



# Guidelines for Estimating Crop Production Costs 2019

in Manitoba





## Guidelines For Estimating Crop Production Costs - 2019

Date: January, 2019

The following budgets are estimates of the cost of producing the most commonly grown field crops in Manitoba. General Manitoba Agriculture 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](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.

The [CropPlan Production Cost Calculator](#) is also available for producers to estimate the cash cost of producing field crops on their farm on an annual basis. CropPlan calculates marginal returns, breakeven yields, breakeven crop prices on total production and remaining unsold inventory, land and machinery cost analysis and cash based financial ratios.

**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.

Crop Production Costs 2019 Guidelines (Dollars Per Acre)								
	Canola	Wheat - Hard Red Spring	Soybeans	Oats	Corn	Wheat - Northern Hard Red	Barley	Wheat - Winter
<b>A. Operating Costs</b>								
Seed & Treatment	\$62.50	\$24.00	\$95.10	\$18.13	\$86.25	\$22.00	\$15.00	\$20.00
Fertilizer	\$89.06	\$70.89	\$21.76	\$50.71	\$108.85	\$80.71	\$55.62	\$75.80
Herbicide	\$14.41	\$30.83	\$10.67	\$9.25	\$27.25	\$30.83	\$22.50	\$14.58
Fungicide	\$16.25	\$16.50	\$0.00	\$10.25	\$0.00	\$16.50	\$16.50	\$16.50
Insecticide	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fuel	\$24.21	\$25.95	\$22.65	\$30.72	\$33.40	\$27.34	\$27.29	\$27.24
Machinery Operating	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00
Machinery Lease	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88
Rental and Custom	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Crop Insurance	\$7.47	\$7.70	\$12.66	\$8.92	\$28.31	\$10.82	\$8.81	\$6.49
Hail Insurance	\$8.32	\$6.40	\$9.60	\$6.40	\$6.40	\$6.40	\$6.40	\$6.40
Other Costs	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75
Land Taxes	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Drying Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$35.00	\$0.00	\$0.00	\$0.00
Interest on Operating	<u>\$7.41</u>	<u>\$6.26</u>	<u>\$5.98</u>	<u>\$4.89</u>	<u>\$10.38</u>	<u>\$6.62</u>	<u>\$5.40</u>	<u>\$5.83</u>
<b>Total Operating</b>	<b>\$265.25</b>	<b>\$224.16</b>	<b>\$214.05</b>	<b>\$174.90</b>	<b>\$371.47</b>	<b>\$236.85</b>	<b>\$193.15</b>	<b>\$208.47</b>
<b>B. Fixed Costs</b>								
Land Costs	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44
Machinery Costs	\$66.65	\$66.65	\$66.65	\$66.65	\$75.05	\$66.65	\$66.65	\$66.65
Storage Costs	<u>\$4.84</u>	<u>\$6.65</u>	<u>\$4.60</u>	<u>\$12.70</u>	<u>\$17.06</u>	<u>\$8.23</u>	<u>\$8.83</u>	<u>\$8.10</u>
<b>Total Fixed</b>	<b>\$131.92</b>	<b>\$133.74</b>	<b>\$131.68</b>	<b>\$139.79</b>	<b>\$152.54</b>	<b>\$135.31</b>	<b>\$135.92</b>	<b>\$135.19</b>
<b>Total Operating &amp; Fixed</b>	<b>\$397.18</b>	<b>\$357.90</b>	<b>\$345.74</b>	<b>\$314.69</b>	<b>\$524.01</b>	<b>\$372.16</b>	<b>\$329.06</b>	<b>\$343.66</b>
<b>C. Labour</b>	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40
<b>Total Costs</b>	<b>\$423.58</b>	<b>\$384.30</b>	<b>\$372.14</b>	<b>\$341.09</b>	<b>\$550.41</b>	<b>\$398.56</b>	<b>\$355.46</b>	<b>\$370.06</b>

Profitability Analysis								
<b>Estimated Farmgate</b>								
Target Price \$ per unit	<b>\$11.00</b>	<b>\$6.75</b>	<b>\$11.00</b>	<b>\$3.35</b>	<b>\$4.25</b>	<b>\$5.25</b>	<b>\$4.10</b>	<b>\$5.00</b>
Premium \$ per unit	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
Target Yield per acre	<b>40</b>	<b>55</b>	<b>38</b>	<b>105</b>	<b>141</b>	<b>68</b>	<b>73</b>	<b>67</b>
Unit type (bu. or lb.)	bu	bu	bu	bu	bu	bu	bu	bu
<b>Gross Revenue / acre</b>	<b>\$440.00</b>	<b>\$371.25</b>	<b>\$418.00</b>	<b>\$351.75</b>	<b>\$599.25</b>	<b>\$357.00</b>	<b>\$299.30</b>	<b>\$335.00</b>
Revenue Ranking	<b>6</b>	<b>8</b>	<b>7</b>	<b>12</b>	<b>1</b>	<b>9</b>	<b>15</b>	<b>13</b>
<b>Operating Expense Ratio</b>	<b>60.3%</b>	<b>60.4%</b>	<b>51.2%</b>	<b>49.7%</b>	<b>62.0%</b>	<b>66.3%</b>	<b>64.5%</b>	<b>62.2%</b>
<b>Marginal Returns</b>								
Over Operating Costs	\$174.75	\$147.09	\$203.95	\$176.85	\$227.78	\$120.15	\$106.15	\$126.53
Over Operating & Fixed	\$42.82	\$13.35	\$72.26	\$37.06	\$75.24	(\$15.16)	(\$29.76)	(\$8.66)
Over Total Costs (Net Profit)	\$16.42	(\$13.05)	\$45.86	\$10.66	\$48.84	(\$41.56)	(\$56.16)	(\$35.06)
Profitability Ranking	<b>7</b>	<b>9</b>	<b>3</b>	<b>8</b>	<b>2</b>	<b>16</b>	<b>17</b>	<b>12</b>
<b>Return on Investment (ROI)</b>	<b>3.88%</b>	<b>(3.39%)</b>	<b>12.32%</b>	<b>3.13%</b>	<b>8.87%</b>	<b>(10.43%)</b>	<b>(15.80%)</b>	<b>(9.47%)</b>
<b>Return on Asset (ROA)</b>	<b>2.20%</b>	<b>1.45%</b>	<b>2.98%</b>	<b>2.25%</b>	<b>3.40%</b>	<b>0.73%</b>	<b>0.35%</b>	<b>0.90%</b>

