
2022 Cost of Production

Beef Backgrounding



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

Date: September, 2021

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 and Resource Development 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: www.manitoba.ca/agriculture
or at your nearest [ARD/MASC Service Centre location](#).
[The Farm Machinery Custom and Rental Rate Guide](#) is also available to help determine machinery costs.

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 your nearest ARD/MASC Service Centre location.

Backgrounding Cattle Production Cost Summary - September, 2021
 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)	\$68.00	\$34,000	_____
1.02 Corn Silage (65.2 % TDN, 8.7 % CP)	\$99.75	\$49,900	_____
1.03 Barley Silage (63 % TDN, 11 % CP)	\$0.00	\$0	_____
1.04 Barley Grain (83.1 % TDN, 12.5 % CP)	\$127.92	\$64,065	_____
1.05 Greenfeed	\$0.00	\$0	_____
1.06 Straw	\$0.00	\$0	_____
1.07 32-20% Feedlot Suppl. (61.7%TDN, 35.6%CP)	\$0.00	\$0	_____
1.08 DDGS Corn/Wheat (77 % TDN, 33.9 % CP)	\$21.19	\$10,800	_____
1.09 1:1 Premix	\$0.00	\$0	_____
1.10 2:1 Premix	\$32.72	\$16,400	_____
1.11 Limestone	\$1.40	\$704	_____
1.12 Other	\$0.00	\$0	_____
Total Feed Costs	\$350.98	\$175,869	_____
2. Other Operating Costs			
2.01 Feeder Cost	\$1,165.25	\$582,625	_____
2.02 Straw	\$19.20	\$9,600	_____
2.03 Veterinary Medicine & Supplies	\$25.25	\$12,625	_____
2.04 Annual Fuel & Repair Costs	\$9.57	\$4,784	_____
2.05 Utilities	\$3.31	\$1,655	_____
2.06 Feeder Selling Cost	\$32.93	\$16,463	_____
2.07 Insurance	\$1.60	\$800	_____
2.08 Manure Removal	\$12.56	\$6,278	_____
2.09 Barn & Office Supplies	\$1.20	\$600	_____
2.10 Death Loss	\$27.54	\$13,770	_____
Subtotal Operating Costs	\$1,649.38	\$825,069	_____
2.11 Operating Interest	\$30.85	\$15,425	_____
Total Operating Costs	\$1,680.23	\$840,494	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	\$7.21	\$3,605	_____
3.02 Machinery & Equipment	\$17.28	\$8,640	_____
4. Investment			
4.01 Buildings	\$2.42	\$1,210	_____
4.02 Machinery & Equipment	\$3.56	\$1,780	_____
Total Fixed Costs	\$30.47	\$15,235	_____
Total Operating and Fixed Costs	\$1,710.70	\$855,729	_____
C. Owners - Labour & Living	\$25.00	\$12,500	_____
Total Cost of Production	\$1,735.70	\$868,229	_____

Profitability and Breakeven Analysis

Estimated Farmgate	Per Head	Total
Gross Revenue @ \$195/cwt market price	\$1,702.35	\$851,175
	Breakeven Purchase Price (\$/cwt) @ \$195/cwt market price	Breakeven Selling Price (\$/cwt) @ \$230/cwt feeder price
Operating Costs	\$234.42	\$192.47
Operating Costs & Labour	\$229.42	\$195.33
Operating & Fixed Costs	\$228.33	\$195.96
Total Costs	\$223.33	\$198.82
	Cost per lb of gain sold (\$/cwt)	Marginal Returns per head @ \$195/cwt market price
Feed Costs	\$94.10	\$186.12
Operating Costs	\$142.15	\$22.12
Operating Costs & Labour	\$148.86	(\$2.88)
Operating & Fixed Costs	\$150.32	(\$8.35)
Total Costs	\$157.02	(\$33.35)
Return on Investment (ROI)	(1.9%)	
Estimated Return on Asset (ROA)	(7.3%)	

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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)	\$175.50
Feed Cost	\$368.53
Feeder Cost	\$1,223.51

