

Guidelines For Estimating **Feedlot Finishing Costs** For Weight Range of 650 - 1400 lbs. Based on feeding 500 Steers

Date: September, 2009

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.

Feedlot Finishing Production Costs - Input

Assumptions

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

Herd Profile	<u>Total</u>	
Number of Feeders Purchased	500	head
Feeder Cattle Mortality Rate	1.50	%
Feeder Purchased Weight	650	lbs
Feeder Cattle Price	\$105.00	/cwt
Finish Weight	1,400	lbs
Finish Selling Price	\$90.00	/cwt
Percent Shrink - finished	5.00	%
Percent Shrink - feeder	0.00	%
Average Daily Gain	3.15	lbs/day
Days On Feed	238	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	\$3.00 /bu	18.50 (lbs/day)	238
Barley Silage	\$35.00 /ton	12.50 (lbs/day)	238
Grass Hay	\$50.00 /ton	5.00 (lbs/day)	15
Supplement 32%	\$351.00 /tonne	1.00 (lbs/day)	238
Other Feed #2	\$0.00	0.00 (lbs/day)	
Salt, Vitamins & Mineral	\$0.00 /lb	0.00 (lbs/year)	

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	\$1.00	/cwt
Insurance	\$1.00	/head
Trucking Cost	\$1.60	/cwt
Straw		
Tons/feeder	0.50	tons

Cost

\$25.00 /ton

Veterinary Medicine & Supplies

Cattle Medication

Cost/Head(IBR,BVD,PI3,BVD,BRSV, Pasteurella)	\$2.55	
Vitamin A-D	\$0.65	
External & Internal Parasites	\$1.25	
Blackleg & Haemophilus	\$2.30	
Growth Implants	\$3.42	
Antibiotics	\$6.00	

Herd health program

Professional Services

Total Yearly Hours	2.00	hours
Charge per Hour	\$150.00	/hour

Transportation

Total Kilometres (round trip)	80.00	km
Charge per km	\$0.70	/km
Number of Yearly Visits	2	

Annual Fuel & Repair Costs

Repairs (Machinery, Equipment & Facilities)	\$1,500.00
Fuel Costs	\$3,000.00

Utilities

Yearly Telephone & Hydro	\$3,150.00
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Marketing Costs

Trucking Cost

Distance	700	miles
Rate	\$4.00	/loaded mile
Truck Capacity	54,000	lbs/load
Number of head per load	39	per load
Selling commission	\$0.00	/head

Other Costs

MCEC Fee	\$2.00	/head
MCPA Levy	\$3.00	/head

Manure Removal

Annual Cost for Removal	\$3,700.00
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Insurance

Cost per \$100 Capital Invested in:	
a) Livestock	\$0.00
b) Building & Equipment	\$0.50
Additional Coverage for Liability	\$49.00

Barn & Office Supplies

Total yearly expense relating to barn **\$500.00**

Operating Interest Rate **6.50 %**

Investment Interest Rate **4.00 %**

FOOTNOTE: cwt = hundred-weight = 100 lbs

Capital Costs

	<u>Original</u> <u>Value</u>	<u>Salvage</u> <u>Value</u>	<u>Useful</u> <u>Life</u>
Buildings, Corrals & Water System			
Windbreak fence	\$7,350	10 %	20 years
Pens	\$4,540	10 %	20 years
Shelters	\$0	10 %	20 years
Handling Facilities	\$5,500	10 %	20 years
Waterers	\$5,000	10 %	20 years
Gates	\$1,280	10 %	20 years
Bunk Feeders	\$23,000	10 %	20 years
Well & Pressure System	\$6,000	10 %	20 years
Grain Bin	\$3,500	10 %	20 years
Landscaping	\$15,000	10 %	20 years
Total	\$71,170		
Machinery & Equipment			
Tractor & Loader	\$50,000	20 %	10 years
Miscellaneous	\$25,000	20 %	10 years
Total Investment	\$146,170		