Breakeven Analysis								
<b>Breakeven Price Per Unit</b>								
Over Operating Costs	\$6.63	\$4.08	\$5.63	\$1.67	\$2.63	\$3.48	\$2.65	\$3.11
Over Operating & Fixed Costs	\$9.93	\$6.51	\$9.10	\$3.00	\$3.72	\$5.47	\$4.51	\$5.13
<b>Over Total Costs</b>	<b>\$10.59</b>	<b>\$6.99</b>	<b>\$9.79</b>	<b>\$3.25</b>	<b>\$3.90</b>	<b>\$5.86</b>	<b>\$4.87</b>	<b>\$5.52</b>
<b>Breakeven Yield (Bu or lb.)</b>								
Over Operating Costs	24.1	33.2	19.5	52.2	87.4	45.1	47.1	42
Over Operating & Fixed Costs	36.1	53.0	31.4	93.9	123.3	70.9	80.3	68.7
<b>Over Total Costs</b>	<b>38.5</b>	<b>56.9</b>	<b>33.8</b>	<b>101.8</b>	<b>129.5</b>	<b>75.9</b>	<b>86.7</b>	<b>74</b>
<b>Breakeven Yield Risk Ratio</b>	<b>104%</b>	<b>97%</b>	<b>112%</b>	<b>103%</b>	<b>109%</b>	<b>90%</b>	<b>84%</b>	<b>91%</b>
(Target Yield per Acre / BE Yield)								

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**Crop Production Costs 2019 Guidelines (Dollars Per Acre)**

Peas	Flaxseed	Fall Rye	Beans - Pinto	Sunflower Confection	Wheat - Prairie Spring	Sunflower Oil	Beans - White	Wheat - Special Purpose	Your Farm
\$30.25	\$22.80	\$10.50	\$70.00	\$48.31	\$22.00	\$38.00	\$81.25	\$22.00	
\$16.32	\$53.16	\$48.25	\$50.71	\$75.88	\$75.80	\$75.88	\$55.62	\$75.80	
\$14.75	\$19.13	\$7.50	\$67.66	\$46.35	\$30.83	\$28.75	\$67.66	\$30.83	
\$14.50	\$14.50	\$0.00	\$30.56	\$20.50	\$16.50	\$0.00	\$40.00	\$16.50	
\$0.00	\$0.00	\$0.00	\$0.00	\$4.73	\$0.00	\$0.00	\$0.00	\$0.00	
\$20.39	\$22.85	\$22.28	\$19.70	\$25.99	\$27.34	\$25.99	\$19.61	\$27.34	
\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	
\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	
\$0.00	\$0.00	\$0.00	\$0.00	\$17.00	\$0.00	\$8.50	\$0.00	\$0.00	
\$8.90	\$9.58	\$7.42	\$24.95	\$29.17	\$6.75	\$16.72	\$22.54	\$8.83	
\$12.80	\$6.40	\$6.40	\$11.20	\$6.40	\$6.40	\$6.40	\$11.20	\$6.40	
\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	\$7.75	
\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	
\$0.00	\$0.00	\$0.00	\$0.00	\$10.00	\$0.00	\$10.00	\$0.00	\$0.00	
<u>\$4.41</u>	<u>\$5.29</u>	<u>\$3.97</u>	<u>\$8.92</u>	<u>\$9.20</u>	<u>\$6.36</u>	<u>\$7.07</u>	<u>\$9.59</u>	<u>\$6.42</u>	
<b>\$157.95</b>	<b>\$189.34</b>	<b>\$141.94</b>	<b>\$319.33</b>	<b>\$329.16</b>	<b>\$227.61</b>	<b>\$252.94</b>	<b>\$343.10</b>	<b>\$229.75</b>	
\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	\$60.44	
\$66.65	\$66.65	\$66.65	\$71.53	\$75.05	\$66.65	\$75.05	\$71.53	\$66.65	
<u>\$4.84</u>	<u>\$2.90</u>	<u>\$7.02</u>	<u>\$3.63</u>	<u>\$8.71</u>	<u>\$8.23</u>	<u>\$8.71</u>	<u>\$3.53</u>	<u>\$8.23</u>	
<b>\$131.92</b>	<b>\$129.99</b>	<b>\$134.10</b>	<b>\$135.60</b>	<b>\$144.20</b>	<b>\$135.31</b>	<b>\$144.20</b>	<b>\$135.50</b>	<b>\$135.31</b>	
<b>\$289.87</b>	<b>\$319.33</b>	<b>\$276.05</b>	<b>\$454.93</b>	<b>\$473.36</b>	<b>\$362.93</b>	<b>\$397.14</b>	<b>\$478.60</b>	<b>\$365.06</b>	
\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	\$26.40	
<b>\$316.27</b>	<b>\$345.73</b>	<b>\$302.45</b>	<b>\$481.33</b>	<b>\$499.76</b>	<b>\$389.33</b>	<b>\$423.54</b>	<b>\$505.00</b>	<b>\$391.46</b>	

**Profitability Analysis**

<b>\$7.00</b>	<b>\$12.75</b>	<b>\$4.50</b>	<b>\$0.30</b>	<b>\$0.30</b>	<b>\$5.25</b>	<b>\$0.25</b>	<b>\$0.30</b>	<b>\$5.25</b>	
<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	
<b>40</b>	<b>24</b>	<b>58</b>	<b>1,800</b>	<b>1,800</b>	<b>68</b>	<b>1,800</b>	<b>1,750</b>	<b>68</b>	
bu	bu	bu	lb	lb	bu	lb	lb	bu	
<b>\$280.00</b>	<b>\$306.00</b>	<b>\$261.00</b>	<b>\$540.00</b>	<b>\$540.00</b>	<b>\$357.00</b>	<b>\$450.00</b>	<b>\$525.00</b>	<b>\$357.00</b>	
<b>16</b>	<b>14</b>	<b>17</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>9</b>	
<b>56.4%</b>	<b>61.9%</b>	<b>54.4%</b>	<b>59.1%</b>	<b>61.0%</b>	<b>63.8%</b>	<b>56.2%</b>	<b>65.4%</b>	<b>64.4%</b>	
\$122.05	\$116.66	\$119.06	\$220.67	\$210.84	\$129.39	\$197.06	\$181.90	\$127.25	
(\$9.87)	(\$13.33)	(\$15.05)	\$85.07	\$66.64	(\$5.93)	\$52.86	\$46.40	(\$8.06)	
(\$36.27)	(\$39.73)	(\$41.45)	\$58.67	\$40.24	(\$32.33)	\$26.46	\$20.00	(\$34.46)	
<b>13</b>	<b>14</b>	<b>15</b>	<b>1</b>	<b>4</b>	<b>10</b>	<b>5</b>	<b>6</b>	<b>11</b>	
<b>(11.47%)</b>	<b>(11.49%)</b>	<b>(13.70%)</b>	<b>12.19%</b>	<b>8.05%</b>	<b>(8.30%)</b>	<b>6.25%</b>	<b>3.96%</b>	<b>(8.80%)</b>	
<b>0.78%</b>	<b>0.64%</b>	<b>0.70%</b>	<b>3.30%</b>	<b>2.94%</b>	<b>0.98%</b>	<b>2.57%</b>	<b>2.26%</b>	<b>0.92%</b>	

