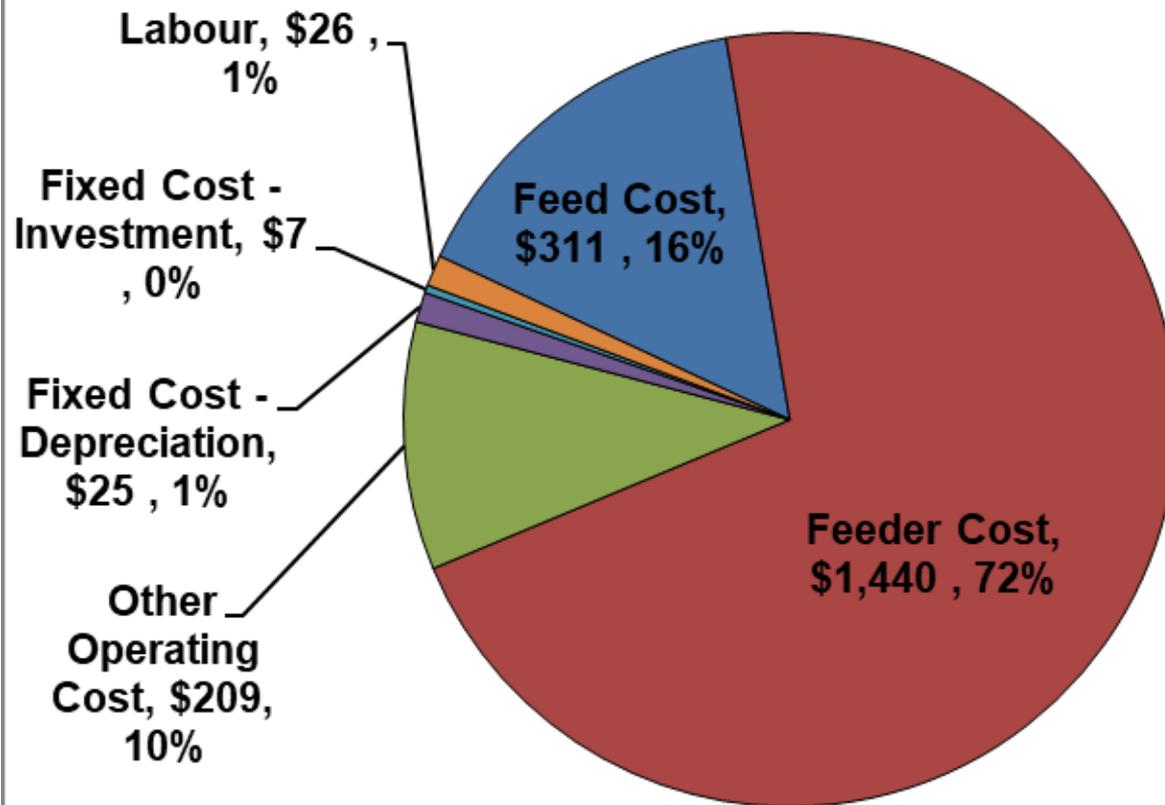
	<u>Total Feed Cost per Steer</u>	<u>Average Feed Cost/Day</u>	<u>Feed Cost per lb. of Gain Sold (shrunk weight)</u>
Barley Silage Ration	\$327.47	\$2.047	\$0.8779
Corn Silage Ration	\$311.04	\$1.944	\$0.8339
Alfalfa Grass Hay Ration	\$339.75	\$2.123	\$0.9109

