
2024 Cost of Production

Beef Backgrounding



Guidelines For Estimating
Beef Backgrounding Costs
For Weight Range of 500 - 900 lbs
Based on 500 Head

Date: September, 2023

This guide is designed to provide you with planning information and a format for calculating costs of production of a backgrounding feeder 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.

Backgrounding generally refers to the feeding of calves from weaning until they are put onto a high concentrate finishing ration. An example of a typical backgrounding operation would be, feed 500 pound steers to gain 1.5 to 2.5 pounds per day for approximately 100-200 days to produce 800 to 900 pound backgrounded feeders.

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:



[*The Farm Machinery Custom and Rental Rate Guide*](#) determine machinery costs.

is also available to help

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.

Backgrounding Cattle Production Cost Summary - September, 2023
 Based on 500 feeders, weight range 500 to 900 lbs, Corn Silage ration @ 2.5 lbs. ADG

A. Operating Costs	Cost/Head	Total Cost	Your Cost
1. Feed Costs			
1.01 Alfalfa Grass Hay (57.8 % TDN, 13.7 % CP)	\$48.00	\$24,000	_____
1.02 Corn Silage (65.2 % TDN, 8.7 % CP)	\$91.77	\$44,910	_____
1.03 Barley Silage (63 % TDN, 11 % CP)	\$0.00	\$0	_____
1.04 Barley Grain (83.1 % TDN, 12.5 % CP)	\$106.60	\$53,388	_____
1.05 Greenfeed	\$0.00	\$0	_____
1.06 Straw	\$0.00	\$0	_____
1.07 32-20% Feedlot Suppl. (61.7%TDN, 35.6%CF)	\$0.00	\$0	_____
1.08 DDGS Corn/Wheat (77 % TDN, 33.9 % CP)	\$20.67	\$10,500	_____
1.09 1:1 Premix	\$0.00	\$0	_____
1.10 2:1 Premix	\$40.91	\$20,500	_____
1.11 Limestone	\$5.10	\$2,560	_____
1.12 Other	<u>\$0.00</u>	<u>\$0</u>	_____
Total Feed Costs	\$313.05	\$155,858	_____
2. Other Operating Costs			
2.01 Feeder Cost	\$1,965.25	\$982,625	_____
2.02 Straw	\$22.40	\$11,200	_____
2.03 Veterinary Medicine & Supplies	\$25.76	\$12,880	_____
2.04 Annual Fuel & Repair Costs	\$10.83	\$5,413	_____
2.05 Utilities	\$3.39	\$1,695	_____
2.06 Feeder Selling Cost	\$34.95	\$17,475	_____
2.07 Insurance	\$1.64	\$820	_____
2.08 Manure Removal	\$18.83	\$9,417	_____
2.09 Barn & Office Supplies	\$1.20	\$600	_____
2.10 Death Loss	<u>\$43.28</u>	<u>\$21,640</u>	_____
Subtotal Operating Costs	\$2,440.58	\$1,219,623	_____
2.11 Operating Interest	<u>\$86.91</u>	<u>\$43,455</u>	_____
Total Operating Costs	\$2,527.49	\$1,263,078	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	\$7.21	\$3,605	_____
3.02 Machinery & Equipment	\$18.00	\$9,000	_____
4. Investment			
4.01 Buildings	\$3.52	\$1,760	_____
4.02 Machinery & Equipment	<u>\$5.40</u>	<u>\$2,700</u>	_____
Total Fixed Costs	\$34.13	\$17,065	_____
Total Operating and Fixed Costs	\$2,561.62	\$1,280,143	_____
C. Owners - Labour & Living	\$27.00	\$13,500	_____
Total Cost of Production	\$2,588.62	\$1,293,643	_____

Profitability and Breakeven Analysis

Estimated Farmgate	Per Head	Total
Gross Revenue @ \$330/cwt market price	\$2,880.90	\$1,440,450
	Breakeven Purchase	Breakeven Selling
	Price (\$/cwt) @	Price (\$/cwt) @
	\$330/cwt market price	\$390/cwt feeder price
Operating Costs	\$460.68	\$289.52
Operating Costs & Labour	\$455.28	\$292.61
Operating & Fixed Costs	\$453.86	\$293.43
Total Costs	\$448.46	\$296.52
	Cost per lb of	Marginal Returns per head
	gain sold (\$/cwt)	@ \$330/cwt market price
Feed Costs	\$83.93	\$602.60
Operating Costs	\$154.82	\$353.41
Operating Costs & Labour	\$162.06	\$326.41
Operating & Fixed Costs	\$163.97	\$319.28
Total Costs	\$171.21	\$292.28
Return on Investment (ROI)	11.3%	
Estimated Return on Asset (ROA)	78.2%	

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Risk & Sensitivity Analysis (Stress Test)

Percent Market Price Change	-10.0%
Percent Feed Cost Change	5.0%
Percent Feeder Cost Change	5.0%

	Per Head
Market Price (\$ per cwt)	\$297.00
Feed Cost	\$328.70
Feeder Cost	\$2,063.51

