



# Guidelines for Estimating Beef Backgrounding Costs 2019

in Manitoba





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

Date: September, 2018

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: [www.manitoba.ca/agriculture](http://www.manitoba.ca/agriculture)  
or at your local [Manitoba Agriculture office](#).

[The Farm Machinery Custom and Rental Rate](#) 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 local Manitoba Agriculture office.

**Backgrounding Cattle Production Cost Summary - September, 2018**  
Based on 500 feeders, weight range 500 to 900 lbs, Corn Silage ration @ 2.5 lbs. ADG

<b>A. Operating Costs</b>	<b>Cost/Head</b>	<b>Total Cost</b>	<b>Your Cost</b>
<b>1. Feed Costs</b>			
1.01 Alfalfa Grass Hay (57.8 % TDN, 13.7 % CP)	\$40.00	\$20,000	_____
1.02 Corn Silage (65.2 % TDN, 8.7 % CP)	\$79.80	\$39,920	_____
1.03 Barley Silage (63 % TDN, 11 % CP)	\$0.00	\$0	_____
1.04 Barley Grain (83.1 % TDN, 12.5 % CP)	\$72.98	\$36,304	_____
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)	\$15.34	\$7,800	_____
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	_____
<b>Total Feed Costs</b>	<b>\$242.24</b>	<b>\$121,128</b>	_____
<b>2. Other Operating Costs</b>			
2.01 Feeder Cost	\$1,090.25	\$545,125	_____
2.02 Straw	\$12.80	\$6,400	_____
2.03 Veterinary Medicine & Supplies	\$17.19	\$8,595	_____
2.04 Annual Fuel & Repair Costs	\$9.38	\$4,688	_____
2.05 Utilities	\$3.21	\$1,605	_____
2.06 Feeder Selling Cost	\$30.93	\$15,463	_____
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	\$24.81	\$12,405	_____
Subtotal Operating Costs	\$1,446.16	\$723,087	_____
2.11 Operating Interest	\$31.97	\$15,985	_____
<b>Total Operating Costs</b>	<b>\$1,478.13</b>	<b>\$739,072</b>	_____
<b>B. Fixed Costs</b>			
<b>3. Depreciation</b>			
3.01 Buildings	\$7.21	\$3,605	_____
3.02 Machinery & Equipment	\$17.28	\$8,640	_____
<b>4. Investment</b>			
4.01 Buildings	\$2.42	\$1,210	_____
4.02 Machinery & Equipment	\$3.56	\$1,780	_____
<b>Total Fixed Costs</b>	<b>\$30.47</b>	<b>\$15,235</b>	_____
<b>Total Operating and Fixed Costs</b>	<b>\$1,508.60</b>	<b>\$754,307</b>	_____
<b>C. Labour</b>	<b>\$22.00</b>	<b>\$11,000</b>	_____
<b>Total Cost of Production</b>	<b>\$1,530.60</b>	<b>\$765,307</b>	_____

**Profitability and Breakeven Analysis**

<b>Estimated Farmgate</b>	<b>Per Head</b>	<b>Total</b>
Gross Revenue @ \$180/cwt market price	\$1,571.40	\$785,700
<hr/>		
	<b>Breakeven Purchase Price (\$/cwt) @ \$180/cwt market price</b>	<b>Breakeven Selling Price (\$/cwt) @ \$215/cwt feeder price</b>
Operating Costs	\$233.65	\$169.32
Operating Costs & Labour	\$229.25	\$171.84
Operating & Fixed Costs	\$227.56	\$172.81
Total Costs	\$223.16	\$175.33
	<b>Cost per lb of gain sold (\$/cwt)</b>	<b>Marginal Returns per head @ \$180/cwt market price</b>
Feed Costs	\$64.94	\$238.91
Operating Costs	\$108.08	\$93.27
Operating Costs & Labour	\$113.98	\$71.27
Operating & Fixed Costs	\$116.25	\$62.80
Total Costs	\$122.14	\$40.80
<b>Return on Investment (ROI)</b>	<b>2.7%</b>	
<b>Estimated Return on Asset (ROA)</b>	<b>12.4%</b>	

**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. No liability for decisions based on this publication is assumed.