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

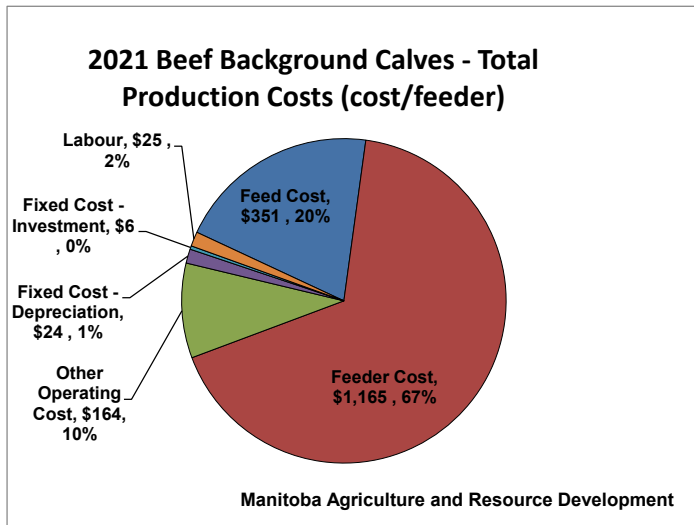
Operating Costs	\$1,756.04
Total Costs	\$1,811.51
Gross Revenue / feeder	\$1,532.12
Marginal Returns	
Over Operating Costs	(\$223.93)
Over Operating & Labour Costs	(\$248.93)
Over Total Costs (Net Profit)	(\$279.40)
Operating Expense Ratio	114.6%

Estimated Breakeven Canadian Dollar Analysis

	Est. Market Price (\$/cwt Cdn) @ 0.7850 Cdn per USD				
	\$185.00	\$190.00	\$195.00	\$200.00	\$205.00
Breakeven CDN Dollar (\$1 Cdn = \$ USD)					
Operating Costs	0.7545	0.7749	0.7953	0.8157	0.8361
Operating & Labour Costs	0.7435	0.7636	0.7837	0.8038	0.8239
Operating, Fixed & Labour Costs	0.7304	0.7502	0.7699	0.7897	0.8094

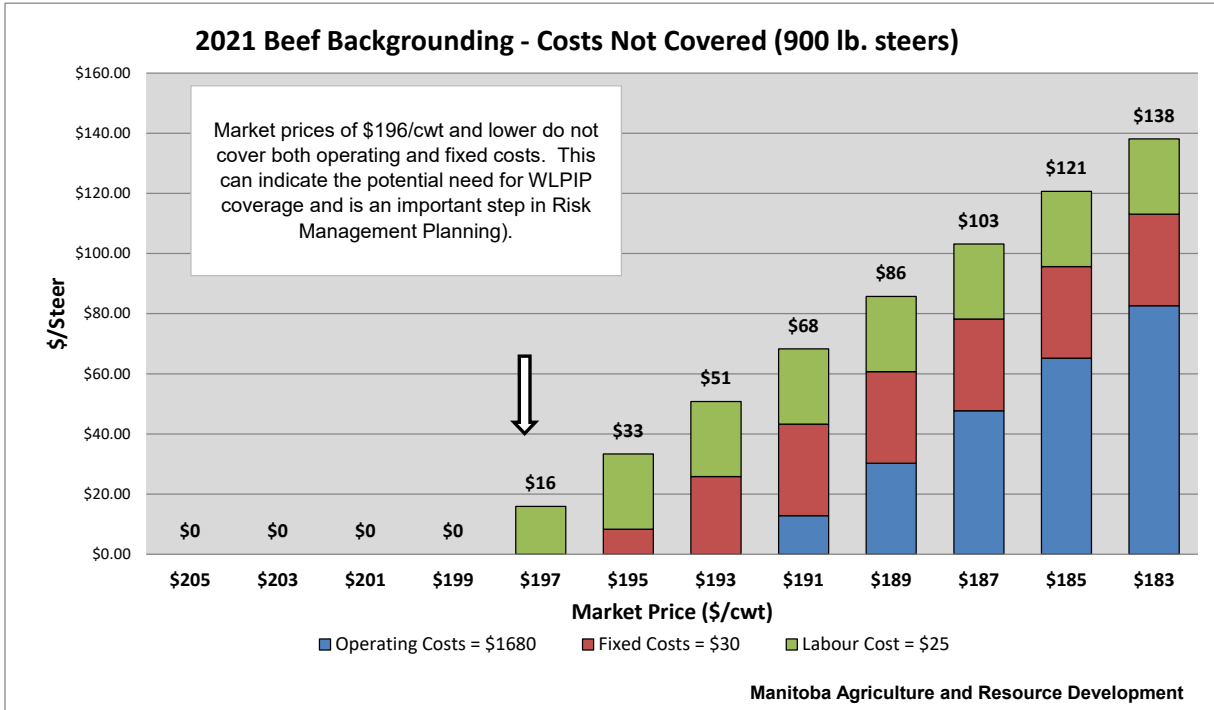
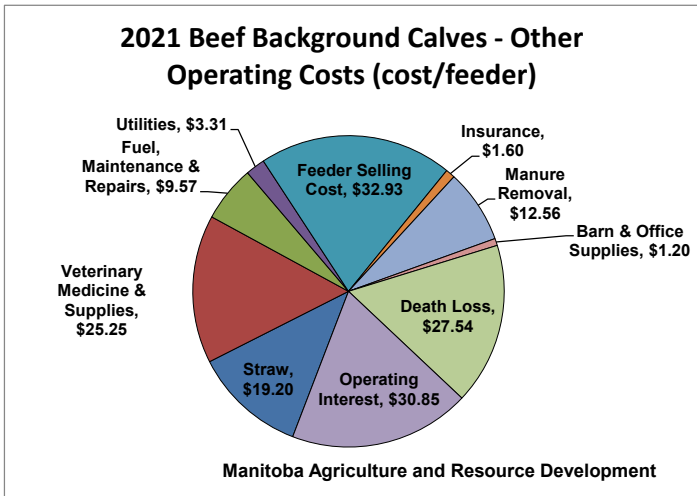
Breakeven Canadian Dollar = (Est. Market Price (\$/lb) x Shrunk Wt. (lbs) x \$ Cdn per USD) / Cost
 (eg. (\$1.95 x 873 lbs x \$0.7850) / \$1735.70) = \$0.7699

