

2024 Cost of Production

Beef Feedlot Finishing



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

Date: September, 2023

This guide is designed to provide you with planning information and a format for calculating costs of production of a beef cattle feedlot finishing 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.

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.

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.

Feedlot Finishing Cost Summary September, 2023
Based on feeding 500 steers for weight range 650 to 1400 lbs.

	<u>Cost/Head</u>	<u>Total Cost</u>	<u>Your Cost</u>
A. Operating Costs			
1. Feed Costs			
1.01 Rolled Barley	\$556.45	\$278,225	_____
1.02 Barley Silage	\$79.41	\$39,705	_____
1.03 Alfalfa Grass Hay	\$4.50	\$2,250	_____
1.04 Supplement	<u>\$52.38</u>	<u>\$26,190</u>	_____
Total Feed Costs	\$692.74	\$346,370	_____
2. Other Operating Costs			
2.01 Feeder Cost	\$2,294.30	\$1,147,150	_____
2.02 Straw	\$35.00	\$17,500	_____
2.03 Veterinary Medicine & Supplies	\$28.49	\$14,245	_____
2.04 Annual Fuel & Repair Costs	\$14.52	\$7,262	_____
2.05 Utilities	\$7.01	\$3,505	_____
2.06 Marketing & Transportation	\$122.17	\$61,085	_____
2.07 Insurance	\$1.80	\$900	_____
2.08 Manure Removal	\$14.00	\$7,000	_____
2.09 Barn & Office Supplies	\$1.80	\$900	_____
2.10 Death Loss	<u>\$53.84</u>	<u>\$26,920</u>	_____
Subtotal Operating Costs	\$3,265.67	\$1,632,837	_____
2.11 Operating Interest	<u>\$156.81</u>	<u>\$78,405</u>	_____
Total Operating Costs	\$3,422.48	\$1,711,242	_____
B. Fixed Costs			
3. Depreciation			
3.01 Buildings	\$7.46	\$3,730	_____
3.02 Machinery & Equipment	\$20.80	\$10,400	_____
4. Investment			
4.01 Buildings	\$3.65	\$1,825	_____
4.02 Machinery & Equipment	<u>\$6.24</u>	<u>\$3,120</u>	_____
Total Fixed Costs	<u>\$38.15</u>	<u>\$19,075</u>	_____
Total Operating and Fixed Costs	\$3,460.63	\$1,730,317	_____
C. Owners - Labour & Living	\$54.00	\$27,000	_____
TOTAL COST OF PRODUCTION	\$3,514.63	\$1,757,317	_____

Profitability and Breakeven Analysis

Estimated Farmgate	<u>Per Head</u>	<u>Total</u>
Gross Revenue @ \$248/cwt market price	\$3,298.40	\$1,649,200
Breakeven Analysis		
	Breakeven Purchase	Breakeven Selling
	Price (\$/cwt) @	Price (\$/cwt) @
	<u>\$248/cwt market price</u>	<u>\$350/cwt feeder price</u>
Operating Costs	\$330.91	\$257.33
Operating Costs & Labour	\$322.60	\$261.39
Operating & Fixed Costs	\$325.04	\$260.20
Total Costs	\$316.73	\$264.26
	Cost per lb of	Marginal Returns per head
	<u>gain sold (\$/cwt)</u>	<u>@ \$248 /cwt market price</u>
Feed Costs	\$101.87	_____
Operating Costs	\$168.75	(\$124.08)
Operating Costs & Labour	\$176.69	(\$178.08)
Operating & Fixed Costs	\$174.36	(\$162.23)
Total Costs	\$182.30	(\$216.23)
Return on Investment (ROI)	(6.2%)	
Estimated Return on Asset (ROA)	(48.5%)	

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	-2.5%
Percent Feed Cost Change	5.0%
Percent Feeder Cost Change	5.0%

	Per Head
Market Price (\$ per cwt)	\$241.80
Feed Cost	\$727.38
Feeder Cost	\$2,409.02

