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

Roy Arnott, P.Ag.
Farm Management Specialist

Assiniboine Community College,
December 2018
What we already know...

• Doing your cost of production for your own farm is the starting point for profitability.

• Determining your cost per bushel sold will allow you to build an effective marketing plan.

• Each year is different! Profitability and risk is dependent on the relationship between yield/price/costs with your financial situation.

(Plan for Prosperity)
Production Economics | Manitoba Agriculture | Province of 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 ... 

[PDF] Crop Production Costs

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.
Agriculture

manitoba.ca > Manitoba Agriculture > Farm Management > Production Economics

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Marketing and Risk Management
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Cost of Production
Farm Software and Worksheets
Machinery Costs

Production Economics

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

Cost of Production

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

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.
The most terrifying words in the English language are: I'm from the government and I'm here to help.

*Ronald Reagan*
Canola Average Yield 2012-2017

Source: MASC
2013-2018 CWRS ranged from $4.35 to $8.65/bu (Avg. $6.41/bu)

2017 Crop Year CWRS ranged from $6.24/bu to $7.59/bu (Avg. $6.73/bu)
2013-2018 Canola ranged from $8.08 to $11.84/bu (Avg. $10.53/bu)

2017 Crop Year Canola ranged from $10.39 to $11.84/bu (Avg. $11.15/bu)
2013-2018 Soybeans ranged from $8.17 to $13.62/bu (Avg $10.68/bu)

2017 Crop Year Soybean ranged from $9.29 to $11.52/bu (Avg $10.39/bu)
Machinery Costs 2013-2018

Source: Alberta Agriculture
Annual Land Value Increases in Manitoba 2012-2017

Source: FCC
<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>
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</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
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
- Yields
- Equipment Costs
- Land Costs
- Interest Rates
Price vs Cost - Fertilizer Pricing

• **Price** – How much money do I need to hand you to buy my fertilizer.

• **Cost** – What did I have to give up to get this price.
  - Is it really cheaper for you to buy in the fall (cost of money, bins etc.) than in the spring?
  - Is it really cheaper to buy from the ‘new’ dealer 20 miles down the road for $5 per tonne less?

• **Expense vs. Investment:**
  - Investment provides a return over what you’ve paid, an expense will not.
  - In times of low profitability – first thing to cut or reduce is expenses, not investments.
Average 11-52-0 Phosphate Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Previous Fall</th>
<th>Spring</th>
<th>Previous Fall Trend</th>
<th>Spring Trend</th>
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<tr>
<td>2015</td>
<td>$850</td>
<td>$900</td>
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<td>2016</td>
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<td>2017</td>
<td>$750</td>
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<td>2018</td>
<td>$700</td>
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<tr>
<td>2019</td>
<td>$650</td>
<td>$600</td>
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</tbody>
</table>

Manitoba Agriculture
Manitoba Crop Production Costs ($/Acre) - 2019

- **Canola**: $424
- **Wheat - Hard Red Spring**: $384
- **Soybeans**: $372
- **Oats**: $341
- **Corn**: $550
- **Wheat - Northern Hard Red**: $399

Legend:
- A. Operating Costs
- B. Fixed Costs
- C. Labour
- Total Costs
+ 1%
Manitoba 2019 - Cropland & Equipment Loan Payments ($/acre)

[Bar chart showing loan payments at different interest rates.]

- **4.5%**: $100
- **5.0%**: $103
- **5.5%**: $107
- **6.0%**: $111
- **6.5%**: $114
- **7.0%**: $118
- **7.5%**: $122

- **Equipment Payment** - $682/ac, 50% equity, 10 year term
- **Land Payment** - $2,950/ac, 75% equity, 20 year term

Manitoba Agriculture
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

<table>
<thead>
<tr>
<th>Crop</th>
<th>Premium % of Insured Value</th>
<th>80% Insured Value Premium $/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola</td>
<td>2.3%</td>
<td>$7.47</td>
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<tr>
<td>Wheat - Hard Red Spring</td>
<td>2.8%</td>
<td>$7.70</td>
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<td>Soybeans</td>
<td>4.5%</td>
<td>$12.66</td>
</tr>
<tr>
<td>Oats</td>
<td>3.4%</td>
<td>$8.92</td>
</tr>
<tr>
<td>Corn</td>
<td>8.2%</td>
<td>$28.31</td>
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<tr>
<td>Wheat - Northern Hard Red</td>
<td>3.9%</td>
<td>$10.82</td>
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</tbody>
</table>
Manitoba - 80% Insured Value AgrilInsurance Risk Analysis - 2019