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	\$230.00	/cwt
Finish Weight (Maximum 900 lbs.)	900	lbs
Feeder Selling Price (WLPIP insured value)	\$195.00	/cwt
\$1 Canadian Dollar (\$1.2739 CDN)	\$0.7850	/\$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	\$2.191
600 to 700 lbs.	40	\$2.476
700 to 800 lbs.	40	\$2.773
800 to 900 lbs.	40	\$3.028
TOTAL	160	

Total Feed Cost per Steer	\$350.98 /head
Average Feed Cost per Day	\$2.19
Feed Cost per lb. of Gain Sold (shrunk weight)	\$0.941

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	\$170.00	2,000	0.085	57.8%	13.7%
Corn Silage	\$50.00	2,000	0.025	65.2%	8.7%
Barley Silage	\$50.00	2,000	0.025	63.0%	11.0%
Barley Grain	\$7.50	48	0.156	83.1%	12.5%
Greenfeed	\$170.00	2,000	0.085		
Straw	\$60.00	2,000	0.030		
32-20% Feedlot Suppl.	\$475	2,205	0.215	61.7%	35.6%
DDGS Corn/Wheat	\$360	2,205	0.163	77.0%	33.9%
1:1 Premix	\$40.00	55	0.727		
2:1 Premix	\$40.00	55	0.727		
Limestone	\$5.50	55	0.100		
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	\$60.00 /ton

Veterinary Medicine & Supplies**Cattle Medication**

IBR,BVD,PI3,BRSV, Pasteurella	\$4.90 /head
Vitamin A-D	\$0.50 /head
External & Internal Parasites	\$0.72 /head
Blackleg & Haemophilus	\$1.26 /head
Growth Implants	\$1.65 /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	\$0.80 /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	\$1.10 /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	\$0.08983 / kWh
12 kWh per feeder	\$538.98
2 1000 watt waterer	\$517.42
Total Hydro	\$1,056.40
Telephone	\$600.00

Trucking Cost

Average Weight	900 lbs/head
Distance	75 miles
Rate	\$5.50 /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	\$195.00 /cwt

Manure Removal

Manure volume produced	0.024 m ³ /feeder/day
Manure volume shrinkage	75 %
Cost for manure removal & application	\$10.00 /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	5.00 %
Investment Interest Rate	2.75 %

