



Guidelines for Estimating Crop Production Costs 2016

in Manitoba



Guidelines For Estimating Crop Production Costs - 2016

Date: January, 2016

The following budgets are estimates of the cost of producing the most commonly grown field crops in Manitoba. General Manitoba Agriculture, Food and Rural Development (MAFRD) recommendations are assumed in using fertilizers and chemical inputs. These figures provide an economic evaluation of the crops and estimated yields 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 for various crops. On each farm, costs and yields differ due to soil type, climate and agronomic practices.

This tool is available as an Excel worksheet at: www.manitoba.ca/agriculture
or at your local [MAFRD GO 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 MAFRD GO Office.

Crop Production Costs 2016 Guidelines (Dollars Per Acre)

	<u>Canola</u>	<u>Wheat</u>	<u>Winter Wheat</u>	<u>Soybeans</u>	<u>Barley</u>	<u>Oats</u>	<u>Corn</u>	<u>Navy Beans</u>
Profitability Ranking	6	8	2	9	12	13	3	1
A. Operating Costs								
Seed & Treatment	\$52.25	\$22.00	\$20.00	\$94.38	\$15.00	\$18.13	\$78.30	\$52.50
Fertilizer	\$78.99	\$61.23	\$66.14	\$11.35	\$53.48	\$48.57	\$94.42	\$56.32
Herbicide	\$13.13	\$26.21	\$13.83	\$14.67	\$24.88	\$9.50	\$18.17	\$66.21
Fungicide	\$36.25	\$21.31	\$21.31	\$0.00	\$17.25	\$10.13	\$0.00	\$39.50
Insecticide	\$4.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fuel	\$16.43	\$20.05	\$21.71	\$15.34	\$21.67	\$23.33	\$23.65	\$18.87
Machinery Operating	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Machinery Lease	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60
Rental and Custom	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Crop Insurance	\$14.96	\$11.82	\$10.24	\$22.31	\$12.34	\$14.21	\$24.53	\$28.78
Other Costs	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75
Land Taxes	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00
Drying Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.00	\$0.00
Interest on Operating	<u>\$6.88</u>	<u>\$5.39</u>	<u>\$5.13</u>	<u>\$5.26</u>	<u>\$4.89</u>	<u>\$4.32</u>	<u>\$8.45</u>	<u>\$8.13</u>
Total Operating	\$256.98	\$201.36	\$191.71	\$196.66	\$182.85	\$161.53	\$315.88	\$303.66
B. Fixed Costs								
Land Investment Costs	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75
Machinery Depreciation	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91
Machinery Investment	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48
Storage Costs	<u>\$5.23</u>	<u>\$7.19</u>	<u>\$9.80</u>	<u>\$4.58</u>	<u>\$10.46</u>	<u>\$13.07</u>	<u>\$15.03</u>	<u>\$4.03</u>
Total Fixed	\$116.36	\$118.32	\$120.94	\$115.71	\$121.59	\$124.20	\$126.17	\$115.16
Total Operating & Fixed	\$373.34	\$319.68	\$312.65	\$312.37	\$304.45	\$285.74	\$442.04	\$418.82
C. Labour								
	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00
Total Costs	\$403.34	\$349.68	\$342.65	\$342.37	\$334.45	\$315.74	\$472.04	\$448.82