<table>
<thead>
<tr>
<th>Crop</th>
<th>80% Insured Value</th>
<th>Coverage of Operating Costs</th>
<th>Coverage of Total Costs</th>
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</thead>
<tbody>
<tr>
<td>Canola</td>
<td>$330</td>
<td>125%</td>
<td>78%</td>
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<tr>
<td>Wheat - Hard Red Spring</td>
<td>$274</td>
<td>122%</td>
<td>71%</td>
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<tr>
<td>Soybeans</td>
<td>$283</td>
<td>132%</td>
<td>76%</td>
</tr>
<tr>
<td>Oats</td>
<td>$263</td>
<td>150%</td>
<td>77%</td>
</tr>
<tr>
<td>Corn</td>
<td>$346</td>
<td>93%</td>
<td>63%</td>
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<tr>
<td>Wheat - Northern Hard Red</td>
<td>$276</td>
<td>117%</td>
<td>69%</td>
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</table>
Manitoba Costs Not Covered By 80% Insured Value
AgrilInsurance - 2019

$/Acre

<table>
<thead>
<tr>
<th>Crop</th>
<th>Operating Costs</th>
<th>Fixed Costs</th>
<th>Labour</th>
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<tbody>
<tr>
<td>Canola</td>
<td>$93</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Wheat - Hard Red Spring</td>
<td>$110</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Soybeans</td>
<td>$89</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Oats</td>
<td>$78</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Corn</td>
<td>$0</td>
<td>$204</td>
<td>$0</td>
</tr>
<tr>
<td>Wheat - Northern Hard Red</td>
<td>$122</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

Manitoba Agriculture
Manitoba Risk & Reward Analysis - 2019

- Canola: 3.9%
- Wheat - Hard Red Spring: 71%
- Soybeans: 76%
- Oats: 77%
- Corn: 63%
- Wheat - Northern Hard Red: 69%
- Barley: 62%
- Wheat - Winter: 67%

Legend:
- Blue: Return on Investment (Reward)
- Green: Coverage of Total Costs (Risk)
$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”
$330.43 per acre 80% insurance coverage per acre / 40 bu per acre = $8.26 covered risk per bushel

Breakeven price per bushel

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

Market price per bushel

$11.00 Mkt price per bushel minus $10.59 B/E per bushel = $0.41 Reward
Manitoba - Monetizing Risk & Reward ($/unit) - 2019

<table>
<thead>
<tr>
<th>Crop</th>
<th>$/unit Covered By Agril Insurance</th>
<th>$/unit Exposed Risk</th>
<th>$/unit Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola</td>
<td>$8.26</td>
<td>$2.33</td>
<td>$0.41</td>
</tr>
<tr>
<td>Wheat - Hard Red Spring</td>
<td>$4.98</td>
<td>$2.01</td>
<td>($0.24)</td>
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<tr>
<td>Soybeans</td>
<td>$7.44</td>
<td>$2.35</td>
<td>$1.21</td>
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<tr>
<td>Oats</td>
<td>$2.50</td>
<td>$0.75</td>
<td>$0.10</td>
</tr>
<tr>
<td>Corn</td>
<td>$2.45</td>
<td>$1.45</td>
<td>$0.35</td>
</tr>
<tr>
<td>Wheat - Northern Hard Red</td>
<td>$4.06</td>
<td>($0.61)</td>
<td>($2.00)</td>
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</table>

Legend:
- $/unit Covered By AgrilInsurance
- $/unit Exposed Risk
- $/unit Reward
7 Deadly Rules for Profitability

- Production Costs
- Risk Management
- Prices
- Yields
- Equipment Costs
- Land Costs
- Interest Rates
Breakeven Calculation...the Basic Formulas

• Breakeven Price = Cost / Yield

• 2019 Canola:
  ➢ Total Cost per acre = $423.58
  ➢ Yield per acre = 40 bushels

• Breakeven Price = $423.58 / 40 bu
  = $10.59/bu

#DoNotForget B/E = $0 Profit
2019 Manitoba Canola - Costs Not Covered @ 40 bu/acre

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.
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
Breakeven Calculation...the Basic Formulas

• Breakeven Yield = Cost / Price

• 2019 Canola:
  ➢ Total Cost per acre = $423.58
  ➢ Price per bushel = $11.00

• Breakeven Yield = $423.58 / $11.00 bu
  = 38.5 bushels per acre

#DoNotForget
B/E = $0 Profit
Breakeven Calculation…the Basic Formulas

• Breakeven Yield = Cost of Treatment / Price

• 2019 Canola Sclerotinia Treatment:
  ➢ Total Cost per acre = $16.25 + $9.00 app
  ➢ Price per bushel = $11.00

• Breakeven Yield = $25.25 / $11.00 bu
  = 2.3 bushels per acre
# 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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<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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<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 Investment ($/acre) - 50% equity for 10yrs @4.875%