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 (\$160,000 @ 30%)	\$48,000	20 %	10 years
Miscellaneous	\$60,000	20 %	10 years
Total Investment	\$188,100		

Labour Costs

	<u>Total</u>
Hours/Head	1.0 hours
Labour Rate	\$25.00 /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	\$170.00	2000	\$0.085	3	3	2.5	2	420	\$35.70	105	\$17,850.00
Corn Silage	\$50.00	2000	\$0.025	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$50.00	2000	\$0.025	23	25.75	29.25	32.5	4,420	\$110.50	1,105	\$55,250.00
Barley Grain	\$7.50	48	\$0.156	5	6	7	8	1,040	\$162.24	10,834	\$81,255.00
Greenfeed	\$170.00	2000	\$0.085	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$60.00	2000	\$0.030	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$475.00	2205	\$0.215	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$360.00	2205	\$0.163	0	0	0	0	0	\$0.00	0	\$0.00
1:1 Premix	\$40.00	55	\$0.727	0.25	0.27	0.3	0.32	46	\$33.44	419	\$16,760.00
2:1 Premix	\$40.00	55	\$0.727	0	0	0	0	0	\$0.00	0	\$0.00
Limestone	\$5.50	55	\$0.100	0.06	0.085	0.11	0.13	15	\$1.50	137	\$753.50
Other	\$0.00	2000	\$0.000	0	0	0	0	0	\$0.00	0	\$0.00
\$/head/day				\$1.798	\$2.040	\$2.265	\$2.476		\$343.38		\$171,868.50

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	\$170.00	2000	\$0.085	5	5	5	5	800	\$68.00	200	\$34,000.00
Corn Silage	\$50.00	2000	\$0.025	19	22	27	31.75	3,990	\$99.75	998	\$49,900.00
Barley Silage	\$50.00	2000	\$0.025	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$7.50	48	\$0.156	4	5	5.5	6	820	\$127.92	8,542	\$64,065.00
Greenfeed	\$170.00	2000	\$0.085	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$60.00	2000	\$0.030	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$475.00	2205	\$0.215	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$360.00	2205	\$0.163	1	1	0.75	0.5	130	\$21.19	30	\$10,800.00
1:1 Premix	\$40.00	55	\$0.727	0	0	0	0	0	\$0.00	0	\$0.00
2:1 Premix	\$40.00	55	\$0.727	0.25	0.28	0.285	0.315	45	\$32.72	410	\$16,400.00
Limestone	\$5.50	55	\$0.100	0.065	0.09	0.09	0.105	14	\$1.40	128	\$704.00
Other	\$0.00	2000	\$0.000	0	0	0	0	0	\$0.00	0	\$0.00
\$/head/day				\$1.875	\$2.131	\$2.296	\$2.476		\$350.98		\$175,869.00

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	\$170.00	2000	\$0.085	11.25	12.5	14	15	2,110	\$179.35	528	\$89,760.00
Corn Silage	\$50.00	2000	\$0.025	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$50.00	2000	\$0.025	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$7.50	48	\$0.156	6.75	7.8	8.7	9.7	1,318	\$205.61	13,730	\$102,975.00
Greenfeed	\$170.00	2000	\$0.085	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$60.00	2000	\$0.030	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$475.00	2205	\$0.215	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$360.00	2205	\$0.163	0	0	0	0	0	\$0.00	0	\$0.00
1:1 Premix	\$40.00	55	\$0.727	0.25	0.27	0.31	0.33	46	\$33.44	419	\$16,760.00
2:1 Premix	\$40.00	55	\$0.727	0	0	0	0	0	\$0.00	0	\$0.00
Limestone	\$5.50	55	\$0.100	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				\$2.191	\$2.476	\$2.773	\$3.028		\$418.40		\$209,495.00

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	\$343.38	\$2.146	\$0.9206
Corn Silage Ration	\$350.98	\$2.194	\$0.9410
Alfalfa Grass Hay Ration	\$418.40	\$2.615	\$1.1217

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	\$0.085	\$/lb	_____
=	\$68.00	/feeder	_____