Stress Test Scenario = Market Price Down 10%, Feed Price Up 5% and Feeder Cost Up 5%

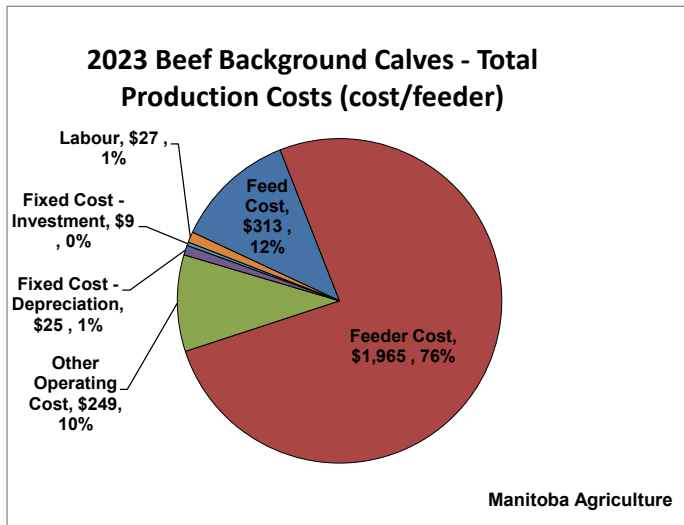
Operating Costs	\$2,641.41
Total Costs	\$2,702.54
Gross Revenue / feeder	\$2,592.81
Marginal Returns	
Over Operating Costs	(\$48.59)
Over Operating & Labour Costs	(\$75.59)
Over Total Costs (Net Profit)	(\$109.73)
Operating Expense Ratio	101.9%

Estimated Breakeven Canadian Dollar Analysis

	Est. Market Price (\$/cwt Cdn) @ 0.7500 Cdn per USD				
	\$320.00	\$325.00	\$330.00	\$335.00	\$340.00
Breakeven CDN Dollar (\$1 Cdn = \$ USD)					
Operating Costs	0.8290	0.8419	0.8549	0.8678	0.8808
Operating & Labour Costs	0.8202	0.8330	0.8458	0.8586	0.8715
Operating, Fixed & Labour Costs	0.8094	0.8220	0.8347	0.8473	0.8600

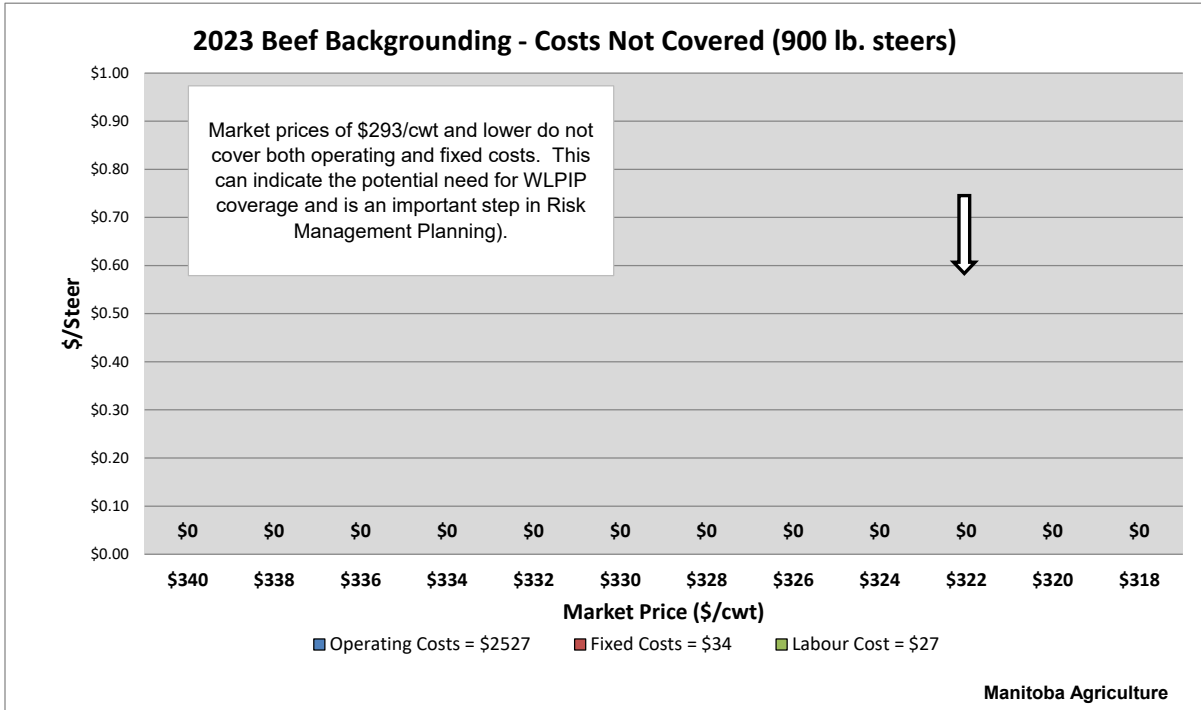
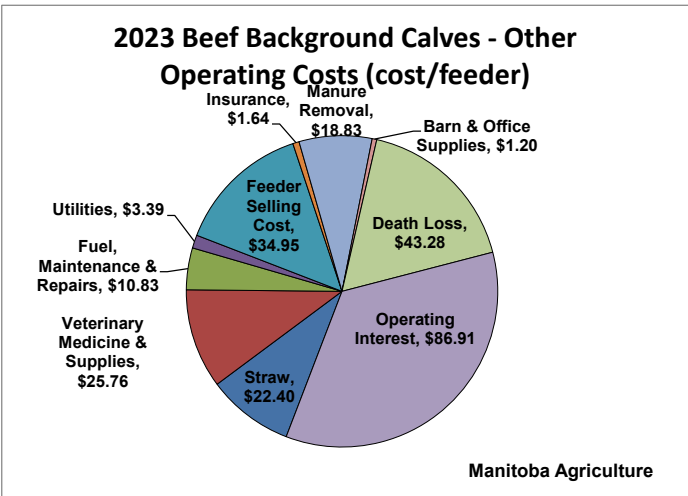
Breakeven Canadian Dollar = (Est. Market Price (\$/lb) x Shrunk Wt. (lbs) x \$ Cdn per USD) / Cost
 (eg. (\$3.30 x 873 lbs x \$0.7500) / \$2588.62) = \$0.8347

