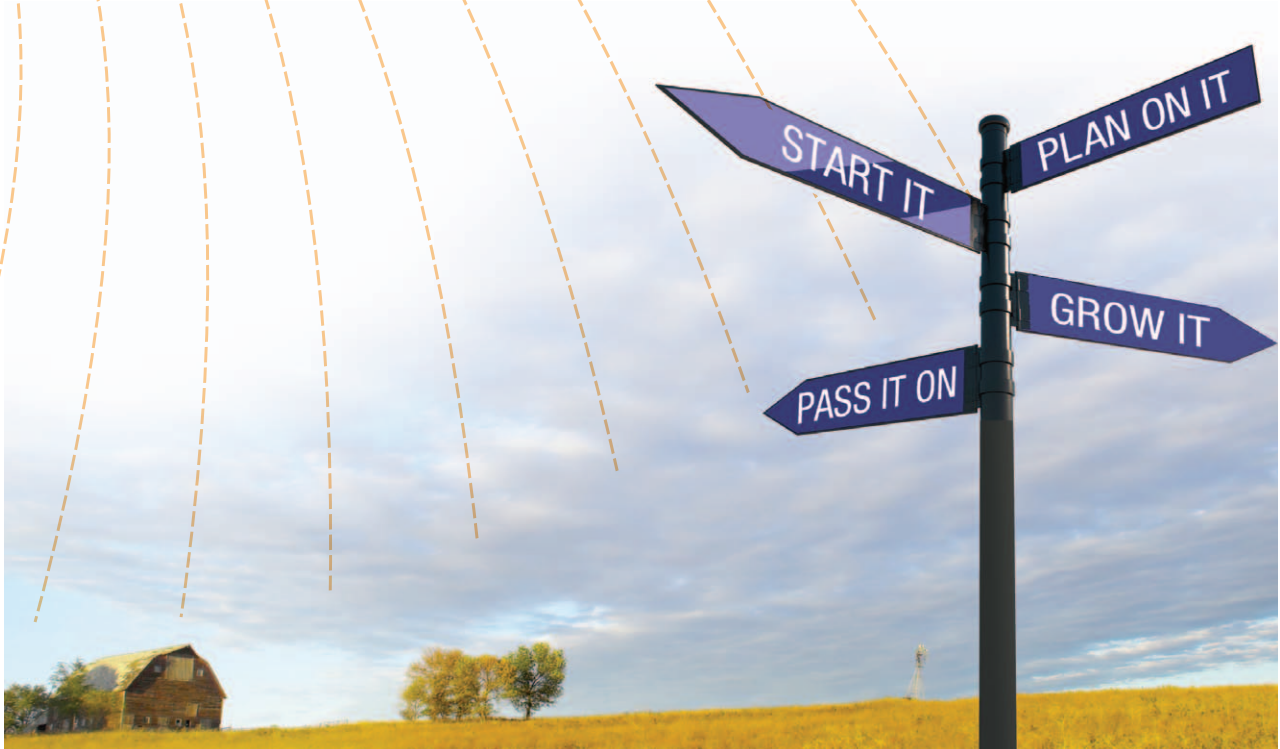




# Guidelines for Estimating Swine Finishing (Contract) Costs 2019/2020

in Manitoba





Guidelines For Estimating  
**Swine (26 to 121 kg) Finishing Costs**  
Contract Based On 2,000 Pig Places

Date: September, 2018

This guide is designed to provide you with planning information and a format for calculating costs of production of a contract based swine finishing 26 to 121 kg 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.

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 and livestock are on a herd health program.

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 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 local Manitoba Agriculture Office.

## **Swine (26 to 121 kg) Finishing Cost of Production 2000 Pig Place Contract**

The following 26 to 121 kg budget is based on a contract that supplies the feed and livestock. The budget includes a land investment cost for 40 acres, with 0 acres rented out at \$60 per acre, of the estimated 116 to 179 acres of total landbase that would be required for this size of livestock operation. This land base falls within the 2XP2O5 application rate, soil phosphorus levels permitting.