### Risk & Sensitivity Analysis (Stress Test)

Percent Market Price Change	<b>-10.0%</b>
Percent Feed Cost Change	<b>5.0%</b>
Percent Feeder Cost Change	<b>5.0%</b>

	Per Head
Market Price (\$ per cwt)	\$162.00
Feed Cost	\$254.35
Feeder Cost	\$1,144.76

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

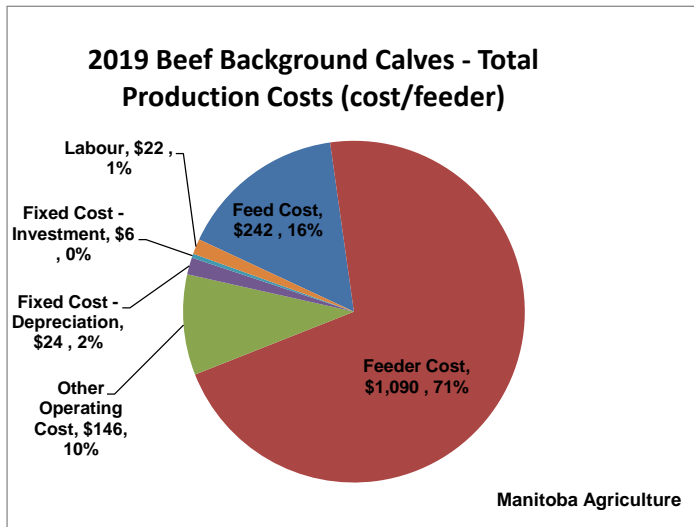
<b>Operating Costs</b>	\$1,544.75
<b>Total Costs</b>	\$1,597.22
<b>Gross Revenue / feeder</b>	\$1,414.26
<b>Marginal Returns</b>	
Over Operating Costs	(\$130.49)
Over Operating & Labour Costs	(\$152.49)
Over Total Costs (Net Profit)	(\$182.96)
<b>Operating Expense Ratio</b>	109.2%

### Estimated Breakeven Canadian Dollar Analysis

	Est. Market Price (\$/cwt Cdn) @ 0.7700 Cdn per USD				
	\$170.00	\$175.00	\$180.00	\$185.00	\$190.00
<b>Breakeven CDN Dollar (\$1 Cdn = \$ USD)</b>					
Operating Costs	0.7731	0.7958	0.8186	0.8413	0.8641
Operating & Labour Costs	0.7618	0.7842	0.8066	0.8290	0.8514
Operating, Fixed & Labour Costs	0.7466	0.7686	0.7905	0.8125	0.8344

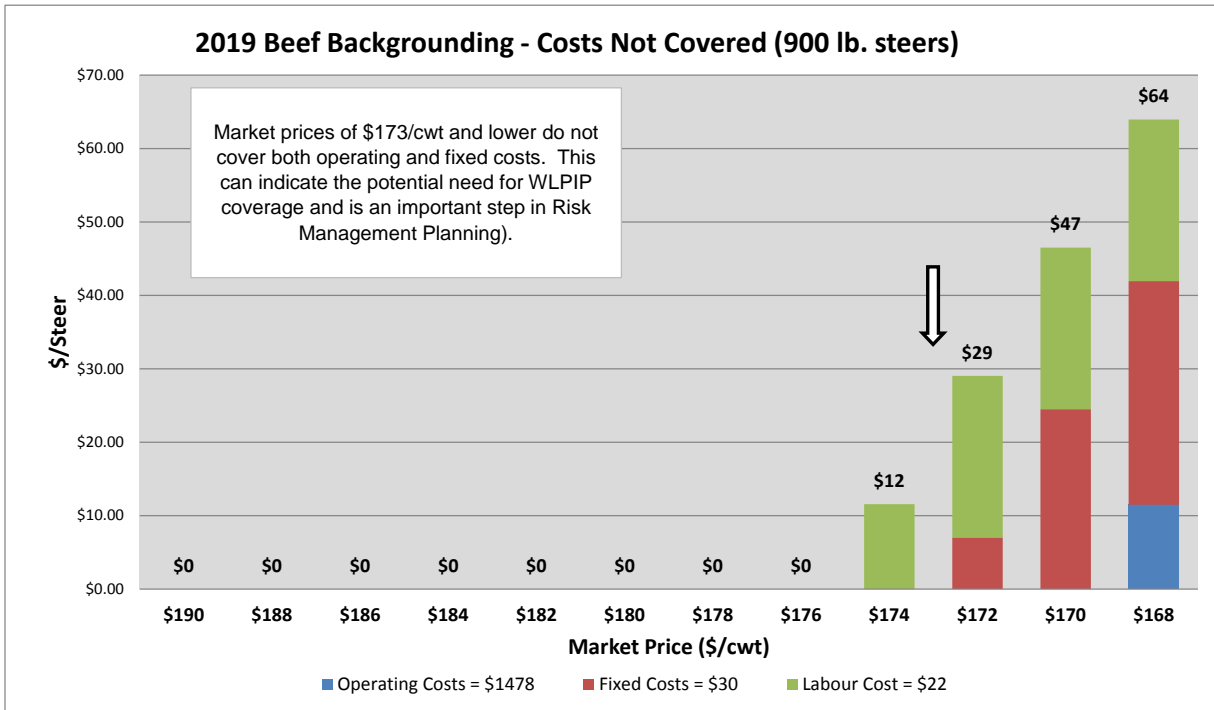
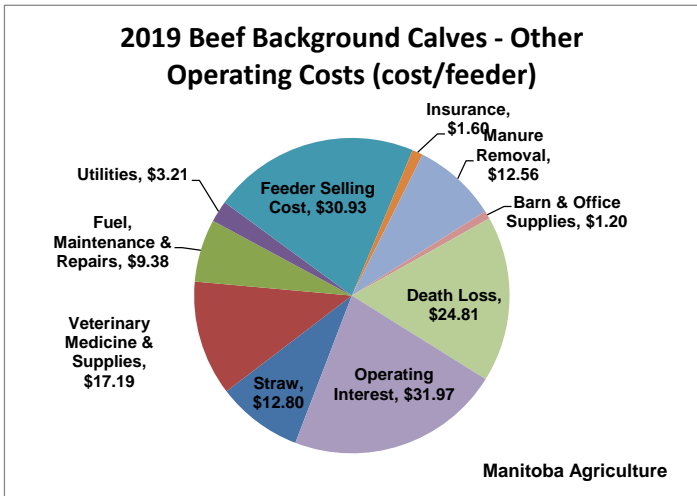
Breakeven Canadian Dollar = (Est. Market Price (\$/lb) x Shrunk Wt. (lbs) x \$ Cdn per USD) / Cost  
 (eg. (\$1.80 x 873 lbs x \$0.7700) / \$1530.60) = \$0.7905

