

Guidelines for Estimating Elk Cow Calf Costs Based on a herd of 30 cows

September, 2003

This guide is designed to provide planning information and a format for calculating costs of production on a 30 cow calf elk enterprise. The production costs included in this enterprise budget are not intended as a cost study of the elk industry in Manitoba. Adjustments will be necessary when applying these figures to your own enterprise.

The budget estimates are based on a number of assumptions which are clearly defined in the supporting pages. Productivity and performance assumptions are based on data supplied by specialists as well as data collected from certain producers. Input costs are based on recommended practices and/or information obtained from producers. Good management is assumed in that a balanced ration is being fed, livestock are on a herd health program and handling facilities are included.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms; the farm over time to track profits or losses; or comparing the plan with the actual production at the end of the planning period.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of the Manitoba Elk industry. Interpretation and utilization of this information is the responsibility of the user. If you require assistance with developing your individual budget, please contact your local MAF Farm Management Specialist or Livestock Specialist.

ELK HERD PROFILE

Number of Cows	30
Number of Bulls	2
Elk Cow market price	\$600
Herd Bull market price	\$2,000
Calf Crop (%)	82
Number of calves born	24
Bull calves	12
Heifer calves	12
Average Calf Weight (lbs)	250
Mortality Rate (%)	0.7
Replacement Rate (%)	10.0
Bull Replacement Rate	20.0
Number of pasture acres	60
Value of pasture per acre	\$300
Fence Cost - per mile	\$12,000
Total fence distance - miles	2

Feed Requirements and Costs

	Cows	Bulls	
	----- kilograms per day -----		
Hay	6.0	6.0	
Oats	0.5	2.0	
Supplement	0.5	0.5	
Days on feed			
Hay & grain			220
Supplement			220
Feed Prices			
Hay (\$/tonne)			\$50.00
Oats (\$/tonne)			\$90.00
Supplement (\$/tonne)			\$270.00

Vet, Medicine and Supplies

Cow Medication \$/head		
Parasite control		\$20.00
Vitamins		\$0.00
Calf Medication \$/head		
Blackleg		\$1.00
Vitamins		\$0.00
DNA & Blood Testing \$/head		

DNA profile	\$64.20
Blood	\$21.40
Vet fees	\$10.00
Vet and Medicine for Bulls \$/head	
Parasite control	\$20.00
Velveting/bull	\$40.00
Semen test	\$0.00
FUEL, OIL, REPAIRS & MAINTENANCE	
a) Machinery - total fuel costs	\$200.00
- total repairs	\$200.00
b) Buildings,Fences etc. total costs	\$400.00
Land Taxes	
Cost per acre	\$5.00
Utilities	
Total hydro costs	\$100.00
Total water costs	\$100.00
Total telephone costs	\$200.00
Manure Removal:	
Annual cost for removal	\$200.00
Operating Interest:	
Bank Rate on Deposits (%)	4.0
Bank Rate on Borrowing (%)	6.5
Insurance:	
Cost per \$100 Capital Invested in	
a). Livestock	\$0.00
b). Building & Equipment	\$0.26
Add'l Coverage for liability (\$/year)	\$30.00
Miscellaneous:	
Total yearly expense	
Velveting	\$25.00
License	\$100.00
HERD REPLACEMENT	
Replacement Cost/Heifer	\$500 breeding
Average Market Value/Cow	\$700 meat price \$1
Price Received/Cull Cow	\$550
Replacement Cost/Herd Bull	\$2,000

Price Received/Cull Bull (meat & trophy)

\$1,200 meat/trophy

CAPITAL COSTS

	<u>Original Value</u>	<u>Salvage Value (%)</u>	<u>Useful Life (yrs)</u>
Buildings & Improvements			
Handling Facilities	\$14,000	10	20
Waterers (2 @ \$1,000)	\$2,000	10	20
Round Bale Feeders	\$0	10	20
Well & Pressure System	\$3,500	10	20
Hydro (1 pole @ \$400)	\$400	<u>10</u>	<u>20</u>
Total Building Cost	\$19,900	10	20
Machinery			
Tractor & Loader	\$2,000	30	10
Quad	\$4,000		
Miscellaneous Machinery	\$400	20	12
Total Machinery Cost	\$6,400		
Land			
Fence (2 miles @ \$12000/mile)	\$24,000	10	20
Pasture (60 ac @ \$300)	\$18,000		
Total Fence & Pasture	\$42,000		
Livestock			
Cows (30 @ \$600)	\$18,000		
Herd Bulls (2 @ \$2000)	\$4,000		
Total Livestock Cost	\$22,000		
Total Capital Investment	\$90,300		