<b>Corn Silage Ratio</b>						
<b>Weight Range (lbs)</b>	<b>500 to 600</b>	<b>600 to 700</b>	<b>700-800</b>	<b>800-900</b>	<b>Total lbs /steer</b>	<b>Total Cost /steer</b>
<b>Feed Name</b>	<b>As Fed Lbs/Head/Day</b>					
Alfalfa Grass Hay	5	5	5	5	800	\$48.00
Corn Silage	19	22	27	31.75	3,990	\$91.77
Barley Silage	0	0	0	0	0	\$0.00
Barley Grain	4	5	5.5	6	820	\$106.60
Greenfeed	0	0	0	0	0	\$0.00
Straw	0	0	0	0	0	\$0.00
32-20% Feedlot Suppl.	0	0	0	0	0	\$0.00
DDGS Corn/Wheat	1	1	0.75	0.5	130	\$22.36
1:1 Premix	0	0	0	0	0	\$0.00
2:1 Premix	0.25	0.28	0.285	0.315	45	\$41.09
Limestone	0.065	0.09	0.09	0.105	14	\$1.40
Other	0	0	0	0	0	\$0.00
<b>\$/head/day</b>	<b>\$1.663</b>	<b>\$1.892</b>	<b>\$2.033</b>	<b>\$2.193</b>		<b>\$311.22</b>

## 2. Other Operating Costs

2.01 Feeder Cost	\$1,440.25
2.02 Straw	\$22.40
2.03 Veterinary Medicine & Supplies	\$25.31
2.04 Annual Fuel & Repair Costs	\$11.79
2.05 Utilities	\$3.39
2.06 Feeder Selling Cost	\$34.95
2.07 Insurance	\$1.64
2.08 Manure Removal	\$18.83
2.09 Barn & Office Supplies	\$1.20
2.10 Death Loss	<u>\$32.76</u>
Subtotal Operating Costs	\$1,903.56
2.11 Operating Interest	<u>\$56.80</u>
<b>Total Operating Costs</b>	<b>\$1,960.36</b>

## 2023 Beef Background Calves - Total Production Costs (cost/feeder)



**B. Fixed Costs**

**3. Depreciation**

3.01 Buildings	\$7.21
3.02 Machinery & Equipment	\$18.00

**4. Investment**

4.01 Buildings	\$2.64
4.02 Machinery & Equipment	<u>\$4.05</u>

**Total Fixed Costs** **\$31.90**

**Total Operating and Fixed Costs** **\$1,992.26**

**C. Owners - Labour & Living** **\$26.00**

**Total Cost of Production** **\$2,018.26**

## Profitability and Breakeven Analysis

### Estimated Farmgate

Gross Revenue @ \$235/cwt market price

#### Per Head

**\$2,051.55**

#### Total

**\$1,025,775**

	<b>Breakeven Purchase Price (\$/cwt) @ <u>\$235/cwt market price</u></b>	<b>Breakeven Selling Price (\$/cwt) @ <u>\$285/cwt feeder price</u></b>
Operating Costs	\$303.24	\$224.55
Operating Costs & Labour	\$298.04	\$227.53
Operating & Fixed Costs	\$296.86	\$228.21
Total Costs	\$291.66	\$231.19

	<b>Cost per lb of gain sold (\$/cwt) <u>@ \$235/cwt market price</u></b>	<b>Marginal Returns per head <u>@ \$235/cwt market price</u></b>
Feed Costs	\$83.39	\$300.26
Operating Costs	\$143.53	\$91.19
Operating Costs & Labour	\$150.50	\$65.19
Operating & Fixed Costs	\$152.08	\$59.29
Total Costs	\$159.05	\$33.29

## Livestock

- Beef 300 Cow-Calf Production Costs ([Excel](#) or [PDF](#))
- Beef 150 Cow-Calf Production Cost ([Excel](#) or [PDF](#))
- Beef Backgrounding Costs ([Excel](#) or [PDF](#))
- Beef Replacement Heifer Costs ([Excel](#) or [PDF](#))
- Beef Grassing Costs ([Excel](#) or [PDF](#))
- Beef Feedlot Finishing Costs ([Excel](#) or [PDF](#))
- FeedPlan Feed Ingredient Cost Calculator ([Online](#), [Excel](#))
- Beef Cow Overwinter Cost Calculator ([Online](#), [Excel](#))
- Managing Low Forage Supplies During Winter ([Excel](#) or [PDF](#))
- Calf Creep Feed Calculator ([Online](#), [Excel](#))
- Straw Ammoniation Calculator ([Excel](#))
- Livestock Price Slide Calculator ([Online](#), [Excel](#))
- LPI Calf Decision Calculator ([Online](#), [Excel](#))
- LPI Feeders Decision Calculator ([Online](#), [Excel](#))
- Cow Share Lease Calculator ([Excel](#))
- Bison Cow-Calf Production Costs ([Excel](#) or [PDF](#))
- Bison Bull Backgrounding Costs ([Excel](#) or [PDF](#))
- Bison Bull Finishing Costs ([Excel](#) or [PDF](#))
- Sheep Lamb Production Costs ([Excel](#) or [PDF](#))