**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	<b>500</b>	head
Feeder Cattle Mortality Rate	<b>2.00</b>	%
Feeder Purchased Weight	<b>500</b>	lbs
Feeder Cattle Price	<b>\$215.00</b>	/cwt
Finish Weight (Maximum 900 lbs.)	<b>900</b>	lbs
Feeder Selling Price (WLPIP insured value)	<b>\$180.00</b>	/cwt
\$1 Canadian Dollar (\$1.2987 CDN)	<b>\$0.7700</b>	/\$1 USD
WLPIP Insurance Premium	<b>\$0.00</b>	/cwt
Percent Shrink at Sale	<b>3.00</b>	%

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

<u>Weight Range</u>	<u>Days on Feed</u>	<u>Feed Cost \$/Steer/Day</u>
500 to 600 lbs.	40	\$1.345
600 to 700 lbs.	40	\$1.515
700 to 800 lbs.	40	\$1.700
800 to 900 lbs.	40	\$1.853
<b>TOTAL</b>	<b>160</b>	

Total Feed Cost per Steer	\$242.24 /head
Average Feed Cost per Day	\$1.51
Feed Cost per lb. of Gain Sold (shrunk weight)	\$0.649

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	<b>\$100.00</b>	<b>2,000</b>	0.050	<b>57.8%</b>	<b>13.7%</b>
Corn Silage	<b>\$40.00</b>	<b>2,000</b>	0.020	<b>65.2%</b>	<b>8.7%</b>
Barley Silage	<b>\$45.00</b>	<b>2,000</b>	0.023	<b>63.0%</b>	<b>11.0%</b>
Barley Grain	<b>\$4.25</b>	<b>48</b>	0.089	<b>83.1%</b>	<b>12.5%</b>
Greenfeed	<b>\$95.00</b>	<b>2,000</b>	0.048		
Straw	<b>\$40.00</b>	<b>2,000</b>	0.020		
32-20% Feedlot Suppl.	<b>\$450</b>	<b>2,205</b>	0.204	<b>61.7%</b>	<b>35.6%</b>
DDGS Corn/Wheat	<b>\$260</b>	<b>2,205</b>	0.118	<b>77.0%</b>	<b>33.9%</b>
1:1 Premix	<b>\$40.00</b>	<b>55</b>	0.727		
2:1 Premix	<b>\$40.00</b>	<b>55</b>	0.727		
Limestone	<b>\$5.50</b>	<b>55</b>	0.100		
<b>Other</b>	<b>\$0.00</b>	<b>2,000</b>	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	\$40.00 /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	\$7.00 /head