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.



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

Operating interest and feeder selling costs are the most significant other background calf production costs.



Backgrounding Feeder Cattle Production Costs

Assumptions

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

Herd Profile

Number of Feeders Purchased	500	head
Feeder Cattle Mortality Rate	2.00	%
Feeder Purchased Weight	500	lbs
Feeder Cattle Price	\$390.00	/cwt
Finish Weight (Maximum 900 lbs.)	900	lbs
Feeder Selling Price (WLPIP insured value)	\$330.00	/cwt
\$1 Canadian Dollar (\$1.3333 CDN)	\$0.7500	/ \$1 USD
WLPIP Insurance Premium	\$0.00	/cwt
Percent Shrink at Sale	3.00	%

Average Daily Gain	2.50	lbs/day
Type of Feed Ration	Corn Silage	

<u>Weight Range</u>	<u>Days on Feed</u>	<u>Feed Cost \$/Steer/Day</u>
500 to 600 lbs.	40	\$1.667
600 to 700 lbs.	40	\$1.902
700 to 800 lbs.	40	\$2.047
800 to 900 lbs.	40	\$2.214
TOTAL	160	

Total Feed Cost per Steer	\$313.04 /head
Average Feed Cost per Day	\$1.96
Feed Cost per lb. of Gain Sold (shrunk weight)	\$0.839

Total Pounds of Gain	400 lbs
Total Pounds of Gain (Shrunk Weight)	373 lbs

(Analysis Assumed)

<u>Feed Costs</u>	<u>\$/unit</u>	<u>lbs/Unit</u>	<u>\$/lb</u>	<u>TDN</u>	<u>CP</u>
Alfalfa Grass Hay	\$120.00	2,000	0.060	57.8%	13.7%
Corn Silage	\$45.00	2,000	0.023	65.2%	8.7%
Barley Silage	\$55.00	2,000	0.028	63.0%	11.0%
Barley Grain	\$6.25	48	0.130	83.1%	12.5%
Greenfeed	\$120.00	2,000	0.060		
Straw	\$70.00	2,000	0.035		
32-20% Feedlot Suppl.	\$500	2,205	0.227	61.7%	35.6%
DDGS Corn/Wheat	\$350	2,205	0.159	77.0%	33.9%
1:1 Premix	\$50.00	55	0.909		
2:1 Premix	\$50.00	55	0.909		
Limestone	\$20.00	55	0.364		
Other	\$0.00	2,000	0.000		

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**Feeder Purchase Costs**

Buying Commission	\$5.00 /head
Trucking-in	\$1.70 /cwt
Insurance fee	\$1.75 /head

Straw Bedding

lbs/day	4.00 /head
cost	\$70.00 /ton

Veterinary Medicine & Supplies**Cattle Medication**

IBR,BVD,PI3,BRSV, Pasteurella	\$5.00 /head
Vitamin A-D	\$0.50 /head
External & Internal Parasites	\$0.72 /head
Blackleg & Haemophilus	\$1.26 /head
Growth Implants	\$2.00 /head
Antibiotics	\$15.00 /head

Herd Health Program**Professional Services**

Total Yearly Hours	3.00 hours
Rate	\$160.00 /hour

Transportation

Total Kilometres (round trip)	80.0 km
Rate	\$1.00 /km
Number of Yearly Visits	2

Annual Fuel & Repair Costs

a) Machinery Fuel Costs - Winter Feeding

Tractor with Loader PTO hp	120
Diesel Fuel Cost	\$1.40 /litre
Tractor Hours Per Day (average)	1.50 hours

b) Machinery Repair (% of investment cost) 1.2 %

c) Building maintenance (% of investment cost) 2.2 %

Utilities

Hydro - Rate	\$0.09324 / kWh
12 kWh per feeder	\$559.44
2 1000 watt waterer	\$537.06
Total Hydro	\$1,096.50
Telephone	\$600.00