**Breakeven Analysis**

\$3.95	\$7.89	\$2.45	\$0.18	\$0.18	\$3.35	\$0.14	\$0.20	\$3.38	
\$7.25	\$13.31	\$4.76	\$0.25	\$0.26	\$5.34	\$0.22	\$0.27	\$5.37	
<b>\$7.91</b>	<b>\$14.41</b>	<b>\$5.21</b>	<b>\$0.27</b>	<b>\$0.28</b>	<b>\$5.73</b>	<b>\$0.24</b>	<b>\$0.29</b>	<b>\$5.76</b>	
22.6	15	32	1064.4	1097.2	43	1012	1143.7	44	
41.4	25.0	61.3	1516.4	1577.9	69.1	1588.6	1595.3	69.5	
<b>45.2</b>	<b>27</b>	<b>67</b>	<b>1604.4</b>	<b>1665.9</b>	<b>74</b>	<b>1694</b>	<b>1683.3</b>	<b>75</b>	
<b>88%</b>	<b>89%</b>	<b>87%</b>	<b>112%</b>	<b>108%</b>	<b>92%</b>	<b>106%</b>	<b>104%</b>	<b>91%</b>	

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### Agrilinsurance Analysis

	Canola	Wheat - Hard Red Spring	Soybeans	Oats	Corn	Wheat - Northern Hard Red	Barley	Wheat - Winter
<b>Agrilinsurance</b>								
80% Insured Value	\$330.43	\$274.00	\$282.65	\$262.60	\$345.95	\$276.33	\$219.15	\$248.75
<b>Premium Cost (% of Insured)</b>	<b>2.3%</b>	<b>2.8%</b>	<b>4.5%</b>	<b>3.4%</b>	<b>8.2%</b>	<b>3.9%</b>	<b>4.0%</b>	<b>2.6%</b>
<b>Costs Not Covered By Agrilinsurance</b>								
Operating Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$25.52	\$0.00	\$0.00	\$0.00
Operating & Fixed Costs	\$66.75	\$83.90	\$63.09	\$52.09	\$178.07	\$95.83	\$109.91	\$94.91
<b>Total Costs</b>	<b>\$93.15</b>	<b>\$110.30</b>	<b>\$89.49</b>	<b>\$78.49</b>	<b>\$204.47</b>	<b>\$122.23</b>	<b>\$136.31</b>	<b>\$121.31</b>
<b>Agrilinsurance Risk Ratio</b>	(Agrilinsurance Coverage / Cost)							
Operating Costs	125%	122%	132%	150%	93%	117%	113%	119%
<b>Total Costs</b>	<b>78%</b>	<b>71%</b>	<b>76%</b>	<b>77%</b>	<b>63%</b>	<b>69%</b>	<b>62%</b>	<b>67%</b>
<b>Risk Ranking</b>	<b>13</b>	<b>12</b>	<b>15</b>	<b>17</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>10</b>
(Lower number indicates increasing risk)								

### Risk & Sensitivity Analysis (Stress Test)

Percent Market Price Change	-10.0%
Percent Crop Yield Change	-5%

	Canola	Wheat - Hard Red Spring	Soybeans	Oats	Corn	Wheat - Northern Hard Red	Barley	Wheat - Winter
<b>Market Price (\$ per unit)</b>	\$9.90	\$6.08	\$9.90	\$3.02	\$3.83	\$4.73	\$3.69	\$4.50
<b>Yield (per acre)</b>	38	52	36	100	134	65	69	64

#### **Stress Test Scenario = Market Price Down 10%, and Crop Yield Down 5%**

Net Profit (Loss)	(\$47.38)	(\$68.40)	(\$15.74)	(\$39.59)	(\$37.86)	(\$91.44)	(\$100.85)	(\$82.06)
<b>Profitability Ranking</b>	<b>7</b>	<b>9</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>16</b>	<b>17</b>	<b>13</b>
<b>Operating Expense Ratio</b>	70.5%	71.0%	60.1%	58.0%	72.5%	77.1%	75.9%	72.4%

### Rotation Economic Analysis

Data Source – MASC Harvest Production Reports (2010-2015)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Rotation Total Marginal Return
<b>Example Rotation #1</b>	Wheat - Hard Red Spring	Canola	Wheat - Hard Red Spring	Canola	Wheat - Hard Red Spring	Canola	
Rotation Yield Premium	100%	102%	101%	102%	101%	102%	-
<b>Net Profit (Loss)</b>	<b>(\$13.05)</b>	<b>\$25.22</b>	<b>(\$9.33)</b>	<b>\$25.22</b>	<b>(\$9.33)</b>	<b>\$25.22</b>	<b>\$44</b>

<b>Example Rotation #2</b>	Corn	Canola	Wheat - Hard Red Spring	Soybeans	Corn	Canola	Rotation Total Marginal Return
Rotation Yield Premium	100%	112%	101%	101%	103%	112%	-
<b>Net Profit (Loss)</b>	<b>\$48.84</b>	<b>\$69.22</b>	<b>(\$9.33)</b>	<b>\$50.04</b>	<b>\$66.82</b>	<b>\$69.22</b>	<b>\$295</b>

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### AgrilInsurance Analysis

Peas	Flaxseed	Fall Rye	Beans - Pinto	Sunflower Confection	Wheat - Prairie Spring	Sunflower Oil	Beans - White	Wheat - Special Purpose	Your Farm
\$174.52	\$213.80	\$166.93	\$441.01	\$376.77	\$208.61	\$322.94	\$413.95	\$212.92	
5.1%	4.5%	4.4%	5.7%	7.7%	3.2%	5.2%	5.4%	4.1%	
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$19.01	\$0.00	\$0.00	\$16.83	
\$115.36	\$105.53	\$109.12	\$13.92	\$96.59	\$154.32	\$74.20	\$64.65	\$152.14	
<b>\$141.76</b>	<b>\$131.93</b>	<b>\$135.52</b>	<b>\$40.32</b>	<b>\$122.99</b>	<b>\$180.72</b>	<b>\$100.60</b>	<b>\$91.05</b>	<b>\$178.54</b>	
110%	113%	118%	138%	114%	92%	128%	121%	93%	
55%	62%	55%	92%	75%	54%	76%	82%	54%	
4	5	9	16	7	1	14	11	2	