**Herd Health Program****Professional Services**

Total Yearly Hours	3.00 hours
Rate	\$150.00 /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	\$1.05 /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	\$0.08527 / kWh
12 kWh per feeder	\$511.62
2 1000 watt waterer	\$491.16
Total Hydro	\$1,002.78
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	\$18.00 /head
Market Value	\$180.00 /cwt



**Manure Removal**

Manure volume produced	0.024 m <sup>3</sup> /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	5.75 %
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>
<b>Buildings, Corrals &amp; Water System</b>			
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
<b>Total</b>	<b>\$80,100</b>		
<b>Machinery &amp; Equipment</b>			
Tractors & Loader (\$160,000 @ 30%)	\$48,000	20 %	10 years
Miscellaneous	\$60,000	20 %	10 years
<b>Total Investment</b>	<b>\$188,100</b>		

**Labour Costs**

	<u>Total</u>
Hours/Head	1.0 hours
Labour Rate	\$22.00 /hour

**Feed Costs & Requirements Worksheet**

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

<b>Barley Silage Ration</b>											
<b>Weight Range (lbs)</b>				<b>500 to 600</b>	<b>600 to 700</b>	<b>700-800</b>	<b>800-900</b>	<b>Total lbs /steer</b>	<b>Feed Cost \$/steer</b>	<b>Total Units Required (500 steers)</b>	<b>Total Feed Cost (500 steers)</b>
<b>Days on Feed</b>				<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>				
<b>Feed Name</b>	<b>\$/unit</b>	<b>lbs/Unit</b>	<b>\$/lb</b>	<b>As Fed Lbs/Head/Day</b>							
Alfalfa Grass Hay	\$100.00	2000	\$0.050	3	3	2.5	2	420	\$21.00	105	\$10,500.00
Corn Silage	\$40.00	2000	\$0.020	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$45.00	2000	\$0.023	23	25.75	29.25	32.5	4,420	\$101.66	1,105	\$49,725.00
Barley Grain	\$4.25	48	\$0.089	5	6	7	8	1,040	\$92.56	10,834	\$46,044.50
Greenfeed	\$95.00	2000	\$0.048	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$40.00	2000	\$0.020	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$450.00	2205	\$0.204	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$260.00	2205	\$0.118	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
<b>\$/head/day</b>				<b>\$1.312</b>	<b>\$1.481</b>	<b>\$1.650</b>	<b>\$1.805</b>		<b>\$250.16</b>		<b>\$123,783.00</b>

<b>Corn Silage Ration</b>											
<b>Weight Range (lbs)</b>				<b>500 to 600</b>	<b>600 to 700</b>	<b>700-800</b>	<b>800-900</b>	<b>Total lbs /steer</b>	<b>Feed Cost \$/steer</b>	<b>Total Units Required (500 steers)</b>	<b>Total Feed Cost (500 steers)</b>
<b>Days on Feed</b>				<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>				
<b>Feed Name</b>	<b>\$/unit</b>	<b>lbs/Unit</b>	<b>\$/lb</b>	<b>As Fed Lbs/Head/Day</b>							
Alfalfa Grass Hay	\$100.00	2000	\$0.050	5	5	5	5	800	\$40.00	200	\$20,000.00
Corn Silage	\$40.00	2000	\$0.020	19	22	27	31.75	3,990	\$79.80	998	\$39,920.00
Barley Silage	\$45.00	2000	\$0.023	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$4.25	48	\$0.089	4	5	5.5	6	820	\$72.98	8,542	\$36,303.50
Greenfeed	\$95.00	2000	\$0.048	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$40.00	2000	\$0.020	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$450.00	2205	\$0.204	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$260.00	2205	\$0.118	1	1	0.75	0.5	130	\$15.34	30	\$7,800.00
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
<b>\$/head/day</b>				<b>\$1.292</b>	<b>\$1.466</b>	<b>\$1.584</b>	<b>\$1.718</b>		<b>\$242.24</b>		<b>\$121,127.50</b>