- Canola: Total Costs - $1,291
- Wheat - Hard Red Spring: Total Costs - $902
- Soybeans: Total Costs - $902

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

Source: Manitoba Agriculture
Price Down - $0.25/bu

Manitoba 2019 - Breakeven Equipment Investment ($/acre)
- 50% equity for 10yrs @4.875%
7 Deadly Rules for Profitability

• Production Costs
• Risk Management
• Prices
• Yields
• Equipment Costs
• Land Costs
• Interest Rates
Manitoba 2019 - Breakeven Land Value ($/acre) - 75% equity for 20yrs @5.25%
Price Up - $0.25/bu

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

Manitoba Agriculture
Price Down - $0.25/bu

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

- Canola: Total Costs = $3,210
- Wheat - Hard Red Spring: Total Costs = $1,990
- Soybeans: Total Costs + $25/ac Profit
Manitoba 2019 - Breakeven Land Value ($/acre)

- 85%: $4,218
- 80%: $3,164
- 75%: $2,531
- 70%: $2,109
- 65%: $1,808

Over Total Costs + $25/ac Profit - 20 year term @5.25%

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Manitoba 2019 - Breakeven Land Value ($/acre)

Interest Rate %

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

$/Acre

- $2,698
- $2,585
- $2,479
- $2,379
- $2,285
- $2,197
- $2,114

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

Manitoba Agriculture
7 Deadly Rules for Profitability

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

- Canola: Total Costs = 8.0%
- Wheat - Hard Red Spring: Total Costs = 2.7%
- Soybeans: Total Costs + $25/ac Profit = 8.0%

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

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

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

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

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

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

Years
- 23
- 25
- 28
- 33
- 41
- 80
- 0

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

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

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

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

Manitoba Agriculture
+1% Rules of Thumb:

- Decreased profitability - $8/acre
- Decreased land value - $206/acre
- Increased loan term – 4 to 8 years
- Increased equity required – 2% more
Our most asked question...what is rent in Manitoba??

• Not a transparent market
  • No rent transaction listing service
  • Both producers and landlords are reluctant to reveal rental rates

• Highly dependent on land productivity and competition

• Only way to truly know rental rates is to test the market by advertising

• But there are some things we do know...
RentPlan
Calculating Crop Land Rental Rates
2019
in Manitoba
Calculating Land Rental Rates
(excluding the influence of market competition)

1. Production cost based land rental rate calculation
2. Land value based land rental rate calculation
Production Cost Land Rental Calculation

Gross revenue (yield x price)
- Operating costs
- Labour
- Equipment costs
- Storage costs
- Producer profit expectation

= Maximum land rental amount from your farm
<table>
<thead>
<tr>
<th></th>
<th>Canola</th>
<th>Wheat - Hard Red Spring</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Operating Costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed &amp; Treatment</td>
<td>$62.00</td>
<td>$24.00</td>
<td>$95.10</td>
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<tr>
<td>Fertilizer</td>
<td>$88.57</td>
<td>$69.36</td>
<td>$19.59</td>
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<tr>
<td>Herbicide</td>
<td>$14.41</td>
<td>$30.83</td>
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<tr>
<td>Fungicide</td>
<td>$16.25</td>
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<tr>
<td>Insecticide</td>
<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>Fuel</td>
<td>$24.21</td>
<td>$25.95</td>
<td>$22.86</td>
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<td>Machinery Operating</td>
<td>$10.00</td>
<td>$10.00</td>
<td>$10.00</td>
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<tr>
<td>Rental and Custom</td>
<td>$0.00</td>
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<tr>
<td><strong>Crop Insurance - 80% Insured Value</strong></td>
<td>$7.47</td>
<td>$7.70</td>
<td>$12.66</td>
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<tr>
<td><strong>Hail Insurance - $200/Acre</strong></td>
<td>$8.32</td>
<td>$6.40</td>
<td>$9.60</td>
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<tr>
<td>Other Costs</td>
<td>$7.75</td>
<td>$7.75</td>
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<tr>
<td>Drying Costs</td>
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<tr>
<td>Interest on Operating</td>
<td>$6.87</td>
<td>$5.71</td>
<td>$5.41</td>
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<tr>
<td><strong>Total Operating</strong></td>
<td>$245.84</td>
<td>$204.20</td>
<td>$193.64</td>
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<td>B. Fixed Costs</td>
<td></td>
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</tr>
<tr>
<td>Machinery Costs</td>
<td>$66.65</td>
<td>$66.65</td>
<td>$66.65</td>
</tr>
<tr>
<td>Storage Costs</td>
<td>$4.84</td>
<td>$6.65</td>
<td>$4.84</td>
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<tr>
<td><strong>Total Fixed</strong></td>
<td>$71.49</td>
<td>$73.30</td>
<td>$71.49</td>
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<tr>
<td><strong>Total Operating &amp; Fixed</strong></td>
<td>$317.33</td>
<td>$277.50</td>
<td>$265.13</td>
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<td>C. Labour &amp; Owner Salary Costs</td>
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<tr>
<td></td>
<td>$26.40</td>
<td>$26.40</td>
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<tr>
<td><strong>Total Costs</strong></td>
<td>$343.73</td>
<td>$303.90</td>
<td>$291.53</td>
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## Land Rental Rate Calculation