Trucking Cost

Average Weight	900 lbs/head
Distance	75 miles
Rate	\$7.00 /loaded mile
Truck Capacity	54,000 lbs/load
Number of head per load - calves	60 per load

Marketing Cost

MBP/NCO Levy \$/Head	\$5.50 /head
Commission on Sales	\$20.00 /head
Market Value	\$330.00 /cwt

Manure Removal

Manure volume produced	0.024 m ³ /feeder/day
Manure volume shrinkage	75 %
Cost for manure removal & application	\$15.00 /cubic yard

Insurance

Cost per \$100 Capital Invested in	
a) Livestock	\$0.00 /\$100
b) Building & Equipment	\$0.40 /\$100
Additional Coverage for Liability	\$49.00 /year

Barn & Office Supplies

Total yearly expense relating to barn	\$600.00
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Operating Interest Rate	9.00 %
Investment Interest Rate	4.00 %

FOOTNOTE: cwt = hundred-weight = 100 lbs

Capital Costs

	<u>Original Value</u>	<u>Salvage Value</u>	<u>Useful Life</u>
Buildings, Corrals & Water System			
Windbreak fence	\$6,300	10 %	20 years
Pens	\$5,300	10 %	20 years
Handling Facilities	\$7,500	10 %	20 years
Waterers	\$6,000	10 %	20 years
Gates	\$2,000	10 %	20 years
Feeders	\$1,500	10 %	20 years
Bunk Feeders	\$21,000	10 %	20 years
Well & Pressure System	\$8,000	10 %	20 years
Grain Bin	\$5,000	10 %	20 years
Landscaping	\$17,500	10 %	20 years
Total	\$80,100		
Machinery & Equipment			
Tractors & Loader (\$175,000 @ 30%)	\$52,500	20 %	10 years
Miscellaneous	\$60,000	20 %	10 years
Total Investment	\$192,600		

Labour Costs

	<u>Total</u>
Hours/Head	1.0 hours
Labour Rate	\$27.00 /hour

Feed Costs & Requirements Worksheet

Total Days on Feed = 160 days @ 2.5 lbs. Average Daily Gain (ADG) Per Day

Barley Silage Ration											
Weight Range (lbs)				500 to 600	600 to 700	700-800	800-900	Total lbs /steer	Feed Cost \$/steer	Total Units Required (500 steers)	Total Feed Cost (500 steers)
Days on Feed				40	40	40	40				
Feed Name	\$/unit	lbs/Unit	\$/lb	As Fed Lbs/Head/Day							
Alfalfa Grass Hay	\$120.00	2000	\$0.060	3	3	2.5	2	420	\$25.20	105	\$12,600.00
Corn Silage	\$45.00	2000	\$0.023	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$55.00	2000	\$0.028	23	25.75	29.25	32.5	4,420	\$123.76	1,105	\$60,775.00
Barley Grain	\$6.25	48	\$0.130	5	6	7	8	1,040	\$135.20	10,834	\$67,712.50
Greenfeed	\$120.00	2000	\$0.060	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$70.00	2000	\$0.035	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$500.00	2205	\$0.227	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$350.00	2205	\$0.159	0	0	0	0	0	\$0.00	0	\$0.00
1:1 Premix	\$50.00	55	\$0.909	0.25	0.27	0.3	0.32	46	\$41.81	419	\$20,950.00
2:1 Premix	\$50.00	55	\$0.909	0	0	0	0	0	\$0.00	0	\$0.00
Limestone	\$20.00	55	\$0.364	0.06	0.085	0.11	0.13	15	\$5.46	137	\$2,740.00
Other	\$0.00	2000	\$0.000	0	0	0	0	0	\$0.00	0	\$0.00
\$/head/day				\$1.723	\$1.957	\$2.192	\$2.408		\$331.43		\$164,777.50

Corn Silage Ration											
Weight Range (lbs)				500 to 600	600 to 700	700-800	800-900	Total lbs /steer	Feed Cost \$/steer	Total Units Required (500 steers)	Total Feed Cost (500 steers)
Days on Feed				40	40	40	40				
Feed Name	\$/unit	lbs/Unit	\$/lb	As Fed Lbs/Head/Day							
Alfalfa Grass Hay	\$120.00	2000	\$0.060	5	5	5	5	800	\$48.00	200	\$24,000.00
Corn Silage	\$45.00	2000	\$0.023	19	22	27	31.75	3,990	\$91.77	998	\$44,910.00
Barley Silage	\$55.00	2000	\$0.028	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$6.25	48	\$0.130	4	5	5.5	6	820	\$106.60	8,542	\$53,387.50
Greenfeed	\$120.00	2000	\$0.060	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$70.00	2000	\$0.035	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$500.00	2205	\$0.227	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$350.00	2205	\$0.159	1	1	0.75	0.5	130	\$20.67	30	\$10,500.00
1:1 Premix	\$50.00	55	\$0.909	0	0	0	0	0	\$0.00	0	\$0.00
2:1 Premix	\$50.00	55	\$0.909	0.25	0.28	0.285	0.315	45	\$40.91	410	\$20,500.00
Limestone	\$20.00	55	\$0.364	0.065	0.09	0.09	0.105	14	\$5.10	128	\$2,560.00
Other	\$0.00	2000	\$0.000	0	0	0	0	0	\$0.00	0	\$0.00
\$/head/day				\$1.667	\$1.902	\$2.047	\$2.214		\$313.04		\$155,857.50