Stress Test Scenario = Market Price Down 2.5%, Feed Price Up 5% and Feeder Cost Up 5%

Operating Costs	\$3,571.84
Total Costs	\$3,663.99
Gross Revenue / feeder	\$3,215.94
Marginal Returns	
Over Operating Costs	(\$355.90)
Over Operating & Labour Costs	(\$409.90)
Over Total Costs (Net Profit)	(\$448.05)
Operating Expense Ratio	111.1%

Estimated Breakeven Canadian Dollar Analysis

	Est. Market Price (\$/cwt Cdn) @ 0.7500 Cdn per USD				
	\$238.00	\$243.00	\$248.00	\$253.00	\$258.00
Breakeven CDN Dollar (\$1 Cdn = \$ USD)					
Operating Costs	0.6937	0.7082	0.7228	0.7374	0.7520
Operating & Labour Costs	0.6829	0.6972	0.7116	0.7259	0.7403
Operating, Fixed & Labour Costs	0.6755	0.6897	0.7039	0.7180	0.7322

Breakeven Canadian Dollar = (Est. Market Price (\$/lb) x Shrunk Wt. (lbs) x \$ Cdn per USD) / Cost
 (eg. (\$2.48 x 1330 lbs x \$0.7500) / \$3514.63) = \$0.7039

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.

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	2.00	%
Feeder Purchased Weight	650	lbs
Feeder Cattle Price	\$350.00	/cwt
Finish Weight	1,400	lbs
Finish Selling Price	\$248.00	/cwt
\$1 Canadian Dollar (\$1.3333 CDN)	\$0.7500	/ \$1 USD
WLPPI Insurance Premium	\$0.00	/cwt
Percent Shrink - finished	5.00	%
Percent Shrink - feeder	0.00	%
Average Daily Gain	3.25	lbs/day
Days On Feed	231	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	\$6.25 /bu	18.50 (lbs/day)	231
Barley Silage	\$55.00 /ton	12.50 (lbs/day)	231
Alfalfa Grass Hay	\$120.00 /ton	5.00 (lbs/day)	15
Supplement 32%	\$500.00 /tonne	1.00 (lbs/day)	231
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	\$1.75	/head
Trucking Cost	\$1.70	/cwt
Straw		
Tons/feeder	0.50	tons
Cost	\$70.00	/ton

Veterinary Medicine & Supplies**Cattle Medication**

Cost/Head(IBR,BVD,PI3,BVD,BRSV, Pasteurella)	\$6.00	
Vitamin A-D	\$0.50	
External & Internal Parasites	\$0.96	
Blackleg & Haemophilus	\$1.65	
Growth Implants	\$3.42	
Antibiotics	\$15.00	

Herd health program**Professional Services**

Total Yearly Hours	2.00	hours
Charge per Hour	\$160.00	/hour

Transportation

Total Kilometres (round trip)	80.00	km
Charge per km	\$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**18** kWh per feeder **\$387.69****3** 1000 watt waterer **\$2,517.48**Total Hydro **\$2,905.17**Telephone **\$600.00****Marketing Costs****Trucking Cost**

Distance	700	miles
Rate	\$6.50	/loaded mile
Truck Capacity	54,000	lbs/load
Number of head per load	39	per load
Selling commission	\$0.00	/head

Other CostsMBP/NCO Levy \$/Head **\$5.50** /head**Manure Removal**Annual Cost for Removal **\$7,000.00**

Insurance

Cost per \$100 Capital Invested in:

a) Livestock	\$0.00
b) Building & Equipment	\$0.40
Additional Coverage for Liability	\$49.00

Barn & Office Supplies

Total yearly expense relating to barn	\$900.00
---------------------------------------	----------

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	\$7,350	10 %	20 years
Pens	\$4,540	10 %	20 years
Shelters	\$0	10 %	20 years
Handling Facilities	\$7,500	10 %	20 years
Waterers	\$6,000	10 %	20 years
Gates	\$2,000	10 %	20 years
Bunk Feeders	\$25,000	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	\$82,890		
Machinery & Equipment			
Tractors & Loader (\$175,000 @ 40%)	\$70,000	20 %	10 years
Miscellaneous	\$60,000	20 %	10 years
Total Investment	\$212,890		