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

	3,990.0	lbs/feeder	_____
x	\$0.025	\$/lb	_____
=	\$99.75	/feeder	_____

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

	0.0	lbs/feeder	_____
x	\$0.025	\$/lb	_____
=	\$0.00	/feeder	_____

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

	820.0	lbs/feeder	_____
x	0.156	\$/lb	_____
=	\$127.92	/feeder	_____

1.05 Greenfeed

	0.0	lbs/feeder	_____
x	0.085	\$/lb	_____
=	\$0.00	/feeder	_____

1.06 Straw

	0.0	lbs/feeder	_____
x	0.030	\$/lb	_____
=	\$0.00	/feeder	_____

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

	0.0	lbs/feeder	_____
x	0.215	\$/lb	_____
=	\$0.00	/feeder	_____

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

	130.0	lbs/feeder	_____
x	0.163	\$/lb	_____
=	\$21.19	/feeder	_____

1.09 1:1 Premix

	0.0	lbs/feeder	_____
x	0.727	\$/lb	_____

=	\$0.00	/feeder	_____
1.10 2:1 Premix			
	45.0	lbs/feeder	_____
x	<u>0.727</u>	<u>\$/lb</u>	_____
=	\$32.72	/feeder	_____
1.11 Limestone			
	14.0	lbs/feeder	_____
x	<u>0.100</u>	<u>\$/lb</u>	_____
=	\$1.40	/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	\$230.00	/cwt	_____
±	<u>100</u>	<u>lbs/cwt</u>	_____
=	\$1,150.00	/feeder	_____
Total =	\$1,165.25	/feeder	_____
2.02 Straw			
	4.00	lbs/feeder/day	_____
x	160.00	days on feed	_____
x	<u>\$60.00</u>	<u>/ton</u>	_____
=	\$19.20	/feeder	_____
2.03 Veterinary Medicine & Supplies			
Cattle Medication			
	\$4.90	IBR,BVD,PI3,BRSV,Pasteurella	_____
+	\$0.50	Vitamin A-D	_____
+	\$0.72	External & Internal Parasites	_____
+	\$1.26	Blackleg & Haemophilus	_____
+	\$1.65	Growth Implants	_____
±	<u>\$15.00</u>	<u>Antibiotics</u>	_____
=	\$24.03	/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			
	\$0.80	/km charge	_____
x	80	kilometres	_____
x	2	visits	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$0.26	/feeder	_____
Total =	\$25.25	/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	\$1.10	diesel / litre	_____
x	<u>160</u>	days on feed	_____
	\$2,110.62	annual fuel cost	_____
÷	<u>500.00</u>	<u>feeders</u>	_____
=	\$4.22	/feeder	_____

Machinery repair & maintenance

	\$108,000	machinery capital cost	_____
x	<u>1.20</u>	% repair rate	_____
=	\$1,296.00	oil, repairs & maintenance	_____
÷	<u>500.00</u>	<u>feeders</u>	_____
=	\$2.59	/feeder	_____

Building repair & maintenance

	\$62,600	building capital cost	_____
x	<u>2.20</u>	% repair rate	_____
=	\$1,377.20	oil, repairs & maintenance	_____
÷	<u>500.00</u>	<u>feeders</u>	_____
=	\$2.75	/feeder	_____
=	\$9.57	/feeder	_____

2.05 Utilities

	\$1,656.40	cost/year	_____
÷	<u>500</u>	<u>feeder cattle</u>	_____
=	\$3.31	/feeder	_____

2.06 Feeder Selling Cost

Trucking

Calves	75.00	miles	_____
x	\$5.50	/loaded mile	_____
	490.00	feeders	_____
=	9.00	loads	_____
÷	<u>500.00</u>	<u>feeders</u>	_____
=	\$7.43	/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 =	\$32.93	/feeder	_____
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2.07 Insurance

	\$188,100	building & equipment investment	_____
x	\$0.40	/\$100 capital	_____
÷	100	/\$100	_____
±	<u>500</u>	<u>feeder cattle</u>	_____
=	\$1.50	/feeder	_____
	\$726,250	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 =	\$1.60	/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>\$10.00</u>	<u>yd³ manure removal cost</u>	
=	\$12.56	/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

	\$1,165.25	feeder cattle cost	_____
+	\$1,621.84	maximum value	_____
-	\$32.93	selling costs	_____
÷	2.00	average	_____
x	<u>2.00</u>	<u>% mortality rate</u>	_____
=	\$27.54	/feeder	_____