Alfalfa Grass Hay Ration											
Weight Range (lbs)				500 to 600	600 to 700	700-800	800-900	Total lbs /steer	Feed Cost \$/steer	Total Units Required (500 steers)	Total Feed Cost (500 steers)
Days on Feed				40	40	40	40				
Feed Name	\$/unit	lbs/Unit	\$/lb	As Fed Lbs/Head/Day							
Alfalfa Grass Hay	\$120.00	2000	\$0.060	11.25	12.5	14	15	2,110	\$126.60	528	\$63,360.00
Corn Silage	\$45.00	2000	\$0.023	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$55.00	2000	\$0.028	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$6.25	48	\$0.130	6.75	7.8	8.7	9.7	1,318	\$171.34	13,730	\$85,812.50
Greenfeed	\$120.00	2000	\$0.060	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$70.00	2000	\$0.035	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$500.00	2205	\$0.227	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$350.00	2205	\$0.159	0	0	0	0	0	\$0.00	0	\$0.00
1:1 Premix	\$50.00	55	\$0.909	0.25	0.27	0.31	0.33	46	\$41.81	419	\$20,950.00
2:1 Premix	\$50.00	55	\$0.909	0	0	0	0	0	\$0.00	0	\$0.00
Limestone	\$20.00	55	\$0.364	0	0	0	0	0	\$0.00	0	\$0.00
Other	\$0.00	2000	\$0.000	0	0	0	0	0	\$0.00	0	\$0.00
\$/head/day				\$1.780	\$2.009	\$2.253	\$2.461		\$339.75		\$170,122.50

Feed Summary - 160 Days

	Total Feed Cost per Steer	Average Feed Cost/Day	Feed Cost per lb. of Gain Sold (shrunk weight)
Barley Silage Ration	\$331.43	\$2.071	\$0.8886
Corn Silage Ration	\$313.04	\$1.957	\$0.8393
Alfalfa Grass Hay Ration	\$339.75	\$2.123	\$0.9109

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 budget, contact your local Manitoba Agriculture office.

Backgrounding Cattle Production Cost Worksheet

Assumptions

1. Average daily gain (ADG) was assumed to be 2.5 lbs/day.
2. It was assumed the feeder steer weighed in at 500 lbs shrunk weight, and was raised to 900 lbs (873 lbs after 3 % shrink).
3. Days on feed was 160.
4. Investment in facilities and equipment was assumed to handle 500 head.

A. Operating Costs

Your Cost

1. Feed Costs

1.01 Alfalfa Grass Hay (57.8 % TDN, 13.7 % CP)

	800.0	lbs/feeder	_____
x	\$0.060	\$/lb	_____
=	\$48.00	/feeder	_____

1.02 Corn Silage (65.2 % TDN, 8.7 % CP)

	3,990.0	lbs/feeder	_____
x	\$0.023	\$/lb	_____
=	\$91.77	/feeder	_____

1.03 Barley Silage (63 % TDN, 11 % CP)

	0.0	lbs/feeder	_____
x	\$0.028	\$/lb	_____
=	\$0.00	/feeder	_____

1.04 Barley Grain (83.1 % TDN, 12.5 % CP)

	820.0	lbs/feeder	_____
x	0.130	\$/lb	_____
=	\$106.60	/feeder	_____

1.05 Greenfeed

	0.0	lbs/feeder	_____
x	0.060	\$/lb	_____
=	\$0.00	/feeder	_____

1.06 Straw

	0.0	lbs/feeder	_____
x	0.035	\$/lb	_____
=	\$0.00	/feeder	_____

1.07 32-20% Feedlot Suppl. (61.7%TDN, 35.6%CP)