Labour Costs

	<u>Total</u>
Labour Hours	2.00 hours/head
Labour Rate	\$27.00 /hour

Feedlot Finishing Production Cost Worksheet

Assumptions

1. Average daily gain (ADG) was assumed to be 3.25 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 231. Hay was fed for 15 days.
4. Investment in feedlot facilities and equipment was assumed to handle 500 head.

A. Operating Costs

Your Cost

1. Feed Costs

1.01 Rolled Barley

		231.00	days on grain	
x		18.50	lbs/feeder/day	_____
÷		48.00	lbs/bushel	_____
<u>x</u>		<u>\$6.25</u>	<u>/bushel</u>	_____
=		\$556.45	/feeder	_____

1.02 Barley Silage

		231.00	days on silage	
x		12.50	lbs/feeder/day	_____
÷		2,000.00	lbs/ton	_____
<u>x</u>		<u>\$55.00</u>	<u>/ton</u>	_____
=		\$79.41	/feeder	_____

1.03 Alfalfa Grass Hay

		15.00	days on hay	
x		5.00	lbs/feeder/day	_____
÷		2,000.00	lbs/ton	_____
<u>x</u>		<u>\$120.00</u>	<u>/ton</u>	_____
=		\$4.50	/feeder	_____

1.04 Supplement (Salt, Vitamins, Minerals, Ionophore)

		231.00	days on supplement	
x		1.00	lbs/feeder/day	_____
÷		2,205.00	lbs/tonne	_____
<u>x</u>		<u>\$500.00</u>	<u>/tonne</u>	_____
=		\$52.38	/feeder	_____

2. Other Operating Costs

2.01 Feeder Cattle Cost

	Buying Commission & insurance			
		\$6.50	commission/feeder	_____
		\$1.75	insurance/feeder	_____

	Trucking-in			
		\$1.70	/cwt	_____
x		650.00	lbs/feeder	_____
÷		<u>100.00</u>	<u>lbs/cwt</u>	_____
=		\$11.05	/feeder	_____

		650.00	lbs/feeder	
x		\$350.00	/cwt	_____
÷		<u>100.00</u>	<u>lbs/cwt</u>	_____
=		\$2,275.00	/feeder	_____

	Total			
=		\$2,294.30	/feeder	_____

2.02 Straw

	0.50	tons/feeder/year	_____
x	<u>\$70.00</u>	/ton	_____
=	\$35.00	/feeder	_____

2.03 Veterinary Medicine & Supplies

Cattle Medication

	\$6.00	IBR,PI3,BVD,BRSV & Pasteurella	_____
+	\$0.50	Vitamin A,D & E	_____
+	\$0.96	External & Internal Parasites	_____
+	\$1.65	Blackleg & Haemphilus	_____
+	\$3.42	Implant	_____
±	<u>\$15.00</u>	Antibiotics	_____
=	\$27.53	/feeder	_____

Professional Services

	\$160.00	/hour charge	_____
x	2.00	hours	_____
÷	<u>500</u>	feeder cattle	_____
=	\$0.64	/feeder	_____

Transportation Costs

	\$1.00	/km charge	_____
x	80.00	kilometres	_____
x	2.00	visits	_____
÷	<u>500</u>	feeder cattle	_____
=	\$0.32	/feeder	_____

Total	=	\$28.49	/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>231</u>	days on feed	_____
	\$3,878.26	annual fuel cost	_____
÷	<u>500.00</u>	feeders	_____
=	\$7.76	/feeder	_____

Machinery repair & maintenance

	\$130,000	machinery capital cost	_____
x	<u>1.20</u>	% repair rate	_____
=	\$1,560.00	oil, repairs & maintenance	_____
÷	<u>500.00</u>	feeders	_____
=	\$3.12	/feeder	_____