## Forage

- Hay: Round Bale and Silage Production Costs ([Excel](#) or [PDF](#))
- Silage Production Costs ([Excel](#) or [PDF](#))
- Pasture Production Costs ([Excel](#) or [PDF](#))
- **\*\*NEW\*\*** Pasture Days Insurance Calculator ([Excel](#))
- Standing Hay Costs Calculator ([Online](#), [Excel](#))
- FeedPlan Feed Ingredient Cost Calculator ([Online](#), [Excel](#))
- Forage Purchase Decision Calculator ([Excel](#))
- Forage Price Moisture Conversion Calculator ([Online](#), [Excel](#))
- Forage Yield Moisture Conversion Calculator ([Online](#), [Excel](#))
- [Manitoba Agriculture Forage Production](#)

## Land, Fence & Buildings

- RentPlan Crop Land Rental Rate Calculator ([Online](#), [Excel](#) or [PDF](#))
- Pasture Rental Rate Calculator ([Online](#), [Excel](#))
- FencePlan Cost Calculator ([Online](#), [Excel](#))
- Grain Bin and Farm Building Rental Cost Planner ([Online](#), [Excel](#))
- Crop Share Lease Calculator ([Excel](#))
- Hay Storage Cost Planner ([Excel](#))
- [Contracts and Leases](#)
- [Agricultural Crown Land](#)
- [Manitoba Assessment Property Search](#)
- [Manitoba Assessment Property Sales](#)
- [Association of Manitoba Community Pastures](#)

## Online Calculators

### Machinery

- [Farm Machinery Custom and Rental Guide](#)

### Land, Fence & Buildings

- [RentPlan Cropland Rental Rate Calculator](#)
- [Pasture Rental Rate Calculator](#)
- [FencePlan Cost Calculator](#)
- [Grain Bin and Farm Building Rental Cost Planner](#)

### Forage

- [FeedPlan Feed Ingredient Cost Calculator](#)
- [Pasture Rental Rate Calculator](#)
- [Standing Hay Cost Calculator](#)
- [Standing Corn Cost Calculator](#)
- [Standing Greenfeed Cost Calculator](#)
- [Straw Cost Calculator](#)
- [Forage Price Moisture Conversion Calculator](#)
- [Forage Yield Moisture Conversion Calculator](#)

### Crops

- [RentPlan Cropland Rental Rate Calculator](#)
- [Seeding Rate and Cost Calculator](#)
- [FertPlan Fertilizer Cost And Requirement Calculator](#)
- [Crop Reseeding Decision Tool](#)
- [Crop Disease Break Even Calculator](#)
- [Sclerotinia Treatment Decision Calculator \(Canola\)](#)
- [Sclerotinia Treatment Decision Calculator \(Sunflowers\)](#)
- [Grain Drying Cost Calculator](#)
- [Straw Cost Calculator](#)

### Livestock

- [Beef Cow Overwinter Cost Calculator](#)
- [FeedPlan Feed Ingredient Cost Calculator](#)
- [LPI Decision Calculator \(Calf\)](#)
- [LPI Decision Calculator \(Feeder\)](#)
- [Calf Creep Feed Calculator](#)

# Questions?

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<https://www.gov.mb.ca/agriculture/farm-management/production-economics/cost-of-production.html>