	0.0	lbs/feeder	_____
x	0.227	\$/lb	_____
=	\$0.00	/feeder	_____

1.08 DDGS Corn/Wheat (77 % TDN, 33.9 % CP)

	130.0	lbs/feeder	_____
x	0.159	\$/lb	_____
=	\$20.67	/feeder	_____

1.09 1:1 Premix

	0.0	lbs/feeder	_____
x	0.909	\$/lb	_____

=	\$0.00	/feeder	_____
1.10 2:1 Premix			
	45.0	lbs/feeder	_____
x	<u>0.909</u>	<u>\$/lb</u>	_____
=	\$40.91	/feeder	_____
1.11 Limestone			
	14.0	lbs/feeder	_____
x	<u>0.364</u>	<u>\$/lb</u>	_____
=	\$5.10	/feeder	_____
1.12 Other			
	0.0	lbs/feeder	_____
x	<u>0.000</u>	<u>\$/lb</u>	_____
=	\$0.00	/feeder	_____
2. Other Operating Costs			
2.01 Feeder Cattle Cost			
Commission	\$5.00	/feeder	_____
Insurance	\$1.75	/feeder	_____
Trucking-in	\$1.70	/cwt	_____
x	500	lbs/feeder	_____
÷	<u>100</u>	<u>lbs/cwt</u>	_____
=	\$8.50	/feeder	_____
Feeder	500	lbs/feeder	_____
x	\$390.00	/cwt	_____
÷	<u>100</u>	<u>lbs/cwt</u>	_____
=	\$1,950.00	/feeder	_____
Total =	\$1,965.25	/feeder	_____
2.02 Straw			
	4.00	lbs/feeder/day	_____
x	160.00	days on feed	_____
x	<u>\$70.00</u>	<u>/ton</u>	_____
=	\$22.40	/feeder	_____
2.03 Veterinary Medicine & Supplies			
Cattle Medication			
	\$5.00	IBR,BVD,PI3,BRSV,Pasteurella	_____
+	\$0.50	Vitamin A-D	_____
+	\$0.72	External & Internal Parasites	_____
+	\$1.26	Blackleg & Haemophilus	_____
+	\$2.00	Growth Implants	_____
±	<u>\$15.00</u>	<u>Antibiotics</u>	_____
=	\$24.48	/feeder	_____
Herd Health Program			
Professional Services			
	\$160.00	/hour charge	_____
x	3.00	hours	_____
÷	<u>500.00</u>	<u>feeder cattle</u>	_____
=	\$0.96	/feeder	_____

Transportation Costs				
	\$1.00	/km charge		
x	80	kilometres		
x	2	visits		
÷	<u>500</u>	<u>feeder cattle</u>		
=	\$0.32	/feeder		
Total =	\$25.76	/feeder		

2.04 Annual Fuel & Repair Costs

Machinery fuel cost				
	120	PTO hp		
÷	2.5	avg HP required		
x	0.1665576	litres fuel/hour/hp		
x	1.5	hours per day		
x	\$1.40	diesel / litre		
x	<u>160</u>	<u>days on feed</u>		
	\$2,686.24	annual fuel cost		
÷	<u>500.00</u>	<u>feeders</u>		
=	\$5.37	/feeder		

Machinery repair & maintenance				
	\$112,500	machinery capital cost		
x	<u>1.20</u>	<u>% repair rate</u>		
=	\$1,350.00	oil, repairs & maintenance		
÷	<u>500.00</u>	<u>feeders</u>		
=	\$2.70	/feeder		

Building repair & maintenance				
	\$62,600	building capital cost		
x	<u>2.20</u>	<u>% repair rate</u>		
=	\$1,377.20	oil, repairs & maintenance		
÷	<u>500.00</u>	<u>feeders</u>		
=	\$2.75	/feeder		
=	\$10.83	/feeder		

2.05 Utilities

	\$1,696.50	cost/year		
÷	<u>500</u>	<u>feeder cattle</u>		
=	\$3.39	/feeder		

2.06 Feeder Selling Cost

Trucking				
	Calves	75.00	miles	
x		\$7.00	/loaded mile	
		490.00	feeders	
=		9.00	loads	
÷		<u>500.00</u>	<u>feeders</u>	
=		\$9.45	/feeder	

MBP levy, WLPIP, selling commission				
+	\$5.50	MBP Levy		
+	\$0.00	WLPIP Insurance Premium		
+	<u>\$20.00</u>	<u>commission</u>		
=	\$25.50	/feeder		

Total =	\$34.95	/feeder		
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2.07 Insurance

	\$192,600	building & equipment investment	_____
x	\$0.40	/\$100 capital	_____
÷	100	/\$100	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$1.54	/feeder	_____
	\$1,230,000	herd investment	_____
x	\$0.00	/\$100 capital	_____
÷	100	/\$100	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$0.00	/feeder	_____
	\$49.00	additional coverage for liability	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$0.10	/feeder	_____
Total =	\$1.64	/feeder	_____

2.08 Manure Removal

=	160	days on feed
x	0.024	m ³ /feeder/day
=	3.84	m ³ manure volume
x	75	% volume shrink
x	1.30795	yd ³ per m ³
x	<u>\$15.00</u>	<u>yd³ manure removal cost</u>
=	\$18.83	/feeder

2.09 Barn & Office Supplies

	\$600.00	total barn expenses	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$1.20	/feeder	_____

2.10 Death Loss

	\$1,965.25	feeder cattle cost	_____
+	\$2,397.30	maximum value	_____
-	\$34.95	selling costs	_____
÷	2.00	average	_____
x	<u>2.00</u>	<u>% mortality rate</u>	_____
=	\$43.28	/feeder	_____