Labour Costs

	<u>Total</u>
Labour Hours	2.00 hours/head
Labour Rate	\$12.50 /hour

Feedlot Finishing Cost Summary, September, 2009

	<u>Cost/Head</u>	<u>Total Cost</u>	<u>Your Cost</u>
A. Operating Costs			
1. Feed Costs			
1.01 Rolled Barley	\$275.19	\$137,595	_____
1.02 Barley Silage	\$52.06	\$26,030	_____
1.03 Grass Hay	\$1.88	\$940	_____
1.04 Supplement	<u>\$37.89</u>	<u>\$18,945</u>	_____
Total Feed Costs	<u>\$367.02</u>	<u>\$183,510</u>	_____
2. Other Operating Costs			
2.01 Feeder Cost	\$700.40	\$350,200	_____
2.02 Straw	\$12.50	\$6,250	_____
2.03 Veterinary Medicine & Supplies	\$16.99	\$8,495	_____
2.04 Annual Fuel & Repair Costs	\$9.00	\$4,500	_____
2.05 Utilities	\$6.30	\$3,150	_____
2.06 Marketing & Transportation	\$76.79	\$38,395	_____
2.07 Insurance	\$1.56	\$780	_____
2.08 Manure Removal	\$7.40	\$3,700	_____
2.09 Barn & Office Supplies	\$1.00	\$500	_____
2.10 Death Loss	<u>\$13.67</u>	<u>\$6,835</u>	_____
Subtotal Operating Costs	\$1,212.63	\$606,315	_____
2.11 Operating Interest	<u>\$40.25</u>	<u>\$20,125</u>	_____
Total Operating Costs	<u>\$1,252.88</u>	<u>\$626,440</u>	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	\$6.41	\$3,205	_____
3.02 Machinery & Equipment	\$12.00	\$6,000	_____
4. Investment			
4.01 Buildings	\$3.13	\$1,565	_____
4.02 Machinery & Equipment	<u>\$3.60</u>	<u>\$1,800</u>	_____
Total Fixed Costs	<u>\$25.14</u>	<u>\$12,570</u>	_____
Total Operating and Fixed Costs	<u>\$1,278.02</u>	<u>\$639,010</u>	_____
C. Labour	\$25.00	\$12,500	_____
TOTAL COST OF PRODUCTION	<u>\$1,303.02</u>	<u>\$651,510</u>	_____

Cost per lb of gain sold	<u>\$/cwt</u>	
Feed Costs	\$53.97	_____
Operating Costs	\$83.88	_____
Operating & Fixed Costs	\$87.58	_____
Total Costs	\$91.25	_____
Breakeven Selling Price		
Operating Costs	\$94.20	_____
Operating & Fixed Costs	\$96.09	_____
Total Costs	\$97.97	_____
Breakeven Purchase Price (based on \$90/cwt market price)		
Operating Costs	\$96.40	_____
Operating & Fixed Costs	\$92.54	_____
Total Costs	\$88.69	_____

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 3.15 lbs/day.
2. It was assumed that the feeder steer weighed in at 650 lbs., and finished at 1400 lbs (1330 lbs after a 5% shrink.)
3. Days on feed was 238. Hay was fed for 15 days.
4. Investment in feedlot facilities and equipment was assumed to handle 500 head.

Feedlot Finishing Production Cost Worksheet

A. Operating Costs

Your Cost

1. Feed Costs

1.01 Rolled Barley

	238.00	days on grain	
x	18.50	lbs/feeder/day	
÷	48.00	lbs/bushel	
<u>x</u>	<u>\$3.00</u>	<u>/bushel</u>	
=	\$275.19	/feeder	

1.02 Barley Silage

	238.00	days on silage	
x	12.50	lbs/feeder/day	
÷	2,000.00	lbs/ton	
<u>x</u>	<u>\$35.00</u>	<u>/ton</u>	
=	\$52.06	/feeder	

1.03 Grass Hay

	15.00	days on hay	
x	5.00	lbs/feeder/day	
÷	2,000.00	lbs/ton	
<u>x</u>	<u>\$50.00</u>	<u>/ton</u>	
=	\$1.88	/feeder	