2.11 Operating Interest

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

	\$1,165.25	feeder cost	_____
+	\$242.06	½ of feed & other costs	_____
x	5.00	% operating interest	_____
x	160.00	days on feed	_____
±	<u>365.00</u>	<u>days /year</u>	_____
=	\$30.85	/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	\$48,000	_____
Miscellaneous	<u>\$60,000</u>	_____
Total	\$108,000	_____

Total Investment	\$188,100	_____
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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

	\$108,000	original cost	_____
-	\$21,600	salvage value	_____
÷	10.00	years useful life	_____
±	<u>500.00</u>	feeder cattle	_____
=	\$17.28	/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	2.75	% investment rate	_____
±	<u>500.00</u>	feeder cattle	_____
=	\$2.42	/feeder	_____

4.02 Machinery & Equipment

	\$108,000	original cost	_____
+	\$21,600	salvage value	_____
÷	2.00	average	_____
x	2.75	% investment rate	_____
±	<u>500.00</u>	feeder cattle	_____
=	\$3.56	/feeder	_____

C. Labour

	1.0	hours/feeder/year	_____
±	<u>\$25.00</u>	/hour	_____
=	\$25.00	/feeder	_____

Breakeven Calculations

Cost per lb of gain sold (shrunk weight)

Feed Costs		\$350.98	feed cost	
	÷	373	<u>lbs gained weight</u>	
	=	\$0.94	/lb (gain sold)	
Operating Costs		\$1,680.23	operating costs	
	-	\$1,150.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	\$1.42	/lb (gain sold)	
Operating & Labour Costs		\$1,705.23	operating costs	
	-	\$1,150.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	\$1.49	/lb (gain sold)	
Operating & Fixed		\$1,710.70	oper. & fixed costs	
	-	\$1,150.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	\$1.50	/lb (gain sold)	
Total Costs		\$1,735.70	total costs	
	-	\$1,150.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	\$1.57	/lb (gain sold)	
Breakeven selling price (shrunk weight)				
Operating Costs		\$1,680.23	operating costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	\$1.92	/lb	
Operating & Labour Costs		\$1,705.23	operating & labour	
	÷	873	<u>lbs shrunk weight</u>	
	=	\$1.95	/lb	
Operating & Fixed		\$1,710.70	oper. & fixed costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	\$1.96	/lb	
Total Costs		\$1,735.70	total costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	\$1.99	/lb	

Breakeven purchase price (shrunk weight)

Operating Costs	873	lbs shrunk weight	_____
x	\$195.00	\$/cwt selling price	_____
=	\$1,702.35	income	_____
-	\$530.23	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$2.34	/lb	_____

Operating & Labour Costs	873	lbs shrunk weight	_____
x	\$195.00	\$/cwt selling price	_____
=	\$1,702.35	income	_____
-	\$555.23	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$2.29	/lb	_____

Operating & Fixed	873	lbs shrunk weight	_____
x	\$195.00	\$/cwt selling price	_____
=	\$1,702.35	income	_____
-	\$560.70	op. & fixed less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$2.28	/lb	_____

Total Costs	873	lbs shrunk weight	_____
x	\$195.00	\$/cwt selling price	_____
=	\$1,702.35	income	_____
-	\$585.70	total less feeder cost	_____
÷	500	lbs purchase weight	_____
=	\$2.23	/lb	_____

Profitability and Breakeven Analysis:

Gross Revenue = Shrunk weight (lbs) x \$/lb price (eg. 873 x \$1.95/lb = \$1702.35)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost
 (eg. (\$1702.35 - \$1735.70) / \$1735.70 = -1.9%)

Return on Asset (ROA) = (Margin Over Operating - Labour - Building Depreciation - Machinery Depreciation) / (Building, Machinery & Equipment Investment / Herd Size) (eg. (\$22.12 - \$25.00 - \$7.21 - \$17.28) / (\$188,100 / 500) = -7.3%)