2.11 Operating Interest

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

	\$1,965.25	feeder cost	_____
+	\$237.67	½ of feed & other costs	_____
x	9.00	% operating interest	_____
x	160.00	days on feed	_____
÷	<u>365.00</u>	<u>days /year</u>	_____
=	\$86.91	/feeder	_____

Capital Costs

Buildings, Corrals & Water System

Windbreak fence	\$6,300	_____
Pens	\$5,300	_____

Handling Facilities	\$7,500	_____
Waterers	\$6,000	_____
Gates	\$2,000	_____
Feeders	\$1,500	_____
Bunk Feeders	\$21,000	_____
Well & Pressure System	\$8,000	_____
Grain Bin	\$5,000	_____
Landscaping	<u>\$17,500</u>	_____
Total	\$80,100	_____

Machinery & Equipment

Tractor & Loader	\$52,500	_____
Miscellaneous	<u>\$60,000</u>	_____
Total	\$112,500	_____

Total Investment	\$192,600	_____
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B. Fixed Costs

3. Depreciation Original Cost - Salvage Value

Useful Life

3.01 Buildings

	\$80,100	original cost	_____
-	\$8,010	salvage value	_____
÷	20.00	years useful life	_____
÷	<u>500.00</u>	feeder cattle	_____
=	\$7.21	/feeder	_____

3.02 Machinery & Equipment

	\$112,500	original cost	_____
-	\$22,500	salvage value	_____
÷	10.00	years useful life	_____
÷	<u>500.00</u>	feeder cattle	_____
=	\$18.00	/feeder	_____

4. Investment Original Cost + Salvage Value x Investment Rate

2

4.01 Buildings

	\$80,100	original cost	_____
+	\$8,010	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	<u>500.00</u>	feeder cattle	_____
=	\$3.52	/feeder	_____

4.02 Machinery & Equipment

	\$112,500	original cost	_____
+	\$22,500	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
÷	<u>500.00</u>	feeder cattle	_____
=	\$5.40	/feeder	_____

C. Labour

	1.0	hours/feeder/year	_____
÷	<u>\$27.00</u>	/hour	_____
=	\$27.00	/feeder	_____

Breakeven Calculations

Cost per lb of gain sold (shrunk weight)

Feed Costs		\$313.05	feed cost	
	÷	<u>373</u>	<u>lbs gained weight</u>	
	=	\$0.84	/lb (gain sold)	
Operating Costs		\$2,527.49	operating costs	
	-	\$1,950.00	feeder cost	
	÷	<u>373</u>	<u>lbs gained weight</u>	
	=	\$1.55	/lb (gain sold)	
Operating & Labour Costs		\$2,554.49	operating costs	
	-	\$1,950.00	feeder cost	
	÷	<u>373</u>	<u>lbs gained weight</u>	
	=	\$1.62	/lb (gain sold)	
Operating & Fixed		\$2,561.62	oper. & fixed costs	
	-	\$1,950.00	feeder cost	
	÷	<u>373</u>	<u>lbs gained weight</u>	
	=	\$1.64	/lb (gain sold)	
Total Costs		\$2,588.62	total costs	
	-	\$1,950.00	feeder cost	
	÷	<u>373</u>	<u>lbs gained weight</u>	
	=	\$1.71	/lb (gain sold)	
Breakeven selling price (shrunk weight)				
Operating Costs		\$2,527.49	operating costs	
	÷	<u>873</u>	<u>lbs shrunk weight</u>	
	=	\$2.90	/lb	
Operating & Labour Costs		\$2,554.49	operating & labour	
	÷	<u>873</u>	<u>lbs shrunk weight</u>	
	=	\$2.93	/lb	
Operating & Fixed		\$2,561.62	oper. & fixed costs	
	÷	<u>873</u>	<u>lbs shrunk weight</u>	
	=	\$2.93	/lb	
Total Costs		\$2,588.62	total costs	
	÷	<u>873</u>	<u>lbs shrunk weight</u>	
	=	\$2.97	/lb	

Breakeven purchase price (shrunk weight)

Operating Costs	873	lbs shrunk weight	_____
x	\$330.00	\$/cwt selling price	_____
=	\$2,880.90	income	_____
-	\$577.49	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$4.61	/lb	_____

Operating & Labour Costs	873	lbs shrunk weight	_____
x	\$330.00	\$/cwt selling price	_____
=	\$2,880.90	income	_____
-	\$604.49	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$4.55	/lb	_____

Operating & Fixed	873	lbs shrunk weight	_____
x	\$330.00	\$/cwt selling price	_____
=	\$2,880.90	income	_____
-	\$611.62	op. & fixed less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$4.54	/lb	_____

Total Costs	873	lbs shrunk weight	_____
x	\$330.00	\$/cwt selling price	_____
=	\$2,880.90	income	_____
-	\$638.62	total less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$4.48	/lb	_____

