1,2,3 Simple as Can Be!
Crop Economics for 2019

Roy Arnott, P.Ag.
Farm Management Specialist

Manitoba
Guidelines for Estimating Crop Production Costs 2019 in Manitoba
Knowing the cost of production is essential to management, marketing strategy and risk management planning and to giving a farm the best opportunity for overall profitability. Crop Production Costs (XLS 935 KB or PDF 605 KB) (canola, wheat - hard red spring, soybeans, barley, oats, wheat - winter, corn, wheat - northern ...
Production Economics

Put data to work for your farm using our Cost of Production guides, interactive Farm Software and Worksheets and Machinery Costs.

These estimates can act as a starting point for farm budgets. They can be adapted to your operation using your own farm records.

Cost of Production

Farm Software and Worksheets

Make data to work for your farm using our interactive farm software and worksheets. This will help you make informed decisions for your farm and family.

Machinery Costs

Farm machinery makes up a significant part of the fixed and variable costs for any farm operation.
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
- Yields
- Equipment Costs
- Land Costs
- Interest Rates
<table>
<thead>
<tr>
<th>Crop</th>
<th>Yield</th>
<th>$/unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola</td>
<td>40.0</td>
<td>$11.00</td>
</tr>
<tr>
<td>Wheat - Hard Red Spring</td>
<td>55.0</td>
<td>$6.75</td>
</tr>
<tr>
<td>Soybeans</td>
<td>38.0</td>
<td>$11.00</td>
</tr>
<tr>
<td>Oats</td>
<td>105.0</td>
<td>$3.35</td>
</tr>
<tr>
<td>Corn</td>
<td>141.0</td>
<td>$4.25</td>
</tr>
<tr>
<td>Wheat - Northern Hard Red</td>
<td>68.0</td>
<td>$5.25</td>
</tr>
</tbody>
</table>

**Average Land value ($/acre)**

- $2,950

**Owned Land Equity**

- 75%

**Finance Rate & Term**

- @ 5.25% 20 yrs

**Machinery Investment ($/acre)**

- $682

**Owned Equipment Equity**

- 50%

**Finance Rate & Term**

- @ 4.875% 10 yrs
+ 1%
Manitoba 2019 - Cropland & Equipment Loan Payments ($/acre)

<table>
<thead>
<tr>
<th>Interest Rate %</th>
<th>Equipment Payment - $682/ac, 50% equity, 10 year term</th>
<th>Land Payment - $2,950/ac, 75% equity, 20 year term</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>$100</td>
<td>$60</td>
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<tr>
<td>5.0%</td>
<td>$103</td>
<td>$63</td>
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<td>5.5%</td>
<td>$107</td>
<td>$65</td>
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<tr>
<td>6.0%</td>
<td>$111</td>
<td>$68</td>
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<tr>
<td>6.5%</td>
<td>$114</td>
<td>$72</td>
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<tr>
<td>7.0%</td>
<td>$118</td>
<td>$76</td>
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<tr>
<td>7.5%</td>
<td>$122</td>
<td>$80</td>
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</table>
7 Deadly Rules for Profitability

• Production Costs
• Risk Management
• Prices
• Yields
• Equipment Costs
• Land Costs
• Interest Rates
Manitoba - 80% Insured Value AgrilInsurance Risk Analysis - 2019

- **Canola**: $7.47, 2.26% insured value premium
- **Wheat - Hard Red Spring**: $7.70, 2.81% insured value premium
- **Soybeans**: $12.66, 4.48% insured value premium
- **Oats**: $8.92, 3.40% insured value premium
- **Corn**: $28.31, 8.18% insured value premium
- **Wheat - Northern Hard Red**: $10.82, 3.91% insured value premium

- **80% Insured Value Premium $/Acre**
- **Premium % of Insured Value**
$330.43 per acre 80% insurance coverage per acre / 40 bu per acre = $8.26 covered risk per bushel
$330.43 per acre 80% insurance coverage per acre / 40 bu per acre = $8.26 covered risk per bushel

$10.59 B/E price per bushel minus $8.26 covered risk per bushel = exposed risk aka. = “AFW”

Breakeven price per bushel

Manitoba - Monetizing Risk & Reward ($/unit) - 2019
# Manitoba - Monetizing Risk & Reward ($/unit) - 2019

- **Market price per bushel:**
  - $11.00 Mkt price per bushel
  - $10.59 B/E price per bushel = $0.41 Reward

- **Breakeven price per bushel:**
  - $10.59 B/E price per bushel minus $8.26 covered risk per bushel = exposed risk
  - aka. = “AFW”

- **Covered risk per bushel:**
  - $8.26

- **Exposed risk:**
  - $2.33

- **$330.43 per acre 80% insurance coverage per acre / 40 bu per acre = $8.26 covered risk per bushel**