<b>Alfalfa Grass Hay Ration</b>											
<b>Weight Range (lbs)</b>				<b>500 to 600</b>	<b>600 to 700</b>	<b>700-800</b>	<b>800-900</b>	<b>Total lbs /steer</b>	<b>Feed Cost \$/steer</b>	<b>Total Units Required (500 steers)</b>	<b>Total Feed Cost (500 steers)</b>
<b>Days on Feed</b>				<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>				
<b>Feed Name</b>	<b>\$/unit</b>	<b>lbs/Unit</b>	<b>\$/lb</b>	<b>As Fed Lbs/Head/Day</b>							
Alfalfa Grass Hay	\$100.00	2000	\$0.050	11.25	12.5	14	15	2,110	\$105.50	528	\$52,800.00
Corn Silage	\$40.00	2000	\$0.020	0	0	0	0	0	\$0.00	0	\$0.00
Barley Silage	\$45.00	2000	\$0.023	0	0	0	0	0	\$0.00	0	\$0.00
Barley Grain	\$4.25	48	\$0.089	6.75	7.8	8.7	9.7	1,318	\$117.30	13,730	\$58,352.50
Greenfeed	\$95.00	2000	\$0.048	0	0	0	0	0	\$0.00	0	\$0.00
Straw	\$40.00	2000	\$0.020	0	0	0	0	0	\$0.00	0	\$0.00
32-20% Feedlot Suppl	\$450.00	2205	\$0.204	0	0	0	0	0	\$0.00	0	\$0.00
DDGS Corn/Wheat	\$260.00	2205	\$0.118	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
<b>\$/head/day</b>				<b>\$1.345</b>	<b>\$1.515</b>	<b>\$1.700</b>	<b>\$1.853</b>		<b>\$256.24</b>		<b>\$127,912.50</b>

**Feed Summary - 160 Days**

	<b>Total Feed Cost per Steer</b>	<b>Average Feed Cost/Day</b>	<b>Feed Cost per lb. of Gain Sold (shrunk weight)</b>
<b>Barley Silage Ration</b>	<b>\$250.16</b>	<b>\$1.564</b>	<b>\$0.6707</b>
<b>Corn Silage Ration</b>	<b>\$242.24</b>	<b>\$1.514</b>	<b>\$0.6494</b>
<b>Alfalfa Grass Hay Ration</b>	<b>\$256.24</b>	<b>\$1.602</b>	<b>\$0.6870</b>

**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	<u>\$0.050</u>	<u>\$/lb</u>			
=	<b>\$40.00</b>	<b>/feeder</b>			

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

	3,990.0	lbs/feeder			
x	<u>\$0.020</u>	<u>\$/lb</u>			
=	<b>\$79.80</b>	<b>/feeder</b>			

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

	0.0	lbs/feeder			
x	<u>\$0.023</u>	<u>\$/lb</u>			
=	<b>\$0.00</b>	<b>/feeder</b>			

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

	820.0	lbs/feeder			
x	<u>0.089</u>	<u>\$/lb</u>			
=	<b>\$72.98</b>	<b>/feeder</b>			

##### 1.05 Greenfeed

	0.0	lbs/feeder			
x	<u>0.048</u>	<u>\$/lb</u>			
=	<b>\$0.00</b>	<b>/feeder</b>			

##### 1.06 Straw

	0.0	lbs/feeder			
x	<u>0.020</u>	<u>\$/lb</u>			
=	<b>\$0.00</b>	<b>/feeder</b>			

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

	0.0	lbs/feeder			
x	<u>0.204</u>	<u>\$/lb</u>			
=	<b>\$0.00</b>	<b>/feeder</b>			

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

	130.0	lbs/feeder			
x	<u>0.118</u>	<u>\$/lb</u>			
=	<b>\$15.34</b>	<b>/feeder</b>			