Note: Land rental rate analysis is part of long term strategic planning for your farm and caution should be exercised if short term crop yields and prices are utilized. It is generally recommended for land rental rate planning and analysis that a minimum of 3 to 5 year average crop yields and commodity price outlook should be considered.

### 2019 Crop Production, Revenue & Cost Summary

<table>
<thead>
<tr>
<th></th>
<th>Your Farm</th>
<th>Canola</th>
<th>Wheat - Hard Red Spring</th>
<th>Soybeans</th>
<th>(Select Crop)</th>
<th>(Select Crop)</th>
<th>(Select Crop)</th>
<th>(Select Crop)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Your Crop Acres</strong></td>
<td>2500</td>
<td>1000</td>
<td>1000</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>(Percent of Crop Rotation)</strong></td>
<td>100%</td>
<td>40%</td>
<td>40%</td>
<td>20%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Probable Yield per Acre (bu or lb.)</strong></td>
<td>40</td>
<td>54</td>
<td>36</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Price ($ per Unit)</strong></td>
<td>$11.00</td>
<td>$6.75</td>
<td>$11.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Operating Costs/Acre</strong></td>
<td>$218.75</td>
<td>$245.84</td>
<td>$204.20</td>
<td>$193.64</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Gross Revenue per Acre</strong></td>
<td>$399.53</td>
<td>$436.70</td>
<td>$362.48</td>
<td>$399.30</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Marginal Return Over Operating Costs</strong></td>
<td>$180.78</td>
<td>$190.86</td>
<td>$158.27</td>
<td>$205.66</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

1. Gross Revenue Per Acre = Price per unit x Yield per acre (weighted based on % of crop rotation)
Calculation Option #1 - Production Cost Based Land Rental Rate

Gross revenue
- Operating Costs
- Labour/Owner Salary Costs
- Equipment Costs
- Storage Costs
= Maximum Breakeven Land Rental (before profit)

<table>
<thead>
<tr>
<th></th>
<th>Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross revenue</td>
<td>$399.53</td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$218.75</td>
</tr>
<tr>
<td>Labour/Owner Salary</td>
<td>$26.40</td>
</tr>
<tr>
<td>Equipment Costs</td>
<td>$66.65</td>
</tr>
<tr>
<td>Storage Costs</td>
<td>$5.56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$82.17</strong></td>
</tr>
</tbody>
</table>

Producer Profit Expectation (range)

<table>
<thead>
<tr>
<th></th>
<th>Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>$15</td>
<td></td>
</tr>
<tr>
<td>$30</td>
<td></td>
</tr>
</tbody>
</table>

= Production Cost Based Rental Rate $52 to $67 (Avg. $60/acre)
Production Cost Method

**Strengths:**

- A clear way to calculate the amount you can pay for rent
- Allows producers to measure their profitability on rented land
- Makes it hard to lie to yourself on the profitability of rented land
- Gives landlords an appreciation for the margins producers are facing

**Limitations:**

- Does not factor in land rental market influences
- Producer profit expectation is ambiguous
  - How much should a producer expect for profit?
- Highly sensitive to price and yield estimates
  - Leases longer than 1 year require longer ranging estimations
  - The need for realistic estimations
The amount available for rent with:
$10.50/bu canola & soybeans, $6.50/bu CWRS

<table>
<thead>
<tr>
<th>Calculation Option #1 - Production Cost Based Land Rental Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross revenue</td>
</tr>
<tr>
<td>- Operating Costs</td>
</tr>
<tr>
<td>- Labour/Owner Salary Costs</td>
</tr>
<tr>
<td>- Equipment Costs</td>
</tr>
<tr>
<td>- Storage Costs</td>
</tr>
<tr>
<td>= Maximum Breakeven Land Rental (before profit)</td>
</tr>
</tbody>
</table>

Producer Profit Expectation (range)

$15 to $30

= Production Cost Based Rental Rate

$35 to $50 (Avg. $43/acre)
Calculation Option #2 - Land Value Based Rental Rate

Land Value (local market or assessed value) $2,950 /acre
x Investment Rate of Return - (approx. 5 year GIC rate 1.50 % to 2.00 %
+ Property taxes (area average value) $15 /acre

= Land Value Based Rental Rate $59 to $74/acre (Avg. $67