Building repair & maintenance

	\$82,890	building capital cost	_____
x	<u>2.20</u>	% repair rate	_____
=	\$1,823.58	oil, repairs & maintenance	_____
÷	<u>500.00</u>	feeders	_____
=	\$3.65	/feeder	_____

=	\$14.52	/feeder	_____
----------	----------------	----------------	-------

2.05 Utilities

	\$3,505.17	utilities	_____
÷	<u>500</u>	feeder cattle	_____
=	\$7.01	/feeder	_____

2.06 Marketing & Transportation

		\$5.50	MBP Levy	_____
	+	\$0.00	WLPIP Insurance Premium	_____
	+	<u>\$0.00</u>	<u>commission</u>	_____
	=	\$5.50	/feeder	_____
Trucking		700.00	miles	_____
	x	\$6.50	/loaded mile	_____
	÷	<u>39.00</u>	<u>head/load</u>	_____
	=	\$116.67	/feeder	_____
Total	=	\$122.17	/feeder	_____

2.07 Insurance

		\$212,890	building & equipment investment	_____
	x	\$0.40	/\$100 capital	_____
	÷	100.00	/\$100 capital	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$1.70	/feeder/year	_____
		\$1,436,750	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	=	\$1.80	/feeder	_____

2.08 Manure Removal

		\$7,000	removal cost	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$14.00	/feeder	_____

2.09 Barn & Office Supplies

		\$900.00	total barn expenses	_____
	÷	<u>500</u>	<u>feeder cattle</u>	_____
	=	\$1.80	/feeder	_____

2.10 Death Loss

		\$2,294.30	feeder cattle cost	_____
	+	\$3,211.83	maximum value	_____
	-	\$122.17	marketing costs	_____
	÷	2.00	average value	_____
	x	<u>2.00</u>	<u>% mortality rate</u>	_____
	=	\$53.84	/feeder	_____

2.11 Operating Interest

		\$2,294.30	feeder cost	_____
	+	\$458.77	½ of feed & other costs	_____
	x	9.00	% operating interest	_____
	x	231.00	days on feed	_____
	÷	<u>365.00</u>	<u>365 days</u>	_____
	=	\$156.81	/feeder	_____

Capital Costs

Buildings, Corrals & Water System

Windbreak fence	\$7,350	_____
Pens	\$4,540	_____
Handling Facilities	\$7,500	_____
Waterers	\$6,000	_____
Gates	\$2,000	_____
Bunk Feeders	\$25,000	_____
Well & Pressure System	\$8,000	_____
Grain Bin	\$5,000	_____
Landscaping	\$17,500	_____
Total	\$82,890	_____

Machinery & Equipment

Tractor & Loader	\$70,000	_____
Miscellaneous	\$60,000	_____
Total	\$130,000	_____

Total Investment	\$212,890	_____
-------------------------	------------------	-------

B. Fixed Costs

3. Depreciation Original Cost - Salvage Value
Useful Life

3.01 Buildings

	\$82,890	original cost	_____
-	\$8,289	salvage value	_____
÷	20.00	years useful life	_____
±	<u>500</u>	feeder cattle	_____
=	\$7.46	/feeder	_____

3.02 Machinery & Equipment

	\$130,000	original cost	_____
-	\$26,000	salvage value	_____
÷	10.00	years useful life	_____
±	<u>500</u>	feeder cattle	_____
=	\$20.80	/feeder	_____

4. Investment Original Cost + Salvage Value x Investment Rate
2

4.01 Buildings

	\$82,890	original cost	_____
+	\$8,289	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
±	<u>500</u>	feeder cattle	_____
=	\$3.65	/feeder	_____

4.02 Machinery & Equipment

	\$130,000	original cost	_____
+	\$26,000	salvage value	_____
÷	2.00	average	_____
x	4.00	% investment rate	_____
±	<u>500</u>	feeder cattle	_____
=	\$6.24	/feeder	_____