The budget includes an assumption that this particular operation is "all-in, all-out" by room. Space allocations for finishing pigs are in accordance with Recommended Code of Practice for the Care and Handling of Farm Animals: Pigs.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a contract based finishing 26 to 121 kg operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

**Swine (26 to 121 kg) Finishing Summary - 2000 Pig Place Contract  
September, 2018**

	<u>\$/Pig Sold</u>	<u>Total Cost</u>	<u>\$/Pig Place</u>	<u>Your Costs</u>
<b>A. Operating Costs</b>				
<b>1. Other Operating Costs:</b>				
1.01 Maintenance & Repairs	\$1.51	\$8,615	\$4.31	_____
1.02 Hydro & Propane	\$2.87	\$16,327	\$8.16	_____
1.03 Insurance	\$1.07	\$6,109	\$3.05	_____
1.04 Manure Costs	\$1.89	\$10,729	\$5.36	_____
1.05 Office Supplies	\$0.11	\$598	\$0.30	_____
1.06 Property Tax	<u>\$0.65</u>	<u>\$3,675</u>	<u>\$1.84</u>	_____
Subtotal Operating Costs	\$8.10	\$46,053	\$23.03	_____
1.07 Interest on Operating Costs	<u>\$0.08</u>	<u>\$446</u>	<u>\$0.22</u>	_____
<b>Total Operating Costs</b>	<b><u>\$8.17</u></b>	<b><u>\$46,499</u></b>	<b><u>\$23.25</u></b>	_____
<b>B. Fixed Costs</b>				
<b>2. Depreciation:</b>				
2.01 Buildings & Manure Storage	\$4.07	\$23,134	\$11.57	_____
2.02 Equipment	<u>\$3.88</u>	<u>\$22,099</u>	<u>\$11.05</u>	_____
<b>Total Depreciation Cost</b>	<b><u>\$7.95</u></b>	<b><u>\$45,233</u></b>	<b><u>\$22.62</u></b>	_____
<b>3. Investment Cost</b>				
3.01 Land	\$0.36	\$2,063	\$1.03	_____
3.02 Buildings & Manure Storage	\$1.65	\$9,414	\$4.71	_____
3.03 Equipment	<u>\$0.67</u>	<u>\$3,807</u>	<u>\$1.90</u>	_____
<b>Total Investment Costs</b>	<b><u>\$2.69</u></b>	<b><u>\$15,284</u></b>	<b><u>\$7.64</u></b>	_____
<b>Total Fixed Costs</b>	<b><u>\$10.64</u></b>	<b><u>\$60,517</u></b>	<b><u>\$30.26</u></b>	_____
<b>C. Labour</b>				
Wages	\$4.83	\$27,456	\$13.73	_____
<b>Total Cost of Production</b>	<b><u>\$23.64</u></b>	<b><u>\$134,472</u></b>	<b><u>\$67.24</u></b>	_____

**Profitability and Breakeven Analysis**

	<u>\$/Pig Sold</u>	<u>Total</u>	<u>\$/Pig Place</u>	
<b>Estimated Farmgate</b>				
Revenue per pig place	\$21.09	\$120,000	\$60.00	_____
Land rental per head sold	\$0.00	\$0.00	\$0.00	_____
<b>Gross Revenue per pig place</b>	<b><u>\$21.09</u></b>	<b><u>\$120,000</u></b>	<b><u>\$60.00</u></b>	_____
<b>Marginal Returns</b>				
Over Operating Costs	\$12.92	\$73,501	\$36.75	_____
Over Operating & Labour Costs	\$8.09	\$46,045	\$23.02	_____
<b>Over Total Costs (Net Profit)</b>	<b><u>(\$2.54)</u></b>	<b><u>(\$14,472)</u></b>	<b><u>(\$7.24)</u></b>	_____
<b>Operating Expense Ratio</b>			<b>38.75%</b>	_____
<b>Breakeven Contract Price</b>				
Operating Costs	\$8.17		\$23.25	_____
Operating & Labour Costs	\$13.00		\$36.98	_____
<b>Total Costs</b>	<b><u>\$23.64</u></b>		<b><u>\$67.24</u></b>	_____
<b>Return On Assets (ROA)</b>	<b>0.14%</b>			_____

