

Guidelines For Estimating **Shortkeep Feeder Costs** For Weight Range of 850 - 1400 lbs Based on feeding 500 steers & selling in fall

Date: **March, 2006**

Cattle feeding is a high risk business requiring large amounts of short term capital to buy feeder cattle and feed. With cyclical price variations for both livestock and feed, successful management involves careful consideration of costs, projection of markets and sound judgement.

The following budget is an estimate of the costs of production encountered in finishing beef cattle in a farm feedlot situation. The purpose of this budget is to assist Manitoba livestock producers to calculate their own cost of production and take into consideration the factors that should be included when budgeting to determine breakeven prices.

The assumptions on which costs are calculated are clearly defined in the supporting pages. When interpreting these costs for an individual situation, adjustments may be required. Note that on farm feed costs are based on market prices at the farm. It is assumed that all feed is grown on the farm, except for supplements. Each assumption must be examined and adjustments made where necessary, to apply to the producer's own situation.

Disclaimer: This budget is only a guide and is not intended as an in depth study of the cost of production of the Manitoba cattle 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 MAFRI Business Development Specialist or Livestock Farm Production Extension Specialist.

Shortkeep Cattle Production Costs - Input

Assumptions

1. This budget outlines the cost of production for shortkeep cattle.
2. Buildings and equipment are valued at new cost.
3. All feed is purchased.

Herd Profile

	<u>Total</u>
Number Purchased	500 head
Feeder Cattle Mortality Rate	1.00 %
Feeder Purchased Weight	850 lbs
Feeder Cattle Price	\$104.00 /cwt
Finish Weight	1,400 lbs
Finish Selling Price	\$87.00 /cwt
Number of turns per year	2 turns/year
Percent Shrink - finished	5.00 %
Percent Shrink - feeder	0.00 %
Average Daily Gain	3.5 lbs/day
 Days On Feed	 157 days

FOOTNOTE: 1 kilogram (kg) = 2.2046 pounds (lbs)

Feed Costs

	<u>\$/unit</u>	<u>Feeder Cattle Requirement</u>	<u>Days on Feed</u>
Rolled Barley	\$2.25 /bu	24.00 (lbs/day)	157
Barley Silage	\$25.00 /ton	12.00 (lbs/day)	157
Canola	\$0.00	0.00 (lbs/day)	
Other Feed #1	\$0.00	0.00 (lbs/day)	
Other Feed #2	\$0.00	0.00 (lbs/day)	
Supplement 32%	\$330.00 /tonne	0.75 (lbs/day)	157

FOOTNOTE: 1 bushel (bu) barley = 48 lbs = 21.8 kg

1 kilogram (kg) = 2.2046 pounds (lbs)

1 tonne (t) = 1,000 kg

Other Operating Costs

	<u>Total</u>
Feeder Purchase Costs	
Buying Commission	\$6.75 /head
Trucking-in	\$1.50 /cwt

Straw

Tons/feeder	0.25 tons
Cost	\$20.00 /ton

Veterinary Medicine & Supplies

Cattle Medication

Vitamin A-D	\$0.65 /head
External & Internal Parasites	\$2.72 /head
Blackleg	\$0.48 /head
Growth Implants	\$1.71 /head
Antibiotics	\$5.00 /head

Herd health program

Professional Services

Total Yearly Hours	2.00 hours
Charge	\$135.00 /hour

Transportation

Total Kilometres (round trip)	80.00 km
Charge per km	\$1.00 /km
Number of Yearly Visits	3

Fuel & Repair Costs

Repairs (Machinery, Equipment & Facilities)	\$875.00
Fuel Costs	\$1,900.00

Utilities

Telephone & Hydro	\$1,900.00
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Trucking Cost

Distance	700 miles
Rate	\$3.60 /loaded mile
Truck Capacity	54,000 lbs/load
Number of head per load	39 head
Other Marketing Costs	\$0.00 head

Marketing Cost

Commission on Sales	\$0.00 /head
Market Value	\$0.00 /cwt
Insurance fee	\$0.75 /head

Manure Removal

Cost for Removal	\$3,200
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Insurance

Cost per \$100 Capital Invested in:

a) Livestock	\$0.50 /\$100
b) Building & Equipment	\$0.50 /\$100
Additional Coverage for Liability	\$45.00 /year