### Risk & Sensivity Analysis (Stress Test)

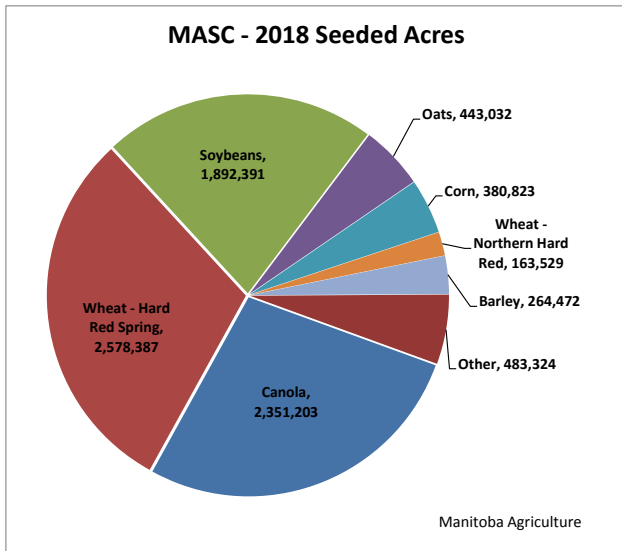
Peas	Flaxseed	Fall Rye	Beans - Pinto	Sunflower Confection	Wheat - Prairie Spring	Sunflower Oil	Beans - White	Wheat - Special Purpose	Your Farm
\$6.30	\$11.48	\$4.05	\$0.27	\$0.27	\$4.73	\$0.23	\$0.27	\$4.73	
38	23	55	1710	1710	65	1710	1663	65	
(\$76.87)	(\$81.80)	(\$79.70)	(\$19.63)	(\$38.06)	(\$82.20)	(\$38.79)	(\$55.99)	(\$84.33)	
10	12	11	2	4	14	5	8	15	
66.0%	71.7%	63.7%	69.2%	71.3%	74.1%	65.7%	76.4%	74.8%	

### Rotation Economic Analysis

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
<b>Example Rotation #3</b>	Wheat - Hard Red Spring	Canola	Oats	Soybeans	Corn	Sunflower Confection	Rotation Total Marginal Return
Rotation Yield Premium	100%	102%	101%	100%	103%	119%	-
<b>Net Profit (Loss)</b>	<b>(\$13.05)</b>	<b>\$25.22</b>	<b>\$14.18</b>	<b>\$45.86</b>	<b>\$66.82</b>	<b>\$142.84</b>	<b>\$282</b>

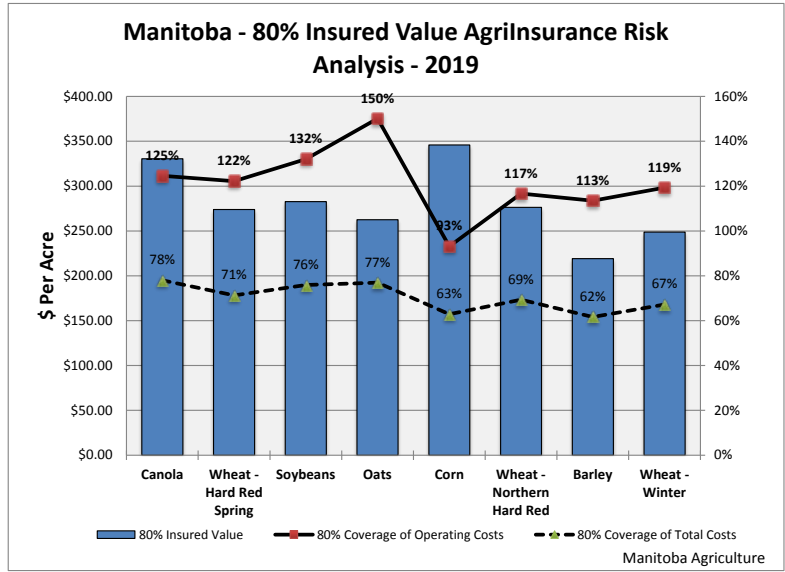
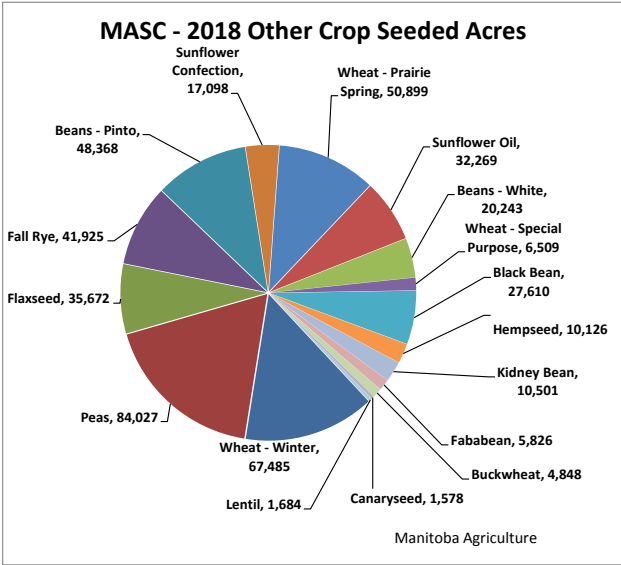
<b>Your Farm Rotation</b>	Soybeans	Wheat - Hard Red Spring	Canola	Soybeans	Wheat - Hard Red Spring	Canola	Rotation Total Marginal Return
Rotation Yield Premium	100%	108%	102%	100%	108%	102%	-
<b>Net Profit (Loss)</b>	<b>\$45.86</b>	<b>\$16.65</b>	<b>\$25.22</b>	<b>\$45.86</b>	<b>\$16.65</b>	<b>\$25.22</b>	<b>\$175</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.