**Note:** This budget is only a guide and is not intended to be 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.

## Swine (26-121 kg) Finishing Production Cost Assumptions

1. This input table outlines the cost of production for a finishing enterprise
2. Buildings and equipment are valued at new cost.
3. Manure haulage is contracted out.
4. Revenue is based on **\$60.00** per pig place

### Indicators of Productivity

	<u>Starter</u>	<u>Grower</u>	<u>Finisher</u>	<u>Total</u>
Number of Pigs Purchased	<b>6,000</b>	5,943	5,887	6,000
Average Beginning Weight (kg)	<b>26.0</b>	40.0	95.0	26
Average Ending Weight (kg)	<b>40.0</b>	<b>95.0</b>	<b>121.0</b>	121
Percent Mortality	<b>0.95</b>	<b>0.95</b>	<b>0.95</b>	2.85
Days on Feed	<b>23</b>	<b>65</b>	<b>28</b>	116
Feed Conversion Ratio	<b>1.95</b>	<b>3.00</b>	<b>3.50</b>	2.98
Number of Pigs (Ending)	5,943	5,887	5,831	5,831
Weight Gain/Pig (kg)	14.0	55.0	26.0	95.0
Feed Disappearance/Pig (kg)	27.3	165.0	91.0	283.3
Average Daily Gain (kg)	0.609	0.846	0.929	0.819
Average Number Pigs in Barn	2,012	1,993	1,974	1,993

### Productivity Profile

	<u>Total</u>	
Pigs Purchased	6,000	
Pigs Died	171	2.9 % mortality
Pigs available for marketing	5,831	
Less Light Weight Pig Adjustment	142	<b>2.44</b> %
Pigs Sold at full market value	5,689	
Washing and restocking days	<b>7</b>	
Total Days to Market	123	
Turnover (365 / days to market)	2.97	

### Labour

Total Hours per year	<b>24.0</b> hours/week	1,248	hours/year
Wage Rate	<b>\$22.00</b> /hour		

## Capital Investment<sup>1</sup>

### 2,000 Pig Places

		<u>/sq.ft</u>	<u>Total</u>	<u>/Pig Place</u>	<u>Your Cost</u>
<b>Buildings</b>					
Barn	18,400 ft. <sup>2</sup>	<b>\$27.50</b>	\$506,000	\$253.00	
Office & Loading	200 ft. <sup>2</sup>	<b>\$27.50</b>	\$5,500	\$2.75	
Standby Generator			\$20,000	\$10.00	
Feed Mill (building only)			<b>\$0</b>	<b>\$0.00</b>	
<b>Total Building Cost</b>			<b>\$531,500</b>	<b>\$265.75</b>	
<b>Equipment</b>					
Finishing Barn			\$232,680	\$116.34	
Other			\$0	\$0.00	
Fire Alarm System			\$1,000	\$0.50	
Storage Bins			\$18,000	\$9.00	
Feed Mill (equipment only)			<b>\$0</b>	<b>\$0.00</b>	
<b>Total Equipment Cost</b>			<b>\$251,680</b>	<b>\$125.84</b>	
<b>Total Buildings and Equipment Cost</b>			<b>\$783,180</b>	<b>\$391.59</b>	
<b>Land Value</b>					
Land Investment	40 acres @	<b>\$1,500</b>	<b>\$60,000</b>	<b>\$30.00</b>	
Land Investment	0 acres @	<b>\$1,500</b>	<b>\$0</b>	<b>\$0.00</b>	
<b>Other Costs</b>					
Site preparation			<b>\$15,000</b>	\$7.50	
Manure Storage			<b>\$100,000</b>	<b>\$50.00</b>	
<b>Total Other Costs</b>			<b>\$115,000</b>	<b>\$57.50</b>	
<b>Total Capital Investment</b>			<b>\$899,680</b>	<b>\$449.84</b>	

<sup>1</sup> FOOTNOTE: The number of square feet in the building and the cost per square foot for buildings and equipment are approximations only. A certified building plan which is designed according to the average inventory of grower-finisher pigs should be used in order to get the exact dimensions and area for new buildings.