Barn & Office Supplies

Total expense relating to barn **\$200.00**

Operating Interest Rate	6.00 %
Investment Interest Rate	4.00 %

FOOTNOTE: cwt = hundred-weight = 100 lbs

Capital Costs

Buildings, Corrals & Water System	Original Value	Salvage Value	Useful Life
Windbreak fence	\$4,900	10 %	20 years
Pens	\$3,027	10 %	20 years
Grain Bin	\$3,000	10 %	20 years
Handling Facilities	\$4,000	10 %	20 years
Waterers	\$4,000	10 %	20 years
Gates	\$1,280	10 %	20 years
Feeders	\$0	10 %	20 years
Bunk Feeders	\$23,000	10 %	20 years
Well & Pressure System	\$3,500	10 %	20 years
Landscaping	\$15,000	10 %	20 years
Total	\$61,707		
Machinery & Equipment			
Tractor & Loader	\$50,000	20 %	10 years
Miscellaneous	\$25,000	20 %	10 years
Total Investment	\$136,707		

Labour Costs

Labour Hours	1.25 hours/head/year
Labour Rate	\$10.50 /hour

Shortkeep Cattle Production Cost Summary March, 2006

	<u>Cost/Head</u>	<u>Total Cost</u>	<u>Your Cost</u>
A. Operating Costs			
1. Feed Costs			
1.01 Ground Barley	\$176.63	\$88,315	_____
1.02 Barley Silage	\$23.55	\$11,775	_____
1.03 Supplement	\$17.62	\$8,810	_____
Total Feed Costs	\$217.80	\$108,900	_____
2. Other Operating Costs			
2.01 Feeder Cost	\$903.50	\$451,750	_____
2.02 Straw	\$5.00	\$2,500	_____
2.03 Veterinary Medicine & Supplies	\$11.58	\$5,790	_____
2.04 Fuel & Repair Costs	\$5.55	\$2,775	_____
2.05 Utilities	\$3.80	\$1,900	_____
2.06 Marketing Costs	\$64.62	\$32,310	_____
2.07 Insurance	\$6.03	\$3,015	_____
2.08 Manure Removal	\$6.40	\$3,200	_____
2.09 Barn & Office Supplies	\$0.40	\$200	_____
2.10 Death Loss	\$10.32	\$5,160	_____
Subtotal Operating Costs	\$1,235.00	\$617,500	_____
2.11 Operating Interest	\$27.46	\$13,730	_____
Total Operating Costs	\$1,262.46	\$631,230	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	\$2.78	\$1,390	_____
3.02 Machinery & Equipment	\$6.00	\$3,000	_____
4. Investment			
4.01 Buildings	\$1.36	\$679	_____
4.02 Machinery & Equipment	\$1.80	\$900	_____
Total Fixed Costs	\$11.94	\$5,969	_____
Total Operating and Fixed Costs	\$1,274.40	\$637,199	_____
C. Labour	\$13.13	\$6,565	_____
Total Cost of Production	\$1,287.53	\$643,764	_____

Cost per lb of gain sold	<u>\$/cwt</u>	
Feed Costs	\$45.38	_____
Operating Costs	\$78.85	_____
Operating & fixed	\$81.33	_____
Total costs	\$84.07	_____
Breakeven Selling Price		
Operating Costs	\$94.92	_____
Operating & fixed	\$95.82	_____
Total costs	\$96.81	_____
Breakeven Purchase Price (base on \$87/cwt market price)		
Operating Costs	\$91.60	_____
Operating & fixed	\$90.20	_____
Total costs	\$88.66	_____

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.

Assumptions

1. Average daily gain (ADG) was assumed to be 3.5 lbs/day
2. It was assumed that the feeder steer weighed in at 850 lbs. shrunk weight, finish weight was estimated at 1400 lbs (1330 after 5 % shrink).
3. Days on feed:157days.
4. Investment in feedlot facilities and equipment was assumed to handle 500 head at a time or with 2 turns 1000 head over the year.