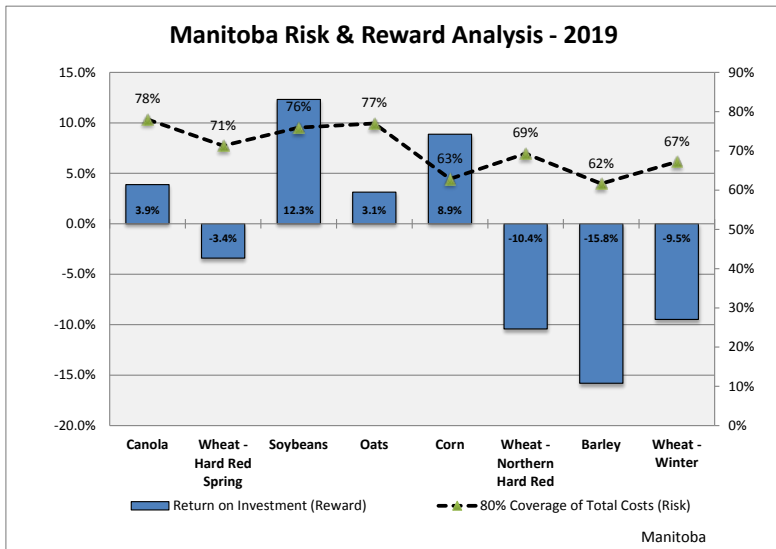
Canola, Wheat - Hard Red Spring and Soybeans total 80% of the 2018 Seeded Acres and 78% of the 5 Year Average Seeded Acres

Other Crops are 6% of the 2018 Seeded Acres



Analysis of your Agrilnsurance Coverage of Operating and Total Costs is an important step in Risk Management Planning for your farm.

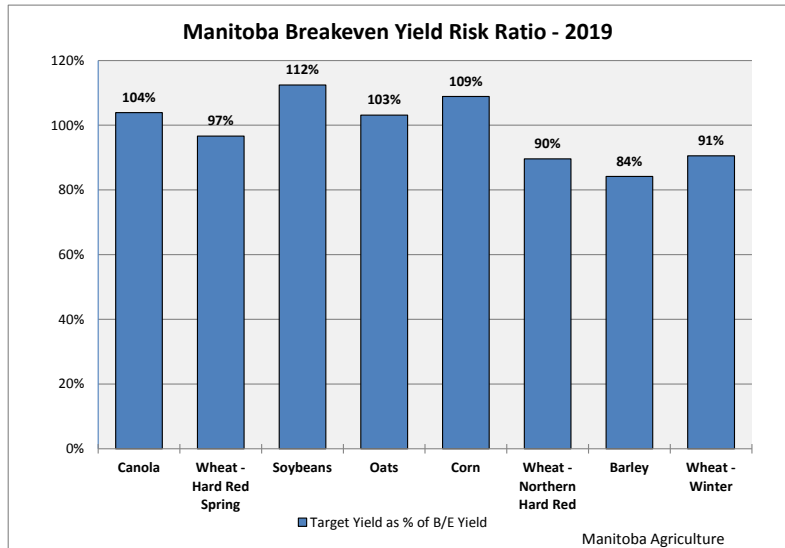




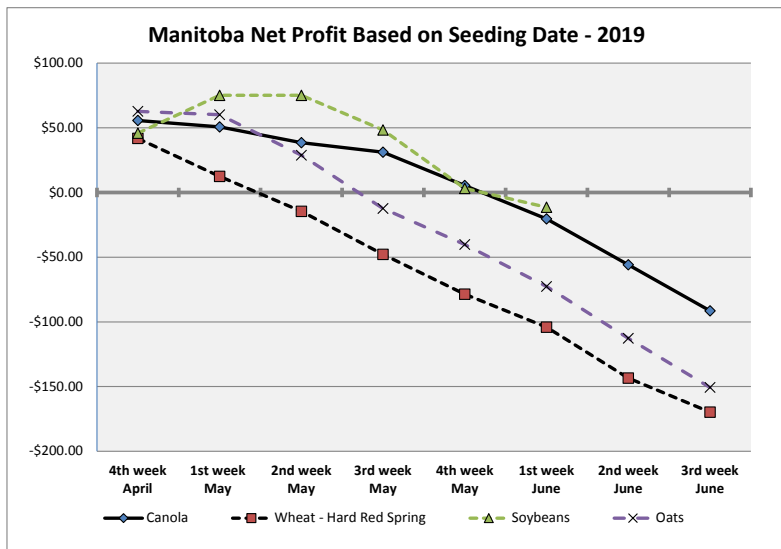
Analysis of ROI (Reward) and the associated Agrilnsurance Coverage of Total Costs (Risk) is useful in comparing the profitability and cost efficiency alongside the production cost risk when evaluating crops to include in your rotation and is an important step in Risk Management Planning for your farm.



Analysis of your Breakeven Yields compared to Target (or average) Yields gives an indication of how close to B/E (\$0 profit = 100%) each crop in your rotation is if faced with potential production or market price challenges and is an important step in Risk Management Planning.



Seeding Date can have a significant impact on crop yields and net profitability. Analysis of seeding dates will highlight potential windows of profitability to seed crops in your rotation and is an important step in Risk Management Planning.



**Seed & Treatment**

<u>Crop</u>	<u>Seeding Rate</u> <u>per Acre</u>	<u>Price</u> <u>per Unit</u>	<u>Cost</u> <u>per Acre</u>
Canola	5 lb	\$12.50 /lb	\$62.50
* Soybeans	1.43 units	\$66.50 /unit	\$95.10
Wheat - Hard Red Spring	2.0 bu	\$12.00 /bu	\$24.00
Wheat - Northern Hard Red	2.0 bu	\$11.00 /bu	\$22.00
Wheat - Special Purpose	2.0 bu	\$11.00 /bu	\$22.00
Wheat - Prairie Spring	2.0 bu	\$11.00 /bu	\$22.00
Wheat - Winter	2.0 bu	\$10.00 /bu	\$20.00
Barley	2.0 bu	\$7.50 /bu	\$15.00
Oats	2.5 bu	\$7.25 /bu	\$18.13
Corn	30,000 plants	\$0.0029 /plant	\$86.25
Peas	2.75 bu	\$11.00 /bu	\$30.25
Fall Rye	1.5 bu	\$7.00 /bu	\$10.50
Flaxseed	60 lb	\$0.38 /lb	\$22.80
Beans - Pinto	1.40 units	\$50.00 /unit	\$70.00
Beans - White	1.25 units	\$65.00 /unit	\$81.25
Sunflower Oil	20,000 plants	\$0.0019 /plant	\$38.00
Sunflower Confection	18,000 plants	\$0.00268 /plant	\$48.31