1.04 Supplement (Salt, Vitamins, Minerals, Ionophore)

	238.00	days on supplement	
x	1.00	lbs/feeder/day	
÷	2,205.00	lbs/tonne	
<u>x</u>	<u>\$351.00</u>	<u>/tonne</u>	
=	\$37.89	/feeder	

2. Other Operating Costs

2.01 Feeder Cattle Cost

Buying Commission & insurance

\$6.50	commision/feeder	
\$1.00	insurance/feeder	

Trucking-in

\$1.60	/cwt	
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x	650.00	lbs/feeder	
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÷	<u>100.00</u>	<u>lbs/cwt</u>	
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=	\$10.40	/feeder	
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650.00	lbs/feeder	
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x	\$105.00	/cwt	
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÷	<u>100.00</u>	<u>lbs/cwt</u>	
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=	\$682.50	/feeder	
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Total	=	\$700.40	/feeder	
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2.02 Straw

0.50	tons/feeder/year	
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x	<u>\$25.00</u>	<u>/ton</u>	
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=	\$12.50	/feeder	
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2.03 Veterinary Medicine & Supplies

Cattle Medication

\$2.55	IBR,PI3,BVD,BRSV & Pasteurella	
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+	\$0.65	Vitamin A,D & E	
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+	\$1.25	External & Internal Parasites	
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+	\$2.30	Blackleg & Haemphilus	
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+	\$3.42	Implant	
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+	<u>\$6.00</u>	<u>Antibiotics</u>	
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=	\$16.17	/feeder	
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Professional Services

\$150.00	/hour charge	
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x	2.00	hours	
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÷	<u>500</u>	<u>feeder cattle</u>	
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=	\$0.60	/feeder	
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Transportation Costs

		\$0.70	/km charge	_____
x		80.00	kilometres	_____
x		2.00	visits	_____
÷		<u>500</u>	<u>feeder cattle</u>	_____
=		\$0.22	/feeder	_____
Total	=	\$16.99	/feeder	_____

2.04 Annual Fuel & Repair Costs

		\$1,500	repairs	_____
+		\$3,000	fuel costs	_____
÷		<u>500</u>	<u>feeder cattle</u>	_____
=		\$9.00	/feeder	_____

2.05 Utilities

		\$3,150	utilities	_____
÷		<u>500</u>	<u>feeder cattle</u>	_____
=		\$6.30	/feeder	_____

2.06 Marketing & Transportation

		\$2.00	MCEC Fee	_____
		\$3.00	MCPA Levy	_____
Trucking		700.00	miles	_____
x		\$4.00	/loaded mile	_____
÷		<u>39.00</u>	<u>head/load</u>	_____
=		\$71.79	/feeder	_____
Total	=	\$76.79	/feeder	_____

2.07 Insurance

		\$146,170	building & equipment investment	_____
x		\$0.50	/\$100 capital	_____
÷		100.00	/\$100 capital	_____
÷		<u>500</u>	<u>feeder cattle</u>	_____
=		\$1.46	/feeder/year	_____
		\$485,625	feeder investment	_____
x		\$0.00	/\$100 capital	_____
÷		100.00	/\$100	_____
÷		<u>500</u>	<u>feeder cattle</u>	_____
=		\$0.00	/feeder/year	_____

		\$49.00	liability premium	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$0.10	/feeder/year	_____
Total	=	\$1.56	/feeder	_____
2.08 Manure Removal				
		\$3,700	removal cost	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$7.40	/feeder	_____
2.09 Barn & Office Supplies				
		\$500.00	total barn expenses	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$1.00	/feeder	_____
2.10 Death Loss				
		\$700.40	feeder cattle cost	_____
	+	\$1,198.96	maximum value	_____
	-	\$76.79	marketing costs	_____
	÷	2.00	average value	_____
	x	<u>1.50</u>	<u>% mortality rate</u>	_____
	=	\$13.67	/feeder	_____
2.11 Operating Interest				
		\$700.40	feeder cost	_____
	+	\$249.28	½ of feed & other costs	_____
	x	6.50	% operating interest	_____
	x	238.00	days on feed	_____
	÷	<u>365.00</u>	<u>365 days</u>	_____
	=	\$40.25	/feeder	_____