Shortkeep Cattle Production Cost Worksheet

A. Operating Costs

Your Cost

1. Feed Costs

1.01 Ground Barley

		157.00	days on grain		
	x	24.00	lbs/feeder/day		
	÷	48.00	lbs/bushel		
	<u>x</u>	<u>\$2.25</u>	<u>/bushel</u>		
	=	\$176.63	/feeder		

1.02 Silage

		157.00	days on silage		
	x	12.00	lbs/feeder/day		
	÷	2,000.00	lbs/ton		
	<u>x</u>	<u>\$25.00</u>	<u>/ton</u>		
	=	\$23.55	/feeder		

1.03 Supplement (Salt, Vitamins, Minerals, Ionophore)

		157.00	days on supplement		
	x	0.75	lbs/feeder/day		
	÷	2,205.00	lbs/tonne		
	<u>x</u>	<u>\$330.00</u>	<u>/tonne</u>		
	=	\$17.62	/feeder		

2. Other Operating Costs

2.01 Feeder Cattle Cost

		\$6.75	/feeder		
		\$1.50	/cwt		
	x	850.00	lbs/feeder		
	<u>÷</u>	<u>100.00</u>	<u>lbs/cwt</u>		
	=	\$12.75	/feeder		

Feeder		850.00	lbs/feeder	_____
	x	\$104.00	/cwt	_____
	÷	<u>100.00</u>	<u>lbs/cwt</u>	_____
	=	\$884.00	/feeder	_____
Total	=	\$903.50	/feeder	_____

2.02 Straw

		0.25	tons/feeder	_____
	x	<u>\$20.00</u>	<u>/ton</u>	_____
	=	\$5.00	/feeder	_____

2.03 Veterinary Medicine & Supplies

Cattle Medication

	+	\$0.65	Vitamins	_____
	+	\$2.72	Parasite control	_____
	+	\$0.48	Blackleg	_____
	+	\$1.71	Growth Implants	_____
	±	<u>\$5.00</u>	<u>Antibiotics</u>	_____
	=	\$10.56	/feeder	_____

Professional Services

		135.00	/hour charge	_____
	x	2.00	hours	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$0.54	/feeder	_____

Transportation

		\$1.00	/km charge	_____
	x	80.00	kilometers	_____
	x	3.00	visits	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	0.48	/feeder	_____

Total	=	\$11.58	/feeder	_____
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2.04 Fuel & Repair Costs

		\$875	repairs	_____
	+	\$1,900	fuel costs	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$5.55	/feeder	_____

2.05 Utilities

		\$1,900	utilities	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$3.80	/feeder	_____

2.06 Marketing & Transportation

Trucking		700.00	miles	_____
	x	\$3.60	/loaded mile	_____
	÷	<u>39.00</u>	<u>head/load</u>	_____
	=	\$64.62	/feeder	_____

Other Costs	+	\$0.00	/feeder	_____
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Total	=	\$64.62	/feeder	_____
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2.07 Insurance

		\$136,707	bldg & equip investment	_____
	x	\$0.50	/\$100 capital	_____
	÷	100.00	/\$100	_____
	÷	500	feeder cattle	_____
	÷	<u>2</u>	<u>turns/year</u>	_____
	=	\$0.68	/feeder	_____

		\$525,500	herd investment	_____
	x	\$0.50	/\$100 capital	_____
	÷	100.00	/\$100	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$5.26	/feeder	_____

		\$45.00	additional coverage for liability	_____
	÷	500	feeder cattle	_____
	÷	<u>2</u>	<u>turns/year</u>	_____
	=	\$0.09	/feeder	_____

Total	=	\$6.03	/feeder	_____
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2.08 Manure Removal

		\$3,200	removal cost	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$6.40	/feeder	_____

2.09 Barn & Office Supplies

		\$200.00	total barn expenses	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$0.40	/feeder	_____

2.10 Death Loss

	\$903.50	feeder cattle cost	_____
+	\$1,224.68	maximum value	_____
-	\$64.62	marketing costs	_____
÷	2.00	average	_____
<u>x</u>	<u>1.00</u>	<u>% mortality rate</u>	_____
=	\$10.32	/feeder	_____

2.11 Operating Interest

(Operating interest is charged on one half the subtotal operating costs)

	\$903.50	feeder cost	_____
+	\$160.59	½ of feed & other costs	_____
x	6.00	% operating interest	_____
x	157.00	days on feed	_____
<u>÷</u>	<u>365.00</u>	<u>days/year</u>	_____
=	\$27.46	/feeder	_____