\* 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>\$/tonne</u>	<u>Actual Nutrient</u> <u>\$/lb</u>	<u>Nitrogen</u> <u>Usage</u>	<u>Sulphur</u> <u>Usage</u>
Nitrogen: (urea) 46-0-0	\$570	\$0.562	50%	-
Nitrogen: (NH3) 82-0-0	\$760	\$0.420	50%	-
Nitrogen: (liquid) 28-0-0	\$360	\$0.583	0%	-
Phosphorus: 11-52-0	\$760	\$0.544	-	-
Potash: 0-0-60	\$460	\$0.348	-	-
Sulphur: 20.5-0-0-24	\$475	\$0.418	-	100%
MES S15: 13-33-0-15	\$760	\$0.614	-	0%

**Amount of Actual Pounds of Elements Applied Per Acre**

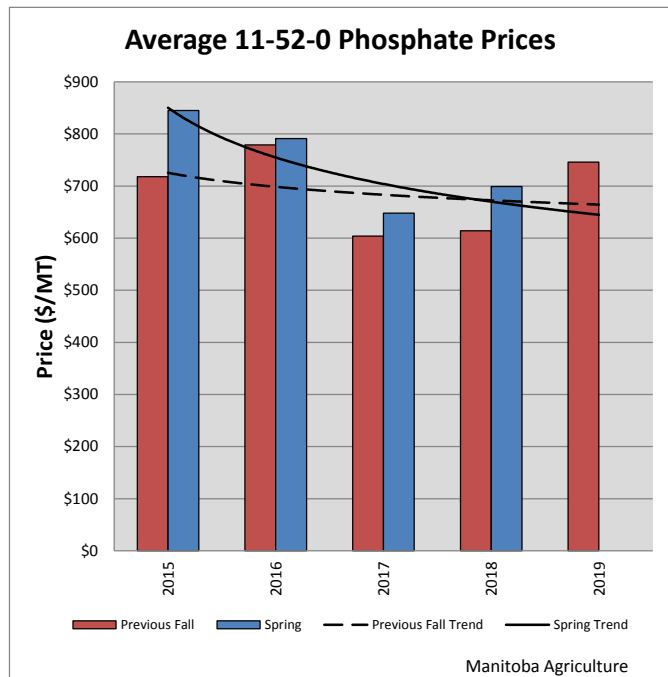
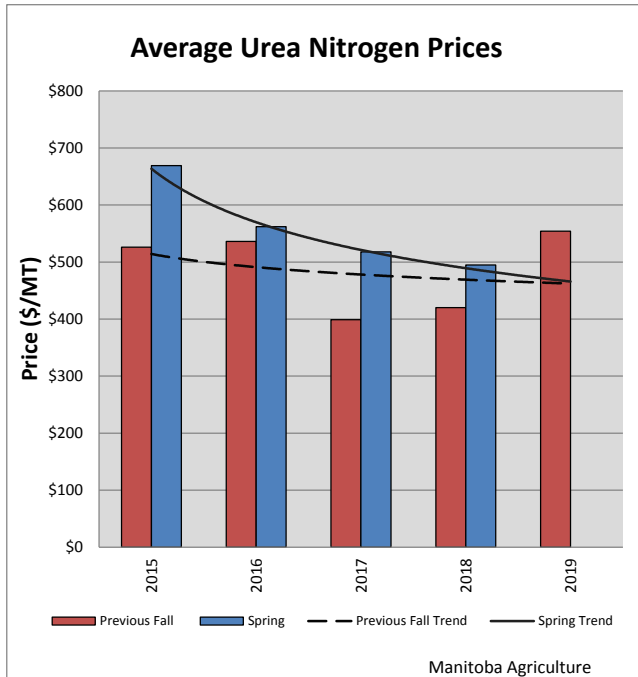
<u>Crop</u>	<u>Nitrogen</u>		<u>Phosphorus</u>		<u>Potash</u>		<u>Sulphur</u>		<u>Total</u> <u>\$/acre</u>
	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	<u>lbs</u>	<u>\$/acre</u>	
Canola	120	\$58.95	40	\$21.76	0	\$0.00	20	\$8.35	\$89.06
Soybeans	0	\$0.00	40	\$21.76	0	\$0.00	0	\$0.00	\$21.76
Wheat - Hard Red Spring	100	\$49.12	40	\$21.76	0	\$0.00	0	\$0.00	\$70.89
Wheat - Northern Hard Red	120	\$58.95	40	\$21.76	0	\$0.00	0	\$0.00	\$80.71
Wheat - Special Purpose	110	\$54.04	40	\$21.76	0	\$0.00	0	\$0.00	\$75.80
Wheat - Prairie Spring	110	\$54.04	40	\$21.76	0	\$0.00	0	\$0.00	\$75.80
Wheat - Winter	110	\$54.04	40	\$21.76	0	\$0.00	0	\$0.00	\$75.80
Barley	80	\$39.30	30	\$16.32	0	\$0.00	0	\$0.00	\$55.62
Oats	70	\$34.39	30	\$16.32	0	\$0.00	0	\$0.00	\$50.71
Corn	140	\$68.77	50	\$27.20	25	\$8.69	10	\$4.18	\$108.85
Peas	0	\$0.00	30	\$16.32	0	\$0.00	0	\$0.00	\$16.32
Fall Rye	65	\$31.93	30	\$16.32	0	\$0.00	0	\$0.00	\$48.25
Flaxseed	75	\$36.84	30	\$16.32	0	\$0.00	0	\$0.00	\$53.16
Beans - Pinto	70	\$34.39	30	\$16.32	0	\$0.00	0	\$0.00	\$50.71
Beans - White	80	\$39.30	30	\$16.32	0	\$0.00	0	\$0.00	\$55.62
Sunflower Oil	100	\$49.12	30	\$16.32	30	\$10.43	0	\$0.00	\$75.88
Sunflower Confection	100	\$49.12	30	\$16.32	30	\$10.43	0	\$0.00	\$75.88

\* The fertilizer recommendation will vary depending on the soil type, climate and crop rotation. MB Ag. recommends that soil test sampling and analysis be conducted each year to produce a better baseline for fertility. It costs \$1.00 to \$2.00/acre for custom sampling and analysis.