##### 1.09 1:1 Premix

	0.0	lbs/feeder			
x	<u>0.727</u>	<u>\$/lb</u>			

=	<b>\$0.00</b>	<b>/feeder</b>	_____
<b>1.10 2:1 Premix</b>			
	45.0	lbs/feeder	_____
x	<u>0.727</u>	<u>\$/lb</u>	_____
=	<b>\$32.72</b>	<b>/feeder</b>	_____
<b>1.11 Limestone</b>			
	14.0	lbs/feeder	_____
x	<u>0.100</u>	<u>\$/lb</u>	_____
=	<b>\$1.40</b>	<b>/feeder</b>	_____
<b>1.12 Other</b>			
	0.0	lbs/feeder	_____
x	<u>0.000</u>	<u>\$/lb</u>	_____
=	<b>\$0.00</b>	<b>/feeder</b>	_____
<b>2. Other Operating Costs</b>			
<b>2.01 Feeder Cattle Cost</b>			
Commission	\$5.00	/feeder	_____
Insurance	\$1.75	/feeder	_____
Trucking-in	\$1.70	/cwt	_____
x	500	lbs/feeder	_____
±	<u>100</u>	<u>lbs/cwt</u>	_____
=	<b>\$8.50</b>	<b>/feeder</b>	_____
Feeder	500	lbs/feeder	_____
x	\$215.00	/cwt	_____
±	<u>100</u>	<u>lbs/cwt</u>	_____
=	<b>\$1,075.00</b>	<b>/feeder</b>	_____
<b>Total =</b>	<b>\$1,090.25</b>	<b>/feeder</b>	_____
<b>2.02 Straw</b>			
	4.00	lbs/feeder/day	_____
x	160.00	days on feed	_____
x	<u>\$40.00</u>	<u>/ton</u>	_____
=	<b>\$12.80</b>	<b>/feeder</b>	_____
<b>2.03 Veterinary Medicine &amp; Supplies</b>			
<b>Cattle Medication</b>			
	\$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>\$7.00</u>	<u>Antibiotics</u>	_____
=	<b>\$16.03</b>	<b>/feeder</b>	_____
<b>Herd Health Program</b>			
<b>Professional Services</b>			
	\$150.00	/hour charge	_____
x	3.00	hours	_____
±	<u>500.00</u>	<u>feeder cattle</u>	_____
=	<b>\$0.90</b>	<b>/feeder</b>	_____

Transportation Costs				
	\$0.80	/km charge		
x	80	kilometres		
x	2	visits		
±	<u>500</u>	<u>feeder cattle</u>		
=	\$0.26	/feeder		
<b>Total =</b>	<b>\$17.19</b>	<b>/feeder</b>		

**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	\$1.05	diesel / litre		
x	<u>160</u>	<u>days on feed</u>		
	\$2,014.68	annual fuel cost		
±	<u>500.00</u>	<u>feeders</u>		
=	\$4.03	/feeder		

Machinery repair & maintenance

	\$108,000	machinery capital cost		
x	<u>1.20</u>	<u>% repair rate</u>		
=	\$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>	<u>% repair rate</u>		
=	\$1,377.20	oil, repairs & maintenance		
±	<u>500.00</u>	<u>feeders</u>		
=	\$2.75	/feeder		
<b>=</b>	<b>\$9.38</b>	<b>/feeder</b>		

**2.05 Utilities**

	\$1,602.78	cost/year		
±	<u>500</u>	<u>feeder cattle</u>		
=	<b>\$3.21</b>	<b>/feeder</b>		

**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>\$18.00</u>	<u>commission</u>		
=	\$23.50	/feeder		

<b>Total =</b>	<b>\$30.93</b>	<b>/feeder</b>		
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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	_____
	\$673,750	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	_____
<b>Total =</b>	<b>\$1.60</b>	<b>/feeder</b>	_____

**2.08 Manure Removal**

=	160	days on feed	
x	0.024	m <sup>3</sup> /feeder/day	
=	3.84	m <sup>3</sup> manure volume	
x	75	% volume shrink	
x	1.30795	yd <sup>3</sup> per m <sup>3</sup>	
x	<u>\$10.00</u>	<u>yd<sup>3</sup> manure removal cost</u>	
=	<b>\$12.56</b>	<b>/feeder</b>	

**2.09 Barn & Office Supplies**

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

**2.10 Death Loss**

	\$1,090.25	feeder cattle cost	_____
+	\$1,421.35	maximum value	_____
-	\$30.93	selling costs	_____
÷	2.00	average	_____
x	<u>2.00</u>	<u>% mortality rate</u>	_____
=	<b>\$24.81</b>	<b>/feeder</b>	_____

**2.11 Operating Interest**

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

	\$1,090.25	feeder cost	_____
+	\$177.95	½ of feed & other costs	_____
x	5.75	% operating interest	_____
x	160.00	days on feed	_____
±	<u>365.00</u>	<u>days /year</u>	_____
=	<b>\$31.97</b>	<b>/feeder</b>	_____

**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>	_____
<b>Total</b>	<b>\$80,100</b>	_____

**Machinery & Equipment**

Tractor & Loader	\$48,000	_____
Miscellaneous	<u>\$60,000</u>	_____
<b>Total</b>	<b>\$108,000</b>	_____

<b>Total Investment</b>	<b>\$188,100</b>	_____
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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	_____
=	<b>\$7.21</b>	/feeder	_____