### Chart Details

<table>
<thead>
<tr>
<th>Product</th>
<th>Covered By AgrilInsurance</th>
<th>Exposed Risk</th>
<th>Reward</th>
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</thead>
<tbody>
<tr>
<td>Canola</td>
<td>$0.41</td>
<td>$2.33</td>
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</tr>
<tr>
<td>Wheat - Hard Red Spring</td>
<td>$8.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soybeans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oats</td>
<td></td>
<td></td>
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<tr>
<td>Wheat - Northern Hard Red</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Manitoba - Monetizing Risk & Reward ($/unit) - 2019

- **Canola**: $8.26
- **Wheat - Hard Red Spring**: $4.98
- **Soybeans**: $7.44
- **Oats**: $2.50
- **Corn**: $2.45
- **Northern Hard Red Wheat**: $4.06

Colors represent:
- Blue: $/unit Covered By AgriInsurance
- Red: $/unit Exposed Risk
- Green: $/unit Reward
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- **Prices**
- Yields
- Equipment Costs
- Land Costs
- Interest Rates
Market prices of $9.93/bu and lower do not cover both operating and fixed costs. This can indicate the potential need for AgriInsurance or AgriStability coverage and is an important step in Risk Management Planning.
2019 Manitoba Wheat - Hard Red Spring - Costs Not Covered @ 55 bu/acre

Market prices of $6.51/bu and lower do not cover both operating and fixed costs. This can indicate the potential need for Agrilinsurance or AgriStability coverage and is an important step in Risk Management Planning.

Operating Costs = $224.16
Fixed Costs = $133.74
Labour Cost = $26.40

Manitoba Agriculture
Manitoba Breakeven Prices (per Unit) - 2019

- Canola: 104%
- Wheat - Hard Red Spring: 97%
- Soybeans: 112%
- Oats: 103%
- Corn: 109%
- Wheat - Northern Hard Red: 90%

Target or Average Price as % of B/E Price

Manitoba Agriculture
7 Deadly Rules for Profitability

• Production Costs
• Risk Management
• Prices
• Yields
• Equipment Costs
• Land Costs
• Interest Rates
Manitoba Breakeven Yields (per Acre) - 2019

Target or Average Yield as % of B/E Yield

- Canola: 104%
- Wheat - Hard Red Spring: 97%
- Soybeans: 112%
- Oats: 103%
- Corn: 109%
- Wheat - Northern Hard Red: 90%
# Rotation Economic Analysis

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

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Rotation Total Marginal Return</th>
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<tr>
<td><strong>Example Rotation #1</strong></td>
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<tr>
<td>Rotation Yield Premium</td>
<td>100%</td>
<td>102%</td>
<td>101%</td>
<td>102%</td>
<td>101%</td>
<td>102%</td>
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<tr>
<td>Net Profit (Loss)</td>
<td>($13.05)</td>
<td>$25.22</td>
<td>($9.33)</td>
<td>$25.22</td>
<td>($9.33)</td>
<td>$25.22</td>
<td><strong>$44</strong></td>
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<table>
<thead>
<tr>
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<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Rotation Total Marginal Return</th>
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<tr>
<td><strong>Example Rotation #2</strong></td>
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<tr>
<td>Rotation Yield Premium</td>
<td>100%</td>
<td>112%</td>
<td>101%</td>
<td>101%</td>
<td>103%</td>
<td>112%</td>
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</tr>
<tr>
<td>Net Profit (Loss)</td>
<td>$48.84</td>
<td>$69.22</td>
<td>($9.33)</td>
<td>$50.04</td>
<td>$66.82</td>
<td>$69.22</td>
<td><strong>$295</strong></td>
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</tbody>
</table>
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
- Yields
- **Equipment Costs**
- Land Costs
- Interest Rates
Manitoba 2019 - Breakeven Equipment Payment ($/acre)

- **Canola**: Total Costs $80, Average $58
- **Wheat - Hard Red Spring**: Total Costs $60
- **Soybeans**: Total Costs + $25/ac Profit $83, Average $58

Manitoba Agriculture
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
- Yields
- Equipment Costs
- Land Costs
- Interest Rates
Price Up - $0.25/bu

Manitoba 2019 - Breakeven Land Value ($/acre) - 75% equity for 20 yrs @ 5.25%

- Canola: $4,292
- Wheat - Hard Red Spring: $3,072
- Soybeans: $3,400

Legend:
- Blue: Total Costs
- Green: Total Costs + $25/ac Profit
- Black: Total Costs - Average
- Dashed: Total Costs + $25/ac Profit - Average

Manitoba Agriculture
Manitoba 2019 - Breakeven Land Value ($/acre)