C. Labour

	2.00	hours/feeder/year	_____
x	<u>\$27.00</u>	/hour	_____
=	\$54.00	/feeder	_____

Breakeven Calculations

Cost per lb of gain sold				<u>Your Farm</u>
Feed Costs		\$692.74	feed cost	_____
	÷	680.00	<u>weight gain (lb)</u>	_____
	=	\$1.02	/lb	_____
 Operating Costs		\$3,422.48	operating costs	_____
	-	\$2,275.00	feeder cost	_____
	÷	680.00	<u>weight gain (lb)</u>	_____
	=	\$1.69	/lb	_____
 Operating & Labour Costs		\$3,476.48	operating & labour	_____
	-	\$2,275.00	feeder cost	_____
	÷	680.00	<u>weight gain (lb)</u>	_____
	=	\$1.77	/lb	_____
 Total Operating & Fixed		\$3,460.63	operating & fixed	_____
	-	\$2,275.00	feeder cost	_____
	÷	680.00	<u>weight gain (lb)</u>	_____
	=	\$1.74	/lb	_____
 Total Costs		\$3,514.63	total	_____
	-	\$2,275.00	feeder cost	_____
	÷	680.00	<u>weight gain (lb)</u>	_____
	=	\$1.82	/lb	_____
 Breakeven selling price				
Operating Costs		\$3,422.48	operating costs	_____
	÷	1,330.00	<u>lbs shrunk weight</u>	_____
	=	\$2.57	/lb	_____
 Operating & Labour		\$3,476.48	operating & labour costs	_____
	÷	1,330.00	<u>lbs shrunk weight</u>	_____
	=	\$2.61	/lb	_____
 Operating & Fixed		\$3,460.63	operating & fixed costs	_____
	÷	1,330.00	<u>lbs shrunk weight</u>	_____
	=	\$2.60	/lb	_____
 Total Costs		\$3,514.63	total costs	_____
	÷	1,330.00	<u>lbs shrunk weight</u>	_____
	=	\$2.64	/lb	_____

Breakeven purchase price			
Operating Costs	1,330.00	lbs shrunk weight	_____
x	\$248.00	\$/cwt selling price	_____
=	\$3,298.40	income	_____
-	\$1,147.48	operating less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase net weight</u>	_____
=	\$3.31	/lb	_____
Operating & Labour	1,330.00	lbs shrunk weight	_____
x	\$248.00	\$/cwt selling price	_____
=	\$3,298.40	income	_____
-	\$1,201.48	op & labour less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase weight</u>	_____
=	\$3.23	/lb	_____
Operating & Fixed	1,330.00	lbs shrunk weight	_____
x	\$248.00	\$/cwt selling price	_____
=	\$3,298.40	income	_____
-	\$1,185.63	op & fixed less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase weight</u>	_____
=	\$3.25	/lb	_____
Total Costs	1,330.00	lbs shrunk weight	_____
x	\$248.00	\$/cwt selling price	_____
=	\$3,298.40	income	_____
-	\$1,239.63	total less feeder cost	_____
÷	<u>650.00</u>	<u>lbs purchase weight</u>	_____
=	\$3.17	/lb	_____

Profitability and Breakeven Analysis:

Gross Revenue = Shrunk weight (lbs) x \$/lb price (eg. 1330 x \$2.48/lb = \$3298.40)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost

(eg. (\$3298.40 - \$3514.63) / \$3514.63 = -6.2%

Return on Asset (ROA) = (Margin Over Operating - Labour - Building Depreciation - Machinery Depreciation) / (Building, Machinery & Equipment Investment / Herd Size)