Profitability and Breakeven Analysis:

Gross Revenue = Shrunk weight (lbs) x \$/lb price (eg. 873 x \$3.30/lb = \$2880.90)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost
 (eg. (\$2880.90 - \$2588.62) / \$2588.62 = 11.3%)

Return on Asset (ROA) = (Margin Over Operating - Labour - Building Depreciation - Machinery Depreciation) / (Building, Machinery & Equipment Investment / Herd Size) (eg. (\$353.41 - \$27.00 - \$7.21 - \$18.00) / (\$192,600 / 500) = 78.2%)

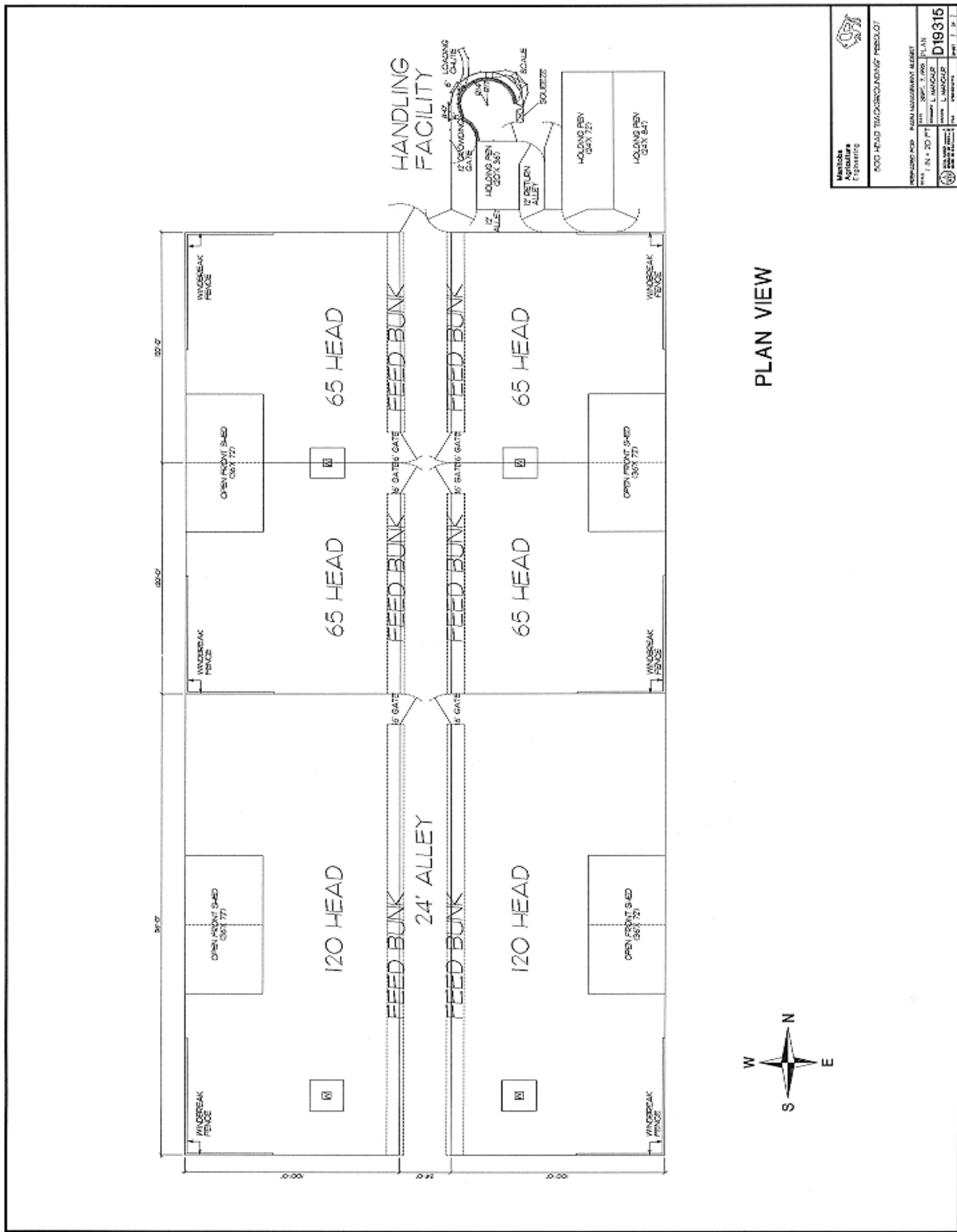
September, 2023

Contact Us

For more information, contact a Farm Management Specialist.

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

Backgrounding Feedlot Facilities



PLAN VIEW

Member Agriculture Engineering	
6000 HEAD BACKGROUNDING FEEDLOT	
PREPARED FOR:	FARM MANAGEMENT CONSULTANT
DATE:	08/01/2008
DRAWN BY:	L. WANGCUP
CHECKED BY:	L. WANGCUP
SCALE:	1" = 20'-0"
PROJECT NO.:	D19315
SHEET NO.:	1 OF 1

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