Capital Costs

Buildings, Corrals & Water System

Windbreak fence	\$7,350	_____
Pens	\$4,540	_____
Handling Facilities	\$5,500	_____
Waterers	\$5,000	_____
Gates	\$1,280	_____
Bunk Feeders	\$23,000	_____
Well & Pressure System	\$6,000	_____
Grain Bin	\$3,500	_____
Landscaping	<u>\$15,000</u>	_____
Total	\$71,170	_____

Machinery & Equipment

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

Total Investment	\$146,170	_____
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B. Fixed Costs

3. Depreciation

Original Cost - Salvage Value Useful Life

3.01 Buildings

	\$71,170	original cost	_____
-	\$7,117	salvage value	_____
÷	20.00	years useful life	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$6.41	/feeder	_____

3.02 Machinery & Equipment

	\$75,000	original cost	_____
-	\$15,000	salvage value	_____
÷	10.00	years useful life	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$12.00	/feeder	_____

4. Investment	<u>Original Cost + Salvage Value</u> x Investment Rate		
	2		
4.01 Buildings			
	\$71,170	original cost	_____
+	\$7,117	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$3.13	/feeder	_____
4.02 Machinery & Equipment			
	\$75,000	original cost	_____
+	\$15,000	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$3.60	/feeder	_____
C. Labour			
	2.00	hours/feeder/year	_____
x	<u>\$12.50</u>	<u>/hour</u>	_____
=	\$25.00	/feeder	_____

Breakeven Calculations

Cost per lb of gain sold			<u>Your Farm</u>
Feed Costs	\$367.02	feed cost	_____
	<u>680.00</u>	<u>weight gain</u>	_____
	\$0.54	/lb	_____
Operating Costs	\$1,252.88	operating costs	_____
	- \$682.50	feeder cost	_____
	<u>680.00</u>	<u>weight gain</u>	_____
	\$0.84	/lb	_____
Total Operating & Fixed	\$1,278.02	operating & fixed	_____
	- \$682.50	feeder cost	_____
	<u>680.00</u>	<u>weight gain</u>	_____
	\$0.88	/lb	_____
Total Costs	\$1,303.02	total	_____
	- \$682.50	feeder cost	_____
	<u>680.00</u>	<u>weight gain</u>	_____
	\$0.91	/lb	_____
Breakeven selling price			
Operating Costs	\$1,252.88	operating costs	_____
	<u>1,330.00</u>	<u>lbs shrunk weight</u>	_____
	\$0.94	/lb	_____
Operating & Fixed	\$1,278.02	operating & fixedcosts	_____
	<u>1,330.00</u>	<u>lbs shrunk weight</u>	_____
	\$0.96	/lb	_____
Total Costs	\$1,303.02	total costs	_____
	<u>1,330.00</u>	<u>lbs shrunk weight</u>	_____
	\$0.98	/lb	_____
Breakeven purchase price			
Operating Costs	1,330.00	lbs shrunk weight	_____
	x \$90.00	\$/cwt selling price	_____
	= \$1,197.00	income	_____
	- \$570.38	operating less feeder cost	_____
	<u>650.00</u>	<u>lbs purchase net weight</u>	_____
	\$0.96	/lb	_____

Operating & Fixed	1,330.00	lbs shrunk weight	_____
x	\$90.00	\$/cwt selling price	_____
=	\$1,197.00	income	_____
-	\$595.52	op & fixed less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase weight</u>	_____
=	\$0.93	/lb	_____
Total Costs	1,330.00	lbs shrunk weight	_____
x	\$90.00	\$/cwt selling price	_____
=	\$1,197.00	income	_____
-	\$620.52	total less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase weight</u>	_____
=	\$0.89	/lb	_____

For more information contact your local MAFRI Office.

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Beef Finishing Feedlot 500 Head