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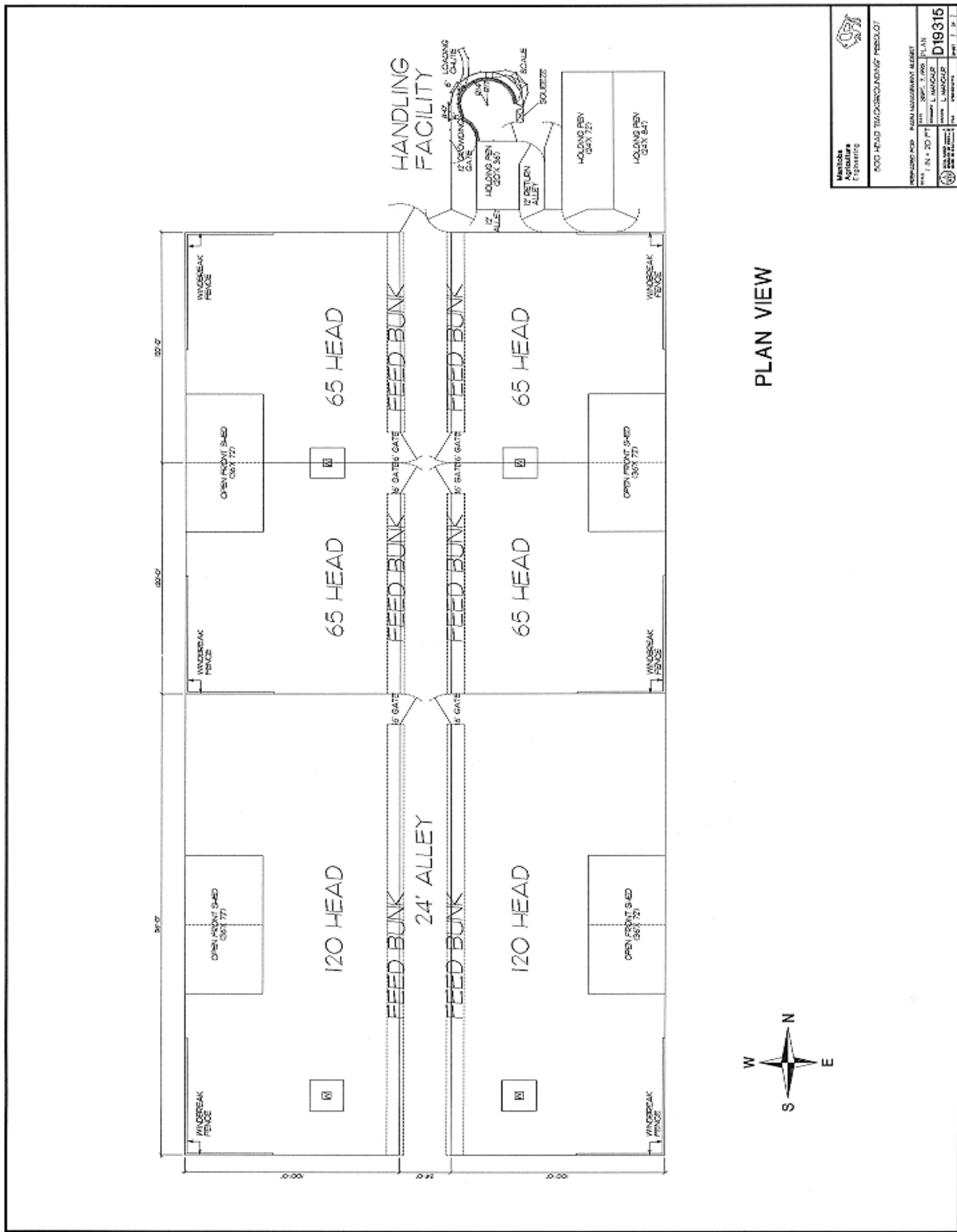
For more information, contact your nearest [ARD/MASC Service Center location](#) or:

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 Farm Management Specialist

Backgrounding Feedlot Facilities



6000 HEAD BACKGROUNDING FEEDLOT	
MEMBER Manitoba Agriculture Engineering	PROJECT NO: 1000 DRAWN: L. LANGLOIS CHECKED: L. LANGLOIS DATE: 11/11/11
PREPARED FOR: FARM MANAGEMENT ASSISTANT TITLE: 1000 HEAD BACKGROUNDING FEEDLOT PLAN DRAWING NO: D19315	SHEET NO. 1 OF 1 DATE: 11/11/11

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