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NOTE: 1 sq.ft. = 0.0929 sq.m; 1 sq.m.= 10.764 sq.ft.; 1 ft.= 0.3048 m

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### Fixed Costs

Depreciation (straight line):

Useful Life:

Buildings 25 years

Equipment 10 years

Salvage Value (% of original cost):

Buildings 10.00 %

Equipment 10.00 %

Investment Interest Rate					<b>2.75</b> %
<b>Other Operating Costs</b>					
Maintenance & Repair					<b>1.10</b> % of total capital investment
Hydro & Propane	Hydro rate	<b>\$0.08527</b>	per kwhr		
	Hydro usage	<b>100,000</b>	kwhr		
	Propane rate	<b>\$0.52</b>	per litre		
	Propane usage	<b>15,000</b>	litres		
Insurance					
Buildings and equipment		<b>\$0.78</b>	/ \$100 Capital Invested		
Manure Costs:					
Haulage	Amount	<b>7.1</b>	litres/pig/day <sup>3</sup>		
	Cost / litre	<b>\$0.002</b>	/litre		
	Cost / gallon	<b>\$0.010</b>	/gallon		
Odour control (barley straw)		<b>\$0</b>	total costs		
Manure Management Fee		<b>\$1,500</b>	total costs		
Manure nutrient content	nutrient	fertilizer	% nutrient		
	kg/1000	value	value cost		
	litres	\$/lb	recovery / sale		
Total Nitrogen	<b>3.50</b>	<b>0.434</b>	<b>60</b>		
Phosphate (P2O5)	<b>0.74</b>	<b>0.461</b>	<b>0</b>		
Potassium	<b>1.41</b>	<b>0.314</b>	<b>0</b>		
	* kg/1000 L x 10 = lbs/1000 imp. Gallons				
Office Supplies		<b>\$0.30</b>	/pig place		
Operating Loan Interest %		<b>5.75</b>	%		
Property Tax:					
Grower-Finisher Barn & Land		<b>\$3,675</b>	/year		
Land		<b>\$4.35</b>	/acre		
Land Value for Grower-Finisher Operation:					
Number of Acres		<b>40</b>	acres		
Number of Acres rented out		<b>0</b>	acres		
Rental rate (income)		<b>\$60</b>	/acre		
Land Value per Acre		<b>\$1,500</b>	/acre		

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<sup>3</sup> FOOTNOTE:      1 cubic metre = 1000 litres  
                          1 cubic metre = 35.314 cubic feet  
                          1 cubic metre = 219.97 imperial gallons

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## Swine Finishing Production Cost Worksheet

### A. Operating Costs

Your Cost

#### 1. Other Operating Costs

##### 1.01 Maintenance & Repairs

	1.10	% of total capital investment	_____
x	\$783,180	total buildings and equipment cost	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	\$1.51	<b>/pig sold</b>	_____

##### 1.02 Utilities

	\$8,527	hydro	_____
+	\$7,800	propane	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>\$2.87</b>	<b>/pig sold</b>	_____

##### 1.03 Insurance

	\$783,180	buildings & equipment	_____
x	\$0.78	/\$100	_____
÷	100	/\$100 capital	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>\$1.07</b>	<b>/pig sold</b>	_____

##### 1.04 Manure Costs

Haulage	7.1	litres/pig/day	_____
x	365	days/year	_____
x	1,993	average inventory of pigs	_____
x	\$0.002	/litre	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	\$2.00	/pig sold	_____

##### Estimated Nutrient Value

	7.1	litres/pig/day	_____
x	365	days/year	_____
x	1,993	average inventory of pigs	_____
÷	<u>1,000</u>		_____
=	5,166	# of 1000 litres of manure	_____