(eg. (\$-124.08 - \$54.00 - \$7.46 - \$20.80) / (\$212,890 /) = -48.5%

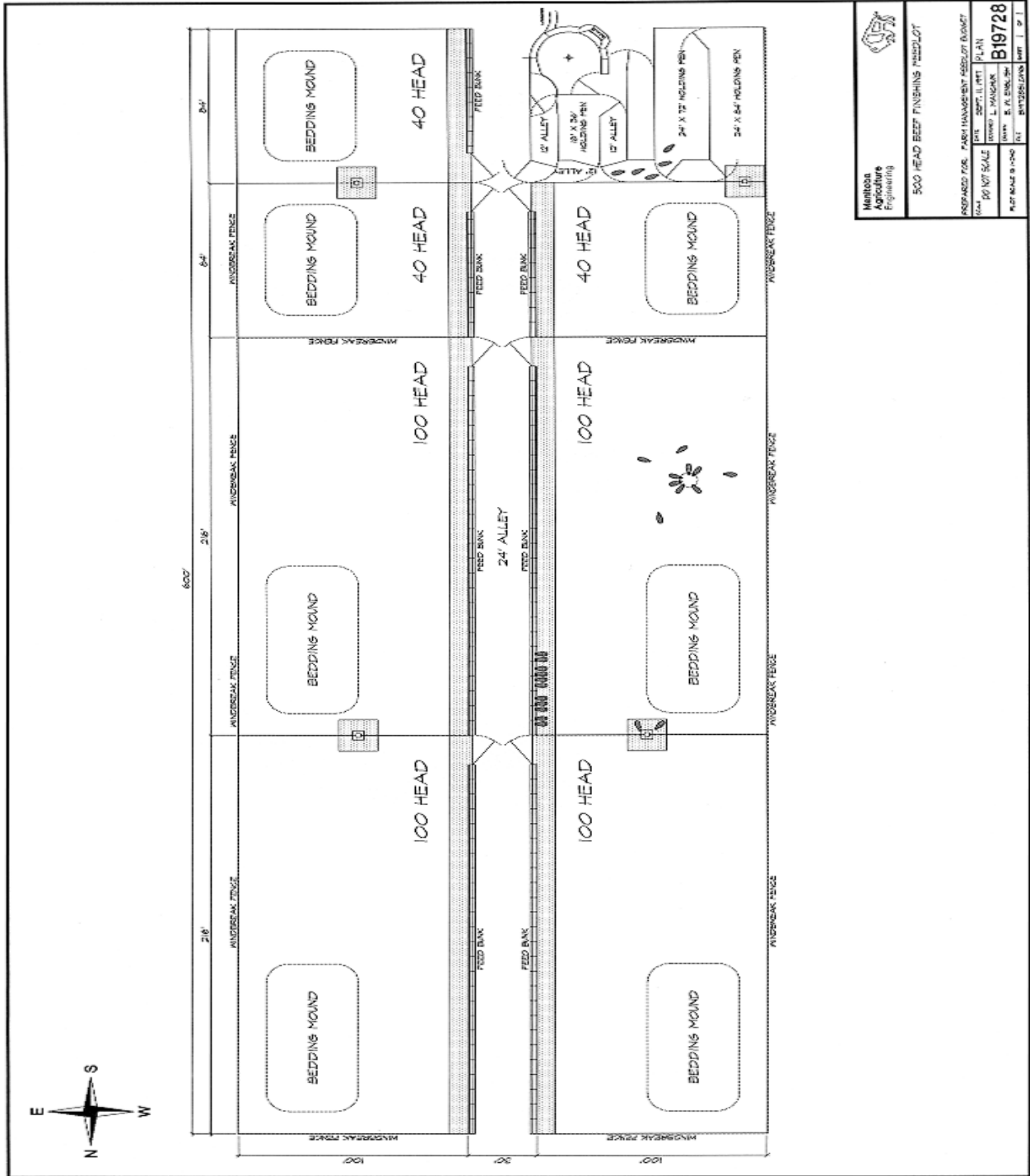
September, 2023

Contact Us

For more information, contact a Farm Management Specialist.

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

Beef Finishing Feedlot 500 Head



Contact us

- For more information, contact a Farm Management Specialist
- manitoba.ca/agriculture
- mbfarmbusiness@gov.mb.ca
- 1-844-769-6224