Capital Costs

Buildings, Corrals & Water System

Windbreak fence	\$4,900	_____
Pens	\$3,027	_____
Grain Bin	\$3,000	_____
Handling Facilities	\$4,000	_____
Waterers	\$4,000	_____
Gates	\$1,280	_____
Bunk Feeders	\$23,000	_____
Well & Pressure System	\$3,500	_____
Landscaping	<u>\$15,000</u>	_____
Total	\$61,707	_____

Machinery & Equipment

Tractor & Loader	\$50,000	_____
Miscellaneous	<u>\$25,000</u>	_____
Total	\$75,000	_____

Total Investment **\$136,707** _____

B. Fixed Costs

3. Depreciation

Original Cost - Salvage Value
Useful Life

3.01 Buildings

	\$61,707	original cost	_____
-	\$6,171	salvage value	_____
÷	20.00	years useful life	_____
÷	500	feeder cattle	_____
÷	<u>2</u>	<u>turns/year</u>	_____
=	\$2.78	/feeder	_____

3.02 Machinery & Equipment

	\$75,000	original cost	_____
-	\$15,000	salvage value	_____
÷	10.00	years useful life	_____
÷	500	feeder cattle	_____
÷	<u>2</u>	<u>turns/year</u>	_____
=	\$6.00	/feeder	_____

4. Investment

Original Cost + Salvage Value x Investment Rate
2

4.01 Buildings

	\$61,707	original cost	_____
+	\$6,171	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	500	feeder cattle	_____
÷	<u>2</u>	<u>turns/year</u>	_____
=	\$1.36	/feeder	_____

4.02 Machinery & Equipment

	\$75,000	original cost	_____
+	\$15,000	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	500	feeder cattle	_____
÷	<u>2</u>	<u>turns/year</u>	_____
=	\$1.80	/feeder	_____

C. Labour

	1.25	hours/feeder	_____
<u>x</u>	<u>\$10.50</u>	<u>/hour</u>	_____
=	\$13.13	/feeder	_____

Breakeven Calculations

Cost per lb of gain sold			<u>Your Cost</u>
Feed Costs		\$217.80	feed cost
	÷	<u>480.00</u>	<u>weight gain</u>
	=	\$0.45	/lb gain sold
 Operating Costs		\$1,262.46	operating costs
	-	\$884.00	feeder cost
	÷	<u>480.00</u>	<u>weight gain</u>
	=	\$0.79	/lb gain sold
 Total Operating & Fixed Costs		\$1,274.40	operating & fixed costs
	-	\$884.00	feeder cost
	÷	<u>480.00</u>	<u>weight gain</u>
	=	\$0.81	/lb gain sold
 Total Costs		\$1,287.53	total costs
	-	\$884.00	feeder cost
	÷	<u>480.00</u>	<u>weight gain</u>
	=	\$0.84	/lb gain sold
 Breakeven selling price			
Operating Costs		\$1,262.46	operating costs
	÷	<u>1,330.00</u>	<u>lbs shrunk weight</u>
	=	\$0.95	/lb
 Total Operating & Fixed Costs		\$1,274.40	operating & fixed costs
	÷	<u>1,330.00</u>	<u>lbs shrunk weight</u>
	=	\$0.96	/lb
 Total Costs		\$1,287.53	total costs
	÷	<u>1,330.00</u>	<u>lbs shrunk weight</u>
	=	\$0.97	/lb
 Breakeven purchase price			
Operating Costs		1,330.00	lbs shrunk weight
	x	\$87.00	\$/cwt selling price
	=	\$1,157.10	income
	-	\$378.46	operating less feeder cost
	÷	<u>850.00</u>	<u>lbs purchase weight</u>
	=	\$0.92	/lb

Operating & fixed cocsts	1,330.00	lbs shrunk weight	_____
x	\$87.00	\$/cwt selling price	_____
=	\$1,157.10	income	_____
-	\$390.40	op & fixed less feeder cost	_____
÷	<u>850.00</u>	<u>lbs purchase weight</u>	_____
=	\$0.90	/lb	_____
Total costs	1,330.00	lbs shrunk weight	_____
x	\$87.00	\$/cwt selling price	_____
=	\$1,157.10	income	_____
-	\$403.53	total less feeder cost	_____
÷	<u>850.00</u>	<u>lbs purchase weight</u>	_____
=	\$0.89	/lb	_____

For more information contact your local MAFRI Office.

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Short Keep Feedlot Facilities