Profitability & Breakeven Analysis

Estimated Farmgate								
Market Price \$ per unit	\$10.50	\$6.50	\$5.25	\$10.00	\$4.00	\$3.00	\$4.50	\$0.28
Premium \$ per unit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Yield per acre (bu or lb.)	40	55	75	35	80	100	115	1,850
Unit type	bu	bu	bu	bu	bu	bu	bu	lb
Gross Revenue / acre	\$420.00	\$357.50	\$393.75	\$350.00	\$320.00	\$300.00	\$517.50	\$518.00
Marginal Returns								
Over Operating Costs	\$163.02	\$156.14	\$202.04	\$153.34	\$137.15	\$138.47	\$201.62	\$214.34
Over Total Costs (Net Profit)	\$16.66	\$7.82	\$51.10	\$7.63	(\$14.45)	(\$15.74)	\$45.46	\$69.18
Operating Expense Ratio	61.2%	56.3%	48.7%	56.2%	57.1%	53.8%	61.0%	58.6%
Breakeven Price Per Unit								
Operating Costs	\$6.42	\$3.66	\$2.56	\$5.62	\$2.29	\$1.62	\$2.75	\$0.16
Total Costs	\$10.08	\$6.36	\$4.57	\$9.78	\$4.18	\$3.16	\$4.10	\$0.24
Breakeven Yield (Bu or lb.)								
Operating Costs	24.5	31.0	36.5	19.7	45.7	53.8	70.2	1085
Total Costs	38.4	53.8	65.3	34.2	83.6	105.2	104.9	1603

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Crop Production Costs 2016 Guidelines (Dollars Per Acre)

<u>Flax</u>	<u>Sunflowers</u>		<u>Peas</u>	<u>Fall Rye</u>	<u>Canary Seed</u>	<u>Lentils</u>	<u>Buck-wheat</u>	<u>Hemp-seed</u>	<u>Your Farm</u>
<u>Confects</u>	<u>Oil</u>								
14	4	10	5	7	15	16	17	11	
\$22.80	\$48.31	\$38.00	\$30.25	\$10.50	\$14.08	\$32.50	\$25.00	\$40.00	
\$43.27	\$53.48	\$53.48	\$14.19	\$46.11	\$48.57	\$14.19	\$31.00	\$56.32	
\$18.25	\$43.79	\$24.75	\$16.00	\$6.70	\$13.53	\$16.00	\$5.25	\$38.82	
\$14.38	\$28.75	\$28.75	\$14.38	\$0.00	\$9.91	\$14.38	\$0.00	\$0.00	
\$0.00	\$13.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$15.83	\$19.92	\$20.25	\$15.75	\$16.55	\$17.10	\$15.81	\$14.17	\$17.32	
\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	
\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
\$14.52	\$29.47	\$18.54	\$19.19	\$14.09	\$21.73	\$25.50	\$30.35	\$33.62	
\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	
\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	
\$0.00	\$10.00	\$10.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$20.00	
<u>\$4.47</u>	<u>\$7.71</u>	<u>\$6.25</u>	<u>\$3.94</u>	<u>\$3.50</u>	<u>\$4.35</u>	<u>\$4.17</u>	<u>\$3.83</u>	<u>\$6.58</u>	
\$166.87	\$288.01	\$233.37	\$147.06	\$130.80	\$162.62	\$155.90	\$142.95	\$246.01	
\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	\$53.75	
\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	\$45.91	
\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	\$11.48	
<u>\$3.27</u>	<u>\$10.40</u>	<u>\$10.99</u>	<u>\$5.23</u>	<u>\$6.54</u>	<u>\$2.80</u>	<u>\$2.40</u>	<u>\$2.22</u>	<u>\$1.71</u>	
\$114.40	\$121.53	\$122.13	\$116.36	\$117.67	\$113.93	\$113.53	\$113.36	\$112.84	
\$281.27	\$409.54	\$355.49	\$263.42	\$248.47	\$276.55	\$269.43	\$256.30	\$358.85	
\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	\$30.00	
\$311.27	\$439.54	\$385.49	\$293.42	\$278.47	\$306.55	\$299.43	\$286.30	\$388.85	
Profitability & Breakeven Analysis									
\$11.75	\$0.27	\$0.21	\$8.00	\$5.75	\$0.24	\$0.24	\$13.00	\$0.68	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
25	1,750	1,850	40	50	1,200	1,100	17	575	
bu	lb	lb	bu	bu	lb	lb	bu	lb	
\$293.75	\$472.50	\$388.50	\$320.00	\$287.50	\$288.00	\$264.00	\$221.00	\$391.00	
\$126.88	\$184.49	\$155.13	\$172.94	\$156.70	\$125.38	\$108.10	\$78.05	\$144.99	
(\$17.52)	\$32.96	\$3.01	\$26.58	\$9.03	(\$18.55)	(\$35.43)	(\$65.30)	\$2.15	
56.8%	61.0%	60.1%	46.0%	45.5%	56.5%	59.1%	64.7%	62.9%	
\$6.67	\$0.16	\$0.13	\$3.68	\$2.62	\$0.14	\$0.14	\$8.41	\$0.43	
\$12.45	\$0.25	\$0.21	\$7.34	\$5.57	\$0.26	\$0.27	\$16.84	\$0.68	
14.2	1067	1111	18.4	22.7	678	650	11.0	361.8	
26.5	1628	1836	36.7	48.4	1277	1248	22.0	571.8	

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Risk & Sensitivity Analysis

	<u>Canola</u>	<u>Wheat</u>	<u>Winter Wheat</u>	<u>Soybeans</u>	<u>Barley</u>	<u>Oats</u>	<u>Corn</u>	<u>Navy Beans</u>
A. Operating Costs	\$256.98	\$201.36	\$191.71	\$196.66	\$182.85	\$161.53	\$315.88	\$303.66
B. Fixed Costs	\$116.36	\$118.32	\$120.94	\$115.71	\$121.59	\$124.20	\$126.17	\$115.16
Total Costs	\$403.34	\$349.68	\$342.65	\$342.37	\$334.45	\$315.74	\$472.04	\$448.82

Estimated Farmgate

Price \$ per unit	\$10.50	\$6.50	\$5.25	\$10.00	\$4.00	\$3.00	\$4.50	\$0.28
Yield per acre (bu or lb.)	40	55	75	35	80	100	115	1,850
Unit type	bu	bu	bu	bu	bu	bu	bu	lb

	Percent Price Variation		Percent Yield Variation					
	Up 5%	Down 10%	Up 10%		Down 5%			
Higher Price (\$ per unit)	\$11.03	\$6.83	\$5.51	\$10.50	\$4.20	\$3.15	\$4.73	\$0.29
Lower Price (\$ per unit)	\$9.45	\$5.85	\$4.73	\$9.00	\$3.60	\$2.70	\$4.05	\$0.25
Higher Yield (per acre)	44.0	60.5	82.5	38.5	88.0	110.0	126.5	2,035.0
Lower Yield (per acre)	38.0	52.3	71.3	33.3	76.0	95.0	109.3	1,757.5

Higher Margin Scenario - Price Up 5% and Yield Up 10%

Gross Revenue / acre	\$485.10	\$412.91	\$454.78	\$404.25	\$369.60	\$346.50	\$597.71	\$598.29
Marginal Returns								
Over Operating Costs	\$228.12	\$211.55	\$263.07	\$207.59	\$186.75	\$184.97	\$281.84	\$294.63
Over Total Costs (Net Profit)	\$81.76	\$63.23	\$112.14	\$61.88	\$35.15	\$30.76	\$125.67	\$149.47
Profitability Ranking	5	7	3	10	12	13	2	1
Operating Expense Ratio	53.0%	48.8%	42.2%	48.6%	49.5%	46.6%	52.8%	50.8%

Lower Margin Scenario - Price Down 10% and Yield Down 5%

Gross Revenue / acre	\$359.10	\$305.66	\$336.66	\$299.25	\$273.60	\$256.50	\$442.46	\$442.89
Marginal Returns								
Over Operating Costs	\$102.12	\$104.30	\$144.95	\$102.59	\$90.75	\$94.97	\$126.59	\$139.23
Over Total Costs (Net Profit)	(\$44.24)	(\$44.02)	(\$5.99)	(\$43.12)	(\$60.85)	(\$59.24)	(\$29.58)	(\$5.93)
Profitability Ranking	9	8	2	7	15	12	4	1
Operating Expense Ratio	71.6%	65.9%	56.9%	65.7%	66.8%	63.0%	71.4%	68.6%

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Risk & Sensitivity Analysis

<u>Flax</u>	<u>Sunflowers</u>		<u>Peas</u>	<u>Fall Rye</u>	<u>Canary</u>	<u>Lentils</u>	<u>Buck-</u>	<u>Hemp</u>	<u>Your Farm</u>
	<u>Confects</u>	<u>Oil</u>			<u>Seed</u>		<u>wheat</u>		
\$166.87	\$288.01	\$233.37	\$147.06	\$130.80	\$162.62	\$155.90	\$142.95	\$246.01	_____
\$114.40	\$121.53	\$122.13	\$116.36	\$117.67	\$113.93	\$113.53	\$113.36	\$112.84	_____
\$311.27	\$439.54	\$385.49	\$293.42	\$278.47	\$306.55	\$299.43	\$286.30	\$388.85	_____
\$11.75	\$0.27	\$0.21	\$8.00	\$5.75	\$0.24	\$0.24	\$13.00	\$0.68	_____
25	1,750	1,850	40	50	1,200	1,100	17	575	_____
bu	lb	lb	bu	bu	lb	lb	bu	lb	_____



\$12.34	\$0.28	\$0.22	\$8.40	\$6.04	\$0.25	\$0.25	\$13.65	\$0.71	_____
\$10.58	\$0.24	\$0.19	\$7.20	\$5.18	\$0.22	\$0.22	\$11.70	\$0.61	_____
27.5	1,925.0	2,035.0	44.0	55.0	1,320.0	1,210.0	18.7	632.5	_____
23.8	1,662.5	1,757.5	38.0	47.5	1,140.0	1,045.0	16.2	546.3	_____

\$339.28	\$545.74	\$448.72	\$369.60	\$332.06	\$332.64	\$304.92	\$255.26	\$451.61	_____
\$172.41	\$257.73	\$215.35	\$222.54	\$201.26	\$170.02	\$149.02	\$112.31	\$205.60	_____
\$28.01	\$106.20	\$63.22	\$76.18	\$53.59	\$26.09	\$5.49	(\$31.05)	\$62.76	_____
14	4	8	6	11	15	16	17	9	_____
49.2%	52.8%	52.0%	39.8%	39.4%	48.9%	51.1%	56.0%	54.5%	_____

\$251.16	\$403.99	\$332.17	\$273.60	\$245.81	\$246.24	\$225.72	\$188.96	\$334.31	_____
\$84.28	\$115.98	\$98.80	\$126.54	\$115.01	\$83.62	\$69.82	\$46.01	\$88.30	_____
(\$60.12)	(\$35.55)	(\$53.33)	(\$19.82)	(\$32.66)	(\$60.31)	(\$73.71)	(\$97.35)	(\$54.54)	_____
13	6	10	3	5	14	16	17	11	_____
66.4%	71.3%	70.3%	53.7%	53.2%	66.0%	69.1%	75.7%	73.6%	_____

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Seed & Treatment

<u>Crop</u>	<u>Seeding Rate</u>	<u>Price</u>	<u>Cost</u>
	<u>per Acre</u>	<u>per Unit</u>	<u>per Acre</u>
Canola	4.75 lb	\$11.00 /lb	\$52.25
Wheat	2.0 bu	\$11.00 /bu	\$22.00
Winter wheat	2.0 bu	\$10.00 /bu	\$20.00
* Soybeans	1.43 units	\$66.00 /unit	\$94.38
Barley	2.0 bu	\$7.50 /bu	\$15.00
Oats	2.5 bu	\$7.25 /bu	\$18.13
Corn	29,000 plants	\$0.0027 /plant	\$78.30
Navy Beans	50 lbs	\$1.05 /lb	\$52.50
Flaxseed	60 lb	\$0.38 /lb	\$22.80
Sunflowers Confection	18,000 plants	\$0.00268 /plant	\$48.31
Sunflowers Oil	20,000 plants	\$0.0019 /plant	\$38.00
Peas	2.75 bu	\$11.00 /bu	\$30.25
Fall Rye	1.5 bu	\$7.00 /bu	\$10.50
Canary Seed	44 lbs	\$0.32 /lb	\$14.08
Lentils	50 lb	\$0.65 /lb	\$32.50
Buckwheat	1 bu	\$25.00 /bu	\$25.00
Hempseed	20 lb	\$2.00 /lb	\$40.00

* If row cropping, change seeding rate to 1.3 units/acre which reduces seed cost by 10%

Fertilizer

<u>Fertilizer Type</u>	<u>Bulk Price</u>	<u>Actual Nutrient</u>	<u>Nitrogen</u>	<u>Sulphur</u>
	<u>\$/tonne</u>	<u>\$/lb</u>	<u>Usage</u>	<u>Usage</u>
Nitrogen: (urea) 46-0-0	\$536	\$0.529	50%	-
Nitrogen: (NH3) 82-0-0	\$820	\$0.454	50%	-
Nitrogen: (liquid) 28-0-0	\$344	\$0.557	0%	-
Phosphorus: 11-52-0	\$779	\$0.568	-	-
Potash: 0-0-60	\$507	\$0.383	-	-
Sulphur: 20.5-0-0-24	\$449	\$0.397	-	100%
MES S15: 13-33-0-15	\$776	\$0.640	-	0%

Amount of Actual Pounds of Elements Applied Per Acre

<u>Crop</u>	<u>Nitrogen</u>		<u>Phosphorus</u>		<u>Potash</u>		<u>Sulphur</u>		<u>Total</u>
	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	
Canola	110	\$54.02	30	\$17.03	0	\$0.00	20	\$7.94	\$78.99
Wheat	90	\$44.20	30	\$17.03	0	\$0.00	0	\$0.00	\$61.23
Winter wheat	100	\$49.11	30	\$17.03	0	\$0.00	0	\$0.00	\$66.14
Soybeans	0	\$0.00	20	\$11.35	0	\$0.00	0	\$0.00	\$11.35
Barley	80	\$39.29	25	\$14.19	0	\$0.00	0	\$0.00	\$53.48
Oats	70	\$34.37	25	\$14.19	0	\$0.00	0	\$0.00	\$48.57
Corn	130	\$63.84	30	\$17.03	25	\$9.58	10	\$3.97	\$94.42
Navy Beans	80	\$39.29	30	\$17.03	0	\$0.00	0	\$0.00	\$56.32
Flaxseed	65	\$31.92	20	\$11.35	0	\$0.00	0	\$0.00	\$43.27
Sunflowers Confection	80	\$39.29	25	\$14.19	0	\$0.00	0	\$0.00	\$53.48
Sunflowers Oil	80	\$39.29	25	\$14.19	0	\$0.00	0	\$0.00	\$53.48
Peas	0	\$0.00	25	\$14.19	0	\$0.00	0	\$0.00	\$14.19
Fall Rye	65	\$31.92	25	\$14.19	0	\$0.00	0	\$0.00	\$46.11
Canary Seed	70	\$34.37	25	\$14.19	0	\$0.00	0	\$0.00	\$48.57
Lentils	0	\$0.00	25	\$14.19	0	\$0.00	0	\$0.00	\$14.19
Buckwheat	40	\$19.64	20	\$11.35	0	\$0.00	0	\$0.00	\$31.00
Hempseed	80	\$39.29	30	\$17.03	0	\$0.00	0	\$0.00	\$56.32

The fertilizer recommendation will vary depending on the soil type, climate and crop rotation. MAFRD recommends that soil test sampling and analysis be conducted each year to produce a better baseline for fertility. It costs \$0.50 to \$1.50/acre for custom sampling and analysis.

Chemicals				
Crop	Weed Control \$/acre	Disease Control \$/acre	Insect Control \$/acre	Total Cost \$/acre
Canola	\$13.13	\$36.25	\$4.73	\$54.11
Wheat	\$26.21	\$21.31	\$0.00	\$47.52
Winter wheat	\$13.83	\$21.31	\$0.00	\$35.14
Soybeans	\$14.67	\$0.00	\$0.00	\$14.67
Barley	\$24.88	\$17.25	\$0.00	\$42.13
Oats	\$9.50	\$10.13	\$0.00	\$19.63
Corn	\$18.17	\$0.00	\$0.00	\$18.17
Navy Beans	\$66.21	\$39.50	\$0.00	\$105.71
Flaxseed	\$18.25	\$14.38	\$0.00	\$32.63
Sunflowers Confection	\$43.79	\$28.75	\$13.23	\$85.77
Sunflowers Oil	\$24.75	\$28.75	\$0.00	\$53.50
Peas	\$16.00	\$14.38	\$0.00	\$30.38
Fall Rye	\$6.70	\$0.00	\$0.00	\$6.70
Canary Seed	\$13.53	\$9.91	\$0.00	\$23.44
Lentils	\$16.00	\$14.38	\$0.00	\$30.38
Buckwheat	\$5.25	\$0.00	\$0.00	\$5.25
Hempseed	\$38.82	\$0.00	\$0.00	\$38.82

Note:

Pre-emergent burn off and/or pre-harvest desiccation not included in weed control costs. (except for wheat, win. wheat and sunflowers).

Chemical costs do not include year end rebates or bundling discounts.

Disease Control costs (except for sunflowers) do not include custom application costs.

Insect Control costs (except for sunflowers) do not include custom application costs.

Operating Costs

Interest Rate on Operating	5.50%	<u>Grain Hauling</u>	
Land Taxes (\$/acre)	\$12.00	Distance to storage	6 miles roundtrip
Labour rate (\$/hour)	\$20.00	Distance to market	45 miles roundtrip
Machinery Operating (\$/acre)	\$10.00	Grain truck fuel use	5 Miles per Imp. Gallon
Other Costs (\$/acre)	\$7.75	Grain truck size	475 bushels
Fuel Cost (\$/litre)	\$0.85		

Operating Cost (\$/Acre)

Crop	Labour	Fuel	Crop	Drying	Storage	Rental and Custom Costs					Total
	(hrs/acre)		Insurance	Costs	\$/acre	Seeding	Application	Swathing	Harvest	General	
Canola	1.5	\$16.43	\$14.96	-	\$5.23	-	-	-	-	-	\$0.00
Wheat	1.5	\$20.05	\$11.82	-	\$7.19	-	-	-	-	-	\$0.00
Winter wheat	1.5	\$21.71	\$10.24	-	\$9.80	-	-	-	-	-	\$0.00
Soybeans	1.5	\$15.34	\$22.31	-	\$4.58	-	-	-	-	-	\$0.00
Barley	1.5	\$21.67	\$12.34	-	\$10.46	-	-	-	-	-	\$0.00
Oats	1.5	\$23.33	\$14.21	-	\$13.07	-	-	-	-	-	\$0.00
Corn	1.5	\$23.65	\$24.53	\$35.00	\$15.03	-	-	-	-	-	\$0.00
Navy Beans	1.5	\$18.87	\$28.78	-	\$4.03	-	-	-	-	-	\$0.00
Flaxseed	1.5	\$15.83	\$14.52	-	\$3.27	-	-	-	-	-	\$0.00
Sunflowers Confection	1.5	\$19.92	\$29.47	\$10.00	\$10.40	-	-	-	-	-	\$0.00
Sunflowers Oil	1.5	\$20.25	\$18.54	\$10.00	\$10.99	-	-	-	-	-	\$0.00
Peas	1.5	\$15.75	\$19.19	-	\$5.23	-	-	-	-	-	\$0.00
Fall Rye	1.5	\$16.55	\$14.09	-	\$6.54	-	-	-	-	-	\$0.00
Canary Seed	1.5	\$17.10	\$21.73	-	\$2.80	-	-	-	-	-	\$0.00
Lentils	1.5	\$15.81	\$25.50	-	\$2.40	-	-	-	-	-	\$0.00
Buckwheat	1.5	\$14.17	\$30.35	-	\$2.22	-	-	-	-	-	\$0.00
Hempseed	1.5	\$17.32	\$33.62	\$20.00	\$1.71	-	-	-	-	-	\$0.00

* Storage costs are listed under Fixed Costs on the Summary Page.

Field Fuel Usage

Crop	Total L/acre	Number of Field Operations & Litres Fuel Per Acre Per Operation								Trucks L/acre	
		cultivator or tandem disk	high speed disk	harrow or land roller	air drill	row planter	SP sprayer	swather	combine	3/4 ton pickup	grain hauling
		2.25	3.5	0.75	2.5	1.3	0.42	1.13	5.54	2	
Canola	19.33	1		1	1		3	1	1	2	3.90
Wheat	23.59	1	1	1	1		4		1	2	5.37
Winter wheat	25.54	1	1	1	1		4		1	2	7.32
Soybeans	18.05	1		2	1		2		1	2	3.42
Barley	25.49	2		1	1		3	1	1	2	7.81
Oats	27.44	2		1	1		3	1	1	2	9.76
Corn	27.83	1	1	1		1	3		1	2	11.23
Navy Beans	22.20	1		2		1	3	1	1	2	7.22
Flaxseed	18.62	1		2	1		3	1	1	2	2.44
Sunflowers Confection	23.43	1	1	1		1	3		1	2	6.83
Sunflowers Oil	23.82	1	1	1		1	3		1	2	7.22
Peas	18.53	1		2	1		2		1	2	3.90
Fall Rye	19.47	1		1	1		1	1	1	2	4.88
Canary Seed	20.12	1		1	1		3	1	1	2	4.69
Lentils	18.60	1		1	1		3		1	2	4.30
Buckwheat	16.67	1		1	1		2	1	1	2	1.66
Hempseed	20.38	1	1	2	1		2		1	2	2.25

Guidelines: Crop Production Costs

Fixed Costs			
Land value (\$/acre)		\$2,150	
Total Crop acres		2,000	
Depreciation Rate		10.0%	
Investment Rate		2.50%	
Land cost (\$/acre)			\$53.75
Machinery Investment (\$/acre)			\$459.06
Machinery Depreciation cost (\$/acre)			\$45.91
Machinery Investment cost (\$/acre)			\$11.48
Machinery Lease cost (\$/acre)			\$3.60
Total (\$/acre)			\$60.98
<u>Grain Storage</u>	<u>Usage %</u>	<u>Cost</u>	
Non-aeration bins	25%	\$1.85 /bu	
Aeration bins	75%	\$2.35 /bu	

Owned Equipment Inventory and Current Values							
	Market	Grain	Grain		Market	Grain	Grain
	Value	Usage %	Allocation		Value	Usage %	Allocation
Power & Misc Equipment				Harvest Equipment			
4WD Tractor 375HP	\$175,000	100%	\$175,000	Combine	\$200,000	100%	\$200,000
MFWD Tractor 150HP	\$50,000	100%	\$50,000	Swather 35 ft	\$75,000	100%	\$75,000
2WD Tractor 60HP	\$20,000	75%	\$15,000	PTO Auger 13x70	\$10,000	100%	\$10,000
ATV Quad	\$3,500	75%	\$2,625	Auger 8x35	\$4,000	100%	\$4,000
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total			\$242,625	Total			\$289,000

	Market	Grain	Grain		Market	Grain	Grain
	Value	Usage %	Allocation		Value	Usage %	Allocation
Seeding, Tillage, Spraying				Trucks & Trailers			
Cultivator	\$25,000	100%	\$25,000	Tandem grain truck	\$50,000	100%	\$50,000
Harrow 80ft	\$35,000	100%	\$35,000	Grain cart	\$20,000	100%	\$20,000
Air tank	\$40,000	100%	\$40,000	5th wheel flatdeck	\$10,000	100%	\$10,000
Air drill 50ft	\$100,000	100%	\$100,000		\$0	0%	\$0
SP sprayer	\$100,000	100%	\$100,000		\$0	0%	\$0
Rock picker	\$4,000	100%	\$4,000		\$0	0%	\$0
Water tanks	\$2,500	100%	\$2,500		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$306,500		\$306,500	Total			\$80,000

Owned Equipment TOTAL	\$918,125	\$459.06 per acre
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Leased Equipment Inventory							
	Annual	Grain	Grain		Annual	Grain	Grain
	Lease	Usage %	Allocation		Lease	Usage %	Allocation
Power & Misc Equipment				Harvest Equipment			
enter equipment here	\$0	0%	\$0	enter equipment here	\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total			\$0	Total			\$0

	Annual	Grain	Grain		Annual	Grain	Grain
	Lease	Usage %	Allocation		Lease	Usage %	Allocation
Seeding, Tillage, Spraying				Trucks & Trailers			
enter equipment here	\$0	0%	\$0	3/4 ton pickup	\$9,600	75%	\$7,200
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
Total	\$0		\$0	Total			\$7,200

Leased Equipment TOTAL	\$7,200	\$3.60 per acre
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* Leased equipment costs are listed under Operating Costs on the Summary Page.

Other Assumptions

Fuel Costs: Includes fuel used for field work, trucking in inputs and trucking out production.

Machinery Operating Costs: Includes costs for maintenance, repairs, licenses and insurance.

Crop Insurance: (2015 rates) 80% coverage and additional hail insurance at \$160/acre coverage for all crops.

Other Costs: Includes overhead expenses - hydro, telephone, accounting, buildings, supplies and insurance, etc.

Land Taxes: The average cost based on land tax assessment and mill rates of a sample of municipalities growing crops less provincial tax rebate.

Drying Costs: Budget allocates costs only for corn, sunflowers and hemp. However, drying costs may be incurred in some years for the other crops.

Interest On Operating: Interest charges on operating costs are calculated at 5.5% for six months.

Land Investment Cost: Land value are based on approximate average land values. Budget assumed 2.5% return on land investment

Depreciation: Assumed 10% on machinery, no salvage value.

Investment Cost: Assumed 2.5% opportunity cost on machinery.

Estimated Farmgate Values:

Crop prices are based on deferred delivery contract prices for fall 2015.

Yields are based on Manitoba 10 year average yields (2004 to 2013) from MASC production data.

Depreciation Cost = $\frac{\text{Original Cost} - \text{Salvage Value}}{\text{Useful Life}}$

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

Storage Cost:

Storage costs for each crop are based on estimated yields entered on the Summary page.

Assumed a 10% depreciation cost and 2.5% investment cost.

Farm storage requirements were assumed to cost \$1.85/bushel for 25% of the storage and \$2.35/bushel for 75% aerated storage.

Example - Wheat

Non-Aeration Bins (25%)

Depreciation:	$\frac{\$101.75 - \$10.175}{20 \text{ years}}$		\$4.58	
Investment:	$\frac{\$101.75 + \$10.175}{2}$	x 2.5%	\$1.40	
		Sub-Total	\$5.98	x 25% = \$1.49

Aeration Bins (75%)

Depreciation:	$\frac{\$129.25 - \$12.925}{20 \text{ years}}$		\$5.82	
Investment:	$\frac{\$129.25 + \$12.925}{2}$	x 2.5%	\$1.78	
		Sub-Total	\$7.59	x 75% = \$5.70
		Total		\$7.19

Profitability & Breakeven Analysis:

Gross Revenue = Price per unit x Yield per acre (eg. wheat: \$6.50/bu x 55bu/ac = \$357.50/ac)

Net Profit = Gross Revenue - Total Cost (eg. wheat: \$357.50 gross revenue - \$349.68 total cost = \$7.82 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. wheat: \$201.36 operating expense / \$357.5 total cost = 56.3%)

Breakeven Price = Cost / Target Yield (eg. wheat cost \$349.68 / 55 bu = \$6.36 per bu)

Breakeven Yield = Cost / Price per Unit (eg. wheat cost \$349.68 / \$6.50 bu = 53.8 bu)

Created and maintained by [MAFRD Farm Management](#)

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