LABOUR COSTS

Annual Hours per Cow **15**
Hourly Labour Rate **\$10.00**

ELK COW-CALF COST SUMMARY - September, 2003

(Based on a 30 head cow herd)

A. OPERATING COSTS	<u>\$/COW</u>	<u>\$ TOTAL</u>	<u>Your Cost</u>
1. Feed Costs:			
1.01 Hay	\$70.40	\$2,112	_____
1.02 Grain	\$12.54	\$376	_____
1.03 Supplement	<u>\$31.68</u>	<u>\$950</u>	_____
Total Feed Cost	\$114.62	\$3,439	_____
2. Other Operating Costs:			
2.01 Vet. & Registration	\$98.63	\$2,959	_____
2.02 Fuel, Mtce. & Repairs	\$26.66	\$800	_____
2.03 Utilities	\$13.33	\$400	_____
2.04 Death Loss	\$4.20	\$126	_____
2.05 Insurance	\$3.28	\$98	_____
2.06 Herd Replacement	\$15.67	\$470	_____
2.07 Land Taxes	\$10.00	\$300	_____
2.08 Miscellaneous	<u>\$4.17</u>	<u>\$125</u>	_____
Subtotal Operating Costs	\$290.56	\$8,717	_____
2.09 Operating Interest	<u>\$9.44</u>	<u>\$283</u>	_____
TOTAL OPERATING COSTS	<u>\$300.00</u>	<u>\$9,000</u>	_____
B. FIXED COSTS			
3. Depreciation			
3.01 Buildings	\$29.85	\$896	_____
3.02 Machinery & Equipment	\$14.89	\$447	_____
3.03 Fence	\$36.00	\$1,080	_____
4. Investment			
4.01 Buildings	\$14.59	\$438	_____
4.02 Machinery & Equipment	\$5.52	\$166	_____
4.03 Livestock	\$29.33	\$880	_____
4.04 Pasture Land & Fencing	<u>\$41.60</u>	<u>\$1,248</u>	_____
TOTAL FIXED COSTS	<u>\$171.78</u>	<u>\$5,153</u>	_____
C. LABOUR COSTS	<u>\$150.00</u>	<u>\$4,500</u>	_____
TOTAL COST OF PRODUCTION	<u>\$621.78</u>	<u>\$18,654</u>	_____
Breakeven*			
A. Operating Costs	<u>\$365.86</u>	_____	_____
B. Operating & Fixed Costs	<u>\$575.35</u>	_____	_____
C. Operating, Fixed & Labour Costs	<u>\$758.27</u>	_____	_____

*Cost ÷ 82% calving percentage

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.

ELK COW-CALF PRODUCTION COST WORKSHEET - September, 2003

Assumptions

1. This budget outlines the cost of production for an elk cow 'calf' enterprise with 30 elk 'cows', 2 herd 'bulls' and an 82% calf crop.
2. All feed is valued at fair market value.
3. Handling facilities include chutes and squeeze specifically designed for elk.
4. This budget assumes all replacements are purchased. Replacement rates on elk 'cows' used are 10% and rates on the herd 'bulls' are 20%.
5. Insurance rates used were for accidental insurance only; not full mortality.