\* For more information on fertilizer rates and recommendations - [Nitrogen Rate Calculator](#)

\* Note: phosphorus amounts are allotted to each crop in the above examples. Sometimes this amount may not be practical or safe to apply with the seed of some crops like soybean or canola. Options for meeting these needs and phosphorus balance through the rotation are provided at:

[Phosphorus Balance Calculator](#)



**Chemicals**

<u>Crop</u>	<u>Weed Control \$/acre</u>	<u>Disease Control \$/acre</u>	<u>Insect Control \$/acre</u>	<u>Total Cost \$/acre</u>
Canola	\$14.41	\$16.25	\$0.00	\$30.66
Soybeans	\$10.67	\$0.00	\$0.00	\$10.67
Wheat - Hard Red Spring	\$30.83	\$16.50	\$0.00	\$47.33
Wheat - Northern Hard Red	\$30.83	\$16.50	\$0.00	\$47.33
Wheat - Special Purpose	\$30.83	\$16.50	\$0.00	\$47.33
Wheat - Prairie Spring	\$30.83	\$16.50	\$0.00	\$47.33
Wheat - Winter	\$14.58	\$16.50	\$0.00	\$31.08
Barley	\$22.50	\$16.50	\$0.00	\$39.00
Oats	\$9.25	\$10.25	\$0.00	\$19.50
Corn	\$27.25	\$0.00	\$0.00	\$27.25
Peas	\$14.75	\$14.50	\$0.00	\$29.25
Fall Rye	\$7.50	\$0.00	\$0.00	\$7.50
Flaxseed	\$19.13	\$14.50	\$0.00	\$33.63
Beans - Pinto	\$67.66	\$30.56	\$0.00	\$98.22
Beans - White	\$67.66	\$40.00	\$0.00	\$107.66
Sunflower Oil	\$28.75	\$0.00	\$0.00	\$28.75
Sunflower Confection	\$46.35	\$20.50	\$4.73	\$71.58

**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 listed on Operating Cost Page) do not include custom application costs.

**Operating Costs**

Interest Rate on Operating	<b>5.75%</b>
Land Taxes (\$/acre)	<b>\$15.00</b>
Labour rate (\$/hour)	<b>\$22.00</b>
Machinery Operating (\$/acre)	<b>\$10.00</b>
Other Costs (\$/acre)	<b>\$7.75</b>
Fuel Cost (\$/litre)	<b>\$1.10</b>

<u>Grain Hauling</u>		
Distance to storage	<b>6</b>	miles roundtrip
Distance to market	<b>45</b>	miles roundtrip
Grain truck fuel use	<b>5</b>	Miles per Imp. Gallon
Grain truck size	<b>475</b>	bushels

**Operating Cost (\$/Acre)**

Crop	Labour (hrs/acre)	Crop*					Rental and Custom Costs					Total
		Fuel	Insurance	Hail Insurance	Drying Costs	Storage \$/acre**	Seeding	Application	Swathing	Harvest	General	
Canola	1.2	\$24.21	\$7.47	\$8.32	-	\$4.84	-	-	-	-	-	\$0.00
Soybeans	1.2	\$22.65	\$12.66	\$9.60	-	\$4.60	-	-	-	-	-	\$0.00
Wheat - Hard Red Spring	1.2	\$25.95	\$7.70	\$6.40	-	\$6.65	-	-	-	-	-	\$0.00
Wheat - Northern Hard Red	1.2	\$27.34	\$10.82	\$6.40	-	\$8.23	-	-	-	-	-	\$0.00
Wheat - Special Purpose	1.2	\$27.34	\$8.83	\$6.40	-	\$8.23	-	-	-	-	-	\$0.00
Wheat - Prairie Spring	1.2	\$27.34	\$6.75	\$6.40	-	\$8.23	-	-	-	-	-	\$0.00
Wheat - Winter	1.2	\$27.24	\$6.49	\$6.40	-	\$8.10	-	-	-	-	-	\$0.00
Barley	1.2	\$27.29	\$8.81	\$6.40	-	\$8.83	-	-	-	-	-	\$0.00
Oats	1.2	\$30.72	\$8.92	\$6.40	-	\$12.70	-	-	-	-	-	\$0.00
Corn	1.2	\$33.40	\$28.31	\$6.40	\$35.00	\$17.06	-	-	-	-	-	\$0.00
Peas	1.2	\$20.39	\$8.90	\$12.80	-	\$4.84	-	-	-	-	-	\$0.00
Fall Rye	1.2	\$22.28	\$7.42	\$6.40	-	\$7.02	-	-	-	-	-	\$0.00
Flaxseed	1.2	\$22.85	\$9.58	\$6.40	-	\$2.90	-	-	-	-	-	\$0.00
Beans - Pinto	1.2	\$19.70	\$24.95	\$11.20	-	\$3.63	-	-	-	-	-	\$0.00
Beans - White	1.2	\$19.61	\$22.54	\$11.20	-	\$3.53	-	-	-	-	-	\$0.00
Sunflower Oil	1.2	\$25.99	\$16.72	\$6.40	\$10.00	\$8.71	-	\$8.50	-	-	-	\$8.50
Sunflower Confection	1.2	\$25.99	\$29.17	\$6.40	\$10.00	\$8.71	-	\$17.00	-	-	-	\$17.00

\* 80% Insured Value - Based on MASC Risk Areas 2, 5, 6, & 12

\*\* 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
Canola	22.00	2	3.5	1	1	1.3	0.42	1.13	5.54	2	3.90
Soybeans	20.59	2		2	1		2		1	2	3.71
Wheat - Hard Red Spring	23.59	1	1	1	1		4		1	2	5.37
Wheat - Northern Hard Red	24.86	1	1	1	1		4		1	2	6.64
Wheat - Special Purpose	24.86	1	1	1	1		4		1	2	6.64
Wheat - Prairie Spring	24.86	1	1	1	1		4		1	2	6.64
Wheat - Winter	24.76	1	1	1	1		4		1	2	6.54
Barley	24.81	2		1	1		3	1	1	2	7.13
Oats	27.93	2		1	1		3	1	1	2	10.25
Corn	30.36	1	1	1		1	3		1	2	13.76
Peas	18.53	1		2	1		2		1	2	3.90
Fall Rye	20.25	1		1	1		1	1	1	2	5.66
Flaxseed	20.77	2		2	1		3	1	1	2	2.34
Beans - Pinto	17.91	1		2		1	3	1	1	2	2.93
Beans - White	17.83	1		2		1	3	1	1	2	2.85
Sunflower Oil	23.63	1	1	1		1	3		1	2	7.03
Sunflower Confection	23.63	1	1	1		1	3		1	2	7.03