##### Nitrogen

	3.50	kg per 1000 litres	_____
x	5,166	# of 1000 litres of manure	_____
x	60	% nutrient value recovery	_____
÷	2.2046	lbs per kg	_____
x	\$0.43	fertilizer value per lb.	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	\$0.38	estimated nutrient value / pig sold	_____

##### Phosphate

	0.74	kg per 1000 litres	_____
x	5,166	# of 1000 litres of manure	_____
x	0	% nutrient value recovery	_____
÷	2.2046	lbs per kg	_____
x	\$0.46	fertilizer value per lb.	_____

÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	\$0.00	estimated nutrient value / pig sold	_____
<b>Potassium</b>			
	1.41	kg per 1000 litres	_____
x	5,166	# of 1000 litres of manure	_____
x	0	% nutrient value recovery	_____
÷	2.2046	lbs per kg	_____
x	\$0.31	fertilizer value per lb.	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	\$0.00	estimated nutrient value / pig sold	_____

**Odour control**

	\$1,500	total cost	_____
	<u>5,689</u>	<u>pigs sold</u>	_____
	\$0.26	<b>/pig sold</b>	_____

**Total \$1.89 /pig sold**

**1.05 Office Supplies**

	\$0.30	/pig place	_____
x	1,993	pig places	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>\$0.11</b>	<b>/pig sold</b>	_____

**1.06 Property Taxes**

	\$3,675	taxes	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>\$0.65</b>	<b>/pig sold</b>	_____

**1.07 Interest on Operating Cost**

	\$8.10	subtotal operating cost	_____
÷	2	average	_____
x	123	total days to market	_____
÷	365	days/year	_____
x	<u>5.8</u>	<u>% operating rate</u>	_____
=	<b>\$0.08</b>	<b>/pig sold</b>	_____

**B. Fixed Costs**

**2. Depreciation**

Original cost - Salvage Value  
Useful Life

**2.01 Buildings**

	\$631,500	total building cost (including earthen manure storage)	_____
-	\$53,150	salvage value (building only)	_____
÷	25	years useful life	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>4.07</b>	<b>/pig sold</b>	_____

**2.02 Equipment**

	\$251,680	total equipment cost	_____
-	\$25,168	salvage value	_____
÷	10	years useful life	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>3.88</b>	<b>/pig sold</b>	_____

### 3. Investment Cost

$$\frac{(\text{Original Cost} + \text{Salvage Value}) \times \text{Investment Rate}}{2}$$

#### 3.01 Land

	\$60,000	land investment	_____
+	\$15,000	site preparation	_____
x	2.8	% investment rate	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>0.36</b>	<b>/pig sold</b>	_____

#### Land for manure application

	\$0	land investment	_____
x	2.8	% investment rate	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	0.00	/pig sold	_____

**Total**                      **\$0.36**                      **/pig sold**                      \_\_\_\_\_

#### 3.02 Buildings

	\$631,500	total building cost (including earthen manure storage)	_____
+	\$53,150	salvage value (building only)	_____
÷	2	average	_____
x	2.8	% investment rate	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>1.65</b>	<b>/pig sold</b>	_____

#### 3.03 Equipment

	\$251,680	total equipment cost	_____
+	\$25,168	salvage value	_____
÷	2	average	_____
x	2.8	% investment rate	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>0.67</b>	<b>/pig sold</b>	_____

### 4. Labour Cost

	1248	total hours/year	_____
x	\$22.00	/hour	_____
÷	<u>5,689</u>	<u>pigs sold</u>	_____
=	<b>4.83</b>	<b>/pig sold</b>	_____

**Return on Assets (ROA)**                      
$$\frac{\text{Net Income} + \text{Operating Interest} + \text{Investment Interest} - \text{Value of Unpaid Family and Operator Labour}}{\text{Total Assets}}$$

**Total Assets** Definition: Total Assets includes the buildings, equipment, land, manure storage and breeding stock valued at replacement cost, plus the value of market livestock on inventory.

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

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- Toll free at 1-844-769-6224
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