**3.02 Machinery & Equipment**

	\$108,000	original cost	_____
-	\$21,600	salvage value	_____
÷	10.00	years useful life	_____
±	<u>500.00</u>	feeder cattle	_____
=	<b>\$17.28</b>	/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	_____
=	<b>\$2.42</b>	/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	_____
=	<b>\$3.56</b>	/feeder	_____

**C. Labour**

	1.0	hours/feeder/year	_____
±	<u>\$22.00</u>	/hour	_____
=	<b>\$22.00</b>	/feeder	_____

## Breakeven Calculations

**Cost per lb of gain sold (shrunk weight)**

<b>Feed Costs</b>		\$242.24	feed cost	
	÷	373	<u>lbs gained weight</u>	
	=	<b>\$0.65</b>	<b>/lb (gain sold)</b>	
<b>Operating Costs</b>		\$1,478.13	operating costs	
	-	\$1,075.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	<b>\$1.08</b>	<b>/lb (gain sold)</b>	
<b>Operating &amp; Labour Costs</b>		\$1,500.13	operating costs	
	-	\$1,075.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	<b>\$1.14</b>	<b>/lb (gain sold)</b>	
<b>Operating &amp; Fixed</b>		\$1,508.60	oper. & fixed costs	
	-	\$1,075.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	<b>\$1.16</b>	<b>/lb (gain sold)</b>	
<b>Total Costs</b>		\$1,530.60	total costs	
	-	\$1,075.00	feeder cost	
	÷	373	<u>lbs gained weight</u>	
	=	<b>\$1.22</b>	<b>/lb (gain sold)</b>	
<b>Breakeven selling price (shrunk weight)</b>				
<b>Operating Costs</b>		\$1,478.13	operating costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	<b>\$1.69</b>	<b>/lb</b>	
<b>Operating &amp; Labour Costs</b>		\$1,500.13	operating & labour	
	÷	873	<u>lbs shrunk weight</u>	
	=	<b>\$1.72</b>	<b>/lb</b>	
<b>Operating &amp; Fixed</b>		\$1,508.60	oper. & fixed costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	<b>\$1.73</b>	<b>/lb</b>	
<b>Total Costs</b>		\$1,530.60	total costs	
	÷	873	<u>lbs shrunk weight</u>	
	=	<b>\$1.75</b>	<b>/lb</b>	



**Breakeven purchase price (shrunk weight)**

<b>Operating Costs</b>	873	lbs shrunk weight	_____
x	\$180.00	\$/cwt selling price	_____
=	\$1,571.40	income	_____
-	\$403.13	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	<b>\$2.34</b>	<b>/lb</b>	_____

<b>Operating &amp; Labour Costs</b>	873	lbs shrunk weight	_____
x	\$180.00	\$/cwt selling price	_____
=	\$1,571.40	income	_____
-	\$425.13	operating less feeder cost	_____
÷	500	lbs purchase weight	_____
=	<b>\$2.29</b>	<b>/lb</b>	_____

<b>Operating &amp; Fixed</b>	873	lbs shrunk weight	_____
x	\$180.00	\$/cwt selling price	_____
=	\$1,571.40	income	_____
-	\$433.60	op. & fixed less feeder cost	_____
÷	500	lbs purchase weight	_____
=	<b>\$2.28</b>	<b>/lb</b>	_____

<b>Total Costs</b>	873	lbs shrunk weight	_____
x	\$180.00	\$/cwt selling price	_____
=	\$1,571.40	income	_____
-	\$455.60	total less feeder cost	_____
÷	500	lbs purchase weight	_____
=	<b>\$2.23</b>	<b>/lb</b>	_____

**Profitability and Breakeven Analysis:**

Gross Revenue = Shrunk weight (lbs) x \$/lb price (eg. 873 x \$1.80/lb = \$1571.40)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost  
 (eg. (\$1571.40 - \$1530.60) / \$1530.60 = 2.7%)

Return on Asset (ROA) = (Margin Over Operating - Labour - Building Depreciation - Machinery Depreciation) / (Building, Machinery & Equipment Investment / Herd Size) (eg. (\$93.27 - \$22.00 - \$7.21 - \$17.28) / (\$188,100 / 500) = 12.4%)