				<u>Your Cost</u>
A. OPERATING COSTS				
1. Feed Costs:				
1.01 Hay Costs				
Cows		6.00	kg hay/day	
	x	220	days/year	
	÷	1,000	kg/tonne	
	x	<u>\$50.00</u>	<u>/tonne</u>	
	=	\$66.00	/cow	
Bulls		6.00	kg hay/day	
	x	2	bulls	
	x	220	days/year	
	÷	1,000	kg/tonne	
	x	\$50.00	/tonne	
	÷	<u>30</u>	<u>cows</u>	
	=	\$4.40	/cow	
Total		\$70.40	/cow	

Elk Cow Calf Costs

Your Cost

1.02 Grain Costs

Cows		0.50	kg grain/day	_____
	x	220	days/year	_____
	÷	1,000	kg/tonne	_____
	x	<u>\$90.00</u>	/tonne	_____
	=	\$9.90	/cow	_____
Bulls		2.00	kg oats/day	_____
	x	2	bulls	_____
	x	220	days/year	_____
	÷	1,000	kg/tonne	_____
	x	\$90.00	/tonne	_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$2.64	/cow	_____
Total		\$12.54	/cow	_____

1.03 Supplement Costs

Cows		0.50	kg supplement/day	_____
	x	220	days/year	_____
	÷	1,000	kg/tonne	_____
	x	<u>\$270.00</u>	/tonne	_____
	=	\$29.70	/cow	_____
Bulls		0.50	kg supplement/day	_____
	x	2	bulls	_____
	x	220	days/year	_____
	÷	1,000	kg/tonne	_____
	x	\$270.00	/tonne	_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$1.98	/cow	_____
Total		\$31.68	/cow	_____

2. Other Operating Costs:

2.01 Veterinary Medicine & Supplies

Cows		\$20.00	/ cow parasite control	_____
Calf		\$1.00	blackleg control	_____
	x	<u>82</u>	<u>% calf crop</u>	_____

Elk Cow Calf Costs

			<u>Your Cost</u>
	=	\$0.82 /cow	_____
Bull		\$20.00 parasite control	_____
	x	2 bulls	_____
	÷	<u>30</u> cows	_____
	=	\$1.33 /cow	_____
DNA & Blood Testing			
Calves		\$64.20 DNA profile	_____
	+	\$21.40 blood test	_____
	+	<u>\$10.00</u> vet fees	_____
	=	\$95.60 total cost/calf	_____
	x	24 calves/year	_____
	÷	<u>30</u> cows	_____
	=	\$76.48 /cow	_____
Total		\$98.63 /cow	_____
2.02 Fuel, Oil, Repairs & Maintenance			
Machinery		\$200.00 annual fuel cost	_____
	+	<u>\$200.00</u> oil, repairs & maintenance	_____
	=	\$400.00 total cost	_____
	÷	<u>30</u> cows	_____
	=	\$13.33 /cow	_____
Buildings, Fences etc.		\$400.00 annual repair & mtc.	_____
	÷	<u>30</u> cows	_____
	=	\$13.33 /cow	_____
Total		\$26.66 /cow	_____
2.03 Utilities			
		\$400.00 annual utilities costs	_____
	÷	<u>30</u> cows	_____
	=	\$13.33 /cow	_____

Elk Cow Calf Costs

			<u>Your Cost</u>	
2.04 Death Loss				
	x	\$600	/cow investment	_____
	x	<u>0.7</u>	<u>(%) mortality rate</u>	_____
	=	\$4.20	/cow	_____
2.05 Insurance				
		\$26,300	bldg. & equip. investment	_____
	x	\$0.26	cost/\$100 capital	_____
	÷	100		_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$2.28	/cow	_____
		\$22,000	herd investment	_____
	x	\$0.00	cost/\$100 capital	_____
	÷	100		_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$0.00	/cow	_____
		\$30	add'l coverage for liability	_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$1.00	/cow	_____
		Total	\$3.28 /cow	_____
2.06 Herd Replacement				
Cows		\$600	/replacement heifer	_____
	-	<u>\$550</u>	<u>/cull cow</u>	_____
	=	\$50	net cost	_____
	x	<u>10.0</u>	<u>% replacement rate</u>	_____
	=	\$5.00	/cow	_____
Bulls		\$2,000	/replacement bull	_____
	-	<u>\$1,200</u>	<u>/cull bull</u>	_____
	=	\$800	net cost	_____
	x	2	bulls	_____
	x	20.0	% replacement rate	_____
	÷	<u>30</u>	<u>cows</u>	_____
	=	\$10.67	/cow	_____
		Total	\$15.67 /cow	_____
2.07 Land Taxes				