<table>
<thead>
<tr>
<th>Land Equity %</th>
<th>$/Acre</th>
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<tbody>
<tr>
<td>85%</td>
<td>$4,218</td>
</tr>
<tr>
<td>80%</td>
<td>$3,164</td>
</tr>
<tr>
<td>75%</td>
<td>$2,531</td>
</tr>
<tr>
<td>70%</td>
<td>$2,109</td>
</tr>
<tr>
<td>65%</td>
<td>$1,808</td>
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</tbody>
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Over Total Costs + $25/ac Profit - 20-year term @5.25%

Manitoba Agriculture
Manitoba 2019 - Breakeven Land Value ($/acre)

- $2,698 at 4.5%
- $2,585 at 5.0%
- $2,479 at 5.5%
- $2,379 at 6.0%
- $2,285 at 6.5%
- $2,197 at 7.0%
- $2,114 at 7.5%

Interest Rate %

Over Total Costs + $25/ac Profit - 75% equity for 20 years
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
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- Equipment Costs
- Land Costs
- Interest Rates
Manitoba 2019 - Breakeven Interest Rate (%) - $2,950/ac, 75% equity for 20yrs

- Canola
  - Total Costs: 8.0%
  - Total Costs + $25/ac Profit: -4.0%

- Wheat - Hard Red Spring
  - Total Costs: 2.7%
  - Total Costs + $25/ac Profit: -4.0%

- Soybeans
  - Total Costs: 8.0%
  - Total Costs + $25/ac Profit: -4.0%

Manitoba Agriculture
Manitoba 2019 - Breakeven Land Interest Rate (%)

- 85%: 10%
- 80%: 6%
- 75%: 3%
- 70%: 2%
- 65%: 0%

Legend:
- Over Total Costs + $25/ac Profit - $2,950/ac, @5.25%

Manitoba Agriculture
Manitoba 2019 - Breakeven Land Interest Rate (%)

<table>
<thead>
<tr>
<th>Loan Term (years)</th>
<th>Interest Rate (%)</th>
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</thead>
<tbody>
<tr>
<td>15</td>
<td>0.7%</td>
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<tr>
<td>17.5</td>
<td>2.3%</td>
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<td>20</td>
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<tr>
<td>22.5</td>
<td>4.3%</td>
</tr>
<tr>
<td>25</td>
<td>4.9%</td>
</tr>
<tr>
<td>27.5</td>
<td>5.4%</td>
</tr>
<tr>
<td>30</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

- Over Total Costs + $25/ac Profit - $2,950/ac, 75% equity

Manitoba Agriculture
Manitoba 2019 - Breakeven Land Loan Term (Years)

Interest Rate %

- 4.5%: 23 years
- 5.0%: 25 years
- 5.5%: 28 years
- 6.0%: 33 years
- 6.5%: 41 years
- 7.0%: 80 years
- 7.5%: 0 years

Over Total Costs + $25/ac Profit - $2,950/ac, 75% equity
Manitoba 2019 - Breakeven Land Loan Term (Years)

- 85%: 12 years
- 80%: 18 years
- 75%: 27 years
- 70%: 44 years
- 65%: 0 years

The chart illustrates the breakeven land loan term (years) for different levels of land equity. The formula used is Over Total Costs + $25/ac Profit - $2,950/ac, @5.25%.

Manitoba Agriculture
Manitoba 2019 - Breakeven Owned Land Equity (%)

Interest Rate %

- 4.5%
- 5.0%
- 5.5%
- 6.0%
- 6.5%
- 7.0%
- 7.5%

Owned Land Equity %

- 77%
- 78%
- 79%
- 80%
- 81%
- 81%
- 82%

Over Total Costs + $25/ac Profit - $2,950/ac, 20 year term
+1% Rule of Thumb:

- Decreased profitability - $8/acre
- Decreased land value - $206/acre
- Increased loan term – 4 to 8 years
- Increased equity required – 2% more
Obviously you’re telling me...

- The more **accurate** your own numbers, the greater your chances are for profitability.
- I need to know the **7 Deadly Rules of Profitability** & how they affect your competitiveness and resiliency.
- **(1%)** higher **Interest Rates** have a significant impact on more than just farm profitability.
- ....you do you and get rewarded!
Additional Farm Management Resources

- Fusarium and Sclerotinia Breakeven Calculator
- Crop Reseeding Decision Tool
- Sclerotinia Treatment Decision Tool
Questions?

For more information
Visit our website:  www.manitoba.ca/agriculture
Follow us on Twitter:  @MBGovAg
View our videos on YouTube:  www.youtube.com/ManitobaAgriculture

Contact:
Roy Arnott, P.Ag.
roy.arnott@gov.mb.ca
Killarney Ag Office
204.523.6424