**Created and maintained by [Manitoba Agriculture Farm Management](#) September, 2018**

**For more information, contact your local [Manitoba Agriculture office](#) or:**

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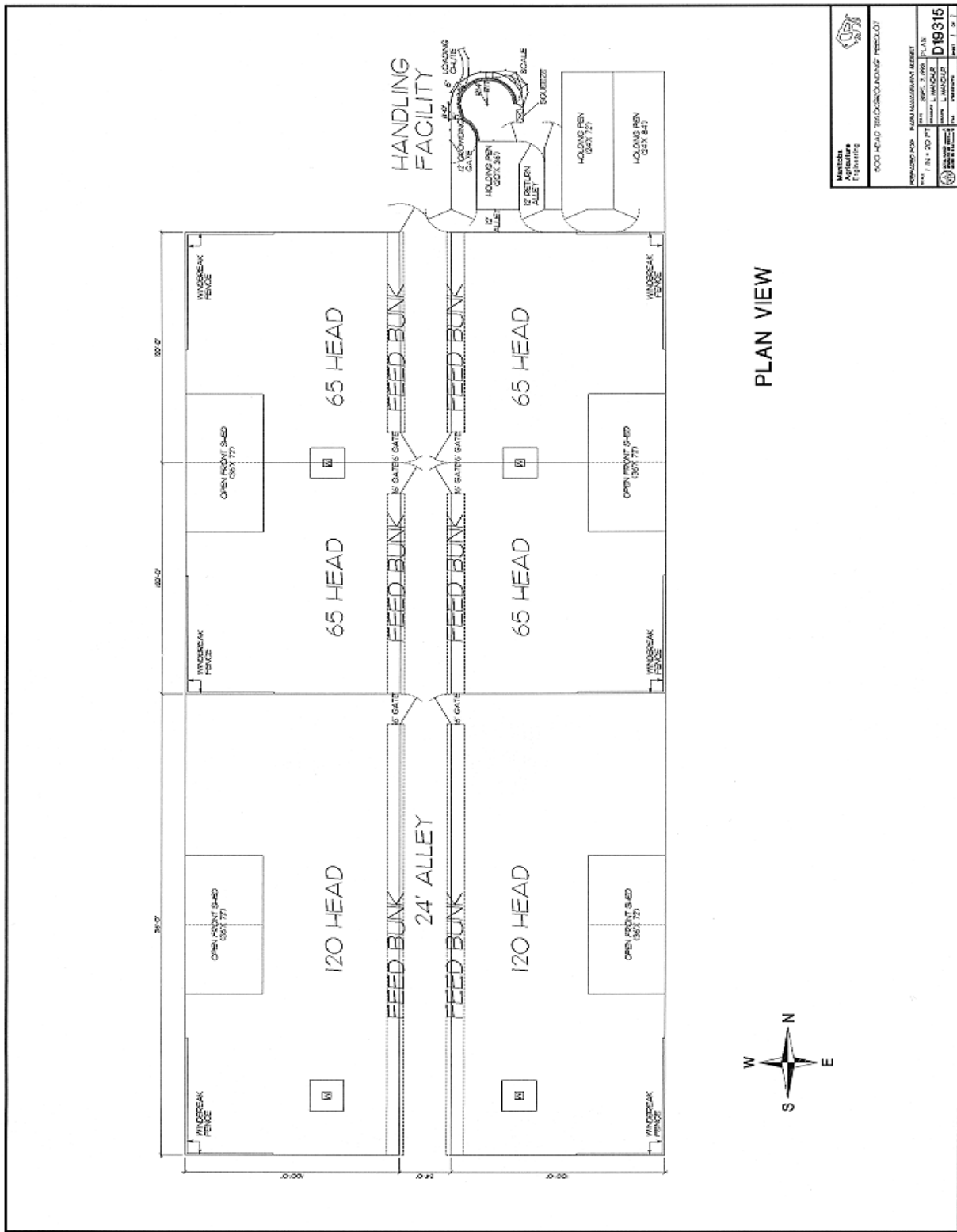
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# Backgrounding Feedlot Facilities



6000 HEAD BACKGROUNDING FEEDLOT	
MEMBER: Agriculture Engineering	PROJECT NO.: FARM MANAGEMENT ASSISTANT DATE: 08/01/2008 DRAWN BY: L. LANGLOIS CHECKED BY: L. LANGLOIS SCALE: 1/8" = 1'-0"
<b>D19315</b>	
SHEET NO. 1 OF 1	DATE: 08/01/2008



A decorative graphic at the top of the page features a green square on the left, a dark blue bar in the center, and an orange square on the right. From the bottom edge of the dark blue bar, several dashed orange lines curve downwards and outwards across the page.

**For more information**

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- Email us at [mbfarmbusiness@gov.mb.ca](mailto:mbfarmbusiness@gov.mb.ca)
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