Elk Cow Calf Costs

Your Cost

	\$300	land taxes	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$10.00	/cow	_____

2.08 Miscellaneous

	\$25.00	velveting costs	_____
+	\$100.00	license fee	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$4.17	/cow	_____

2.09 Operating Interest

	\$290.56	subtotal operating costs	_____
÷	2	average	_____
x	<u>6.50</u>	<u>% operating interest rate</u>	_____
=	\$9.44	/cow	_____

Your Cost

B. FIXED COSTS

Capital Investment

Buildings & Improvements

Handling Facilities	\$14,000	_____
Waterers (2 @ \$ 1000)	\$2,000	_____
Round Bale Feeders	\$0	_____
Well & Pressure System	\$3,500	_____
Hydro (1 pole @ \$400)	<u>\$400</u>	_____
Total Cost	\$19,900	_____

Machinery

Tractor & Loader	\$2,000	_____
Quad	\$4,000	_____
Miscellaneous Machinery	<u>\$400</u>	_____
Total Machinery Cost	\$6,400	_____

Land & Fence

Fence (2 miles @ \$12000/mile)	\$24,000	_____
Pasture (60 ac @ \$300)	<u>\$18,000</u>	_____
Total Land & Fence	\$42,000	_____

Livestock

Cows (30 @ \$600)	\$18,000	_____
Herd Bulls (2 @ \$2000)	<u>\$4,000</u>	_____
Total Livestock Cost	\$22,000	_____

Total Capital Investment **\$90,300** _____

**3. Depreciation: Original Value - Salvage Value
Useful Life**

3.01 Buildings & Improvements

	\$19,900	original value	_____
-	\$1,990	salvage value	_____
÷	20	years useful life	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$29.85	/cow	_____

3.02 Machinery & Equipment

Elk Cow Calf Costs

			<u>Your Cost</u>
Tractor, Loader & Quac	\$6,000	original value	_____
-	\$1,800	salvage value	_____
÷	10	years useful life	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$14.00	/cow	_____
Miscellaneous	\$400	original value	_____
-	\$80	salvage value	_____
=	\$320	net cost	_____
÷	12	years useful life	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$0.89	/cow	_____
Total	\$14.89	/cow	_____

3.03 Fence

	\$24,000	original value	_____
-	\$2,400	salvage value	_____
÷	20	years useful life	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$36.00	/cow	_____

4. Investment:

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

4.01 Buildings & Improvements

	\$19,900	original value	_____
+	\$1,990	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$14.59	/cow	_____

Elk Cow Calf Costs

Your Cost

4.02 Machinery & Equipment

Tractor, Loader & Quac	\$6,000	original value	_____
+	\$1,800	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$5.20	/cow	_____

Miscellaneous	\$400	original value	_____
+	\$80	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$0.32	/cow	_____

Total	\$5.52	/cow	_____
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4.03 Livestock

Cows	\$600	/cow	_____
x	<u>4.0</u>	<u>% investment rate</u>	_____
=	\$24.00	/cow	_____

Bulls	\$2,000	/bull	_____
x	2	number bulls	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$133	/cow	_____
x	<u>4.0</u>	<u>% investment rate</u>	_____
=	\$5.33	/cow	_____

Total	\$29.33	/cow	_____
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Elk Cow Calf Costs

4.04 Pasture Land & Fencing

Your Cost

Fence Investment	\$24,000	original value	_____
+	\$2,400	salvage value	_____
÷	2	average	_____
x	4.0	% investment rate	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$17.60	/cow	_____
Land Investment	\$18,000	original value	_____
x	4.0	% investment rate	_____
÷	<u>30</u>	<u>cows</u>	_____
=	\$24.00	/cow	_____
Total	\$41.60	/cow	_____

C. LABOUR COSTS

	15	annual hours per cow	_____
x	<u>\$10.00</u>	<u>hourly labour rate</u>	_____
=	\$150.00	/cow	_____

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

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