Guidelines: Crop Production Costs

**Fixed Costs**

Average Land value (\$/acre)	<b>\$2,950</b>		<b>Machinery Investment (\$/acre)</b>	
Owned Land Equity	75%		Conventional Crop Equipment	\$682.20
Land Financed	25%		Special Crop Equipment	\$86.00
Finance Rate & Term	5.250%	20 Years	Owned Equipment Equity	50%
Conventional Crop acres	2,000		Equipment Financed	50%
Special Crop acres	500		Finance Rate & Term	4.875% 10 Years
<b>Land cost (\$/acre)</b>	<b>\$60.44</b>		<b>Machinery finance cost (\$/acre)</b>	
			Conventional Crop Equipment	\$43.91
			Special Crop Equipment	\$5.53
<b>Grain Storage</b>	<u>Usage %</u>	<u>Cost</u>	<b>Machinery depreciation cost (\$/acre)</b>	
Non-aeration bins	25%	\$1.95 /bu	Conventional Crop Equipment	\$22.74
Aeration bins	65%	\$2.45 /bu	Special Crop Equipment	\$2.87
Hopper bins	10%	\$3.80 /bu	<b>Machinery Lease cost (\$/acre)</b>	\$2.88
Storage Financed		60%		

**Conventional Crop Equipment Inventory and Current Values**

	Market	Grain	Grain		Market	Grain	Grain
	Value	Usage %	Allocation	Harvest Equipment	Value	Usage %	Allocation
<b>Power &amp; Misc Equipment</b>				<b>Combine</b>	\$400,000	100%	\$400,000
4WD Tractor 475HP	\$300,000	100%	\$300,000	Swather 35 ft	\$125,000	100%	\$125,000
MFWD Tractor 150HP	\$175,000	100%	\$175,000	PTO Auger 13x70	\$15,000	100%	\$15,000
2WD Tractor 60HP	\$40,000	75%	\$30,000	Auger 8x35	\$4,000	100%	\$4,000
ATV Quad	\$10,000	75%	\$7,500		\$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
<b>Total</b>			\$512,500	<b>Total</b>			\$544,000

	Market	Grain	Grain		Market	Grain	Grain
	Value	Usage %	Allocation	Trucks & Trailers	Value	Usage %	Allocation
<b>Seeding, Tillage, Spraying</b>				<b>Tandem grain truck</b>	\$100,000	100%	\$100,000
Cultivator	\$25,000	100%	\$25,000	Grain cart	\$40,000	100%	\$40,000
Harrow 80ft	\$35,000	100%	\$35,000	5th wheel flatdeck	\$10,000	100%	\$10,000
Air tank	\$75,000	100%	\$75,000		\$0	0%	\$0
Air drill	\$125,000	100%	\$125,000		\$0	0%	\$0
SP sprayer	\$225,000	100%	\$225,000		\$0	0%	\$0
Rock picker	\$4,000	100%	\$4,000		\$0	0%	\$0
Water tanks	\$10,000	100%	\$10,000		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
<b>Total</b>	\$499,000		\$499,000	<b>Total</b>			\$150,000

**Owned Equipment TOTAL \$1,705,500**

**Special Crop Equipment Inventory and Current Values**

	Market	Grain	Grain		Market	Grain	Grain
	Value	Usage %	Allocation	Harvest Equipment	Value	Usage %	Allocation
<b>Seeding, Tillage, Spraying</b>				<b>Harvest Header</b>	\$90,000	100%	\$90,000
Planter	\$125,000	100%	\$125,000		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
	\$0	0%	\$0		\$0	0%	\$0
<b>Total</b>			\$125,000	<b>Total</b>			\$90,000

**Special Equipment TOTAL \$215,000**

**Leased Equipment Inventory**

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

**Leased Equipment TOTAL \$7,200 \$2.88 per acre**

\* 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: (2018 rates)**

80% Insured Value coverage, \$50/acre excess moisture Insurance, and additional hail insurance at \$200/acre coverage for all crops. Coverage and costs based on MASC Risk Areas #2, 5, 6, and 12.

**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 and sunflowers. However, drying costs may be incurred in some years for the other crops.

**Interest On Operating:** Interest charges on operating costs are calculated at 5.75% for six months.

**Land Cost:**

Based on approximate average land values. Budget assumed 25% financed at 5.25% for 20 years.

**Machinery Cost:**

Based on approximate average machinery values. Budget assumed 50% financed at 4.875% for 10 years, plus depreciation costs over 15 years.

**Estimated Farmgate Values:**

Target crop prices are based on deferred delivery contract prices for fall 2019.

Target yields are estimated based on 5 year MASC average yields plus 5%.

**Storage Cost:**

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

Budget assumed 60% financed at 5.25% for 20 years.

Farm storage requirements were assumed to cost \$1.95/bushel for 25% of the storage, \$2.45/bushel for 65% aerated storage and \$3.8/bushel for 10% hopper storage.

**Profitability, Breakeven & Risk Analysis Formulas:**

Gross Revenue = Price per unit x Yield per acre (eg. wheat: \$6.75/bu x 55bu/ac = \$371.25/ac)

Net Profit = Gross Revenue - Total Cost (eg. wheat: \$371.25 gross revenue - \$384.3 total cost = -\$13.05 per acre)

Operating Expense Ratio = (Operating Cost / Gross Revenue) x 100 (eg. wheat: \$224.16 operating expense / \$384.3 total cost = 60.4%)

\$ Revenue Per \$ Cost = Gross Revenue / Total Cost (eg. wheat: \$371.25 gross revenue / \$384.3 total cost = \$0.97)

Return on Investment (ROI) = (Gross Revenue - Total Cost) / Total Cost (eg. wheat: (\$371.25 gross revenue - \$384.3 total cost) / \$384.3 total cost = -3.4%)

Estimated Return on Asset (ROA) = (Margin Over Operating - Labour - Machinery Depreciation) / (Land Investment Cost + Machinery Investment Cost)

(eg. wheat: (\$147.09 margin - \$26.40 labour - \$66.65 dep.) / (\$2950 land cost + \$682.20 conv. machinery + \$86.00 special crop. mach.) = 1.45%)

Breakeven Price = Cost / Target Yield (eg. wheat cost \$384.30 / 55 bu = \$6.99 per bu)

Breakeven Yield = Cost / Target Price per Unit (eg. wheat cost \$384.30 / \$6.75 bu = 56.9 bu)

Breakeven Yield Risk Ratio = (Target Yield per Acre / Breakeven Yield) x 100 (eg. wheat yield 55 bu/ac / 56.9 bu BE = 97 %)

AgrilInsurance Risk Ratio = (AgrilInsurance Coverage / Operating Cost) x 100 (eg. wheat coverage \$274.00/ac / \$224.16 operating expense = 122 %)

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

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A decorative graphic at the top of the page features three colored rectangular blocks: a green square on the left, a dark blue rectangle in the center, and an orange rectangle on the right. From the bottom edge of the dark blue rectangle, several thin, dashed orange lines extend downwards and outwards across the page, creating a fan-like effect.

**For more information**

- Go to [manitoba.ca/agriculture](http://manitoba.ca/agriculture).
- Toll free at 1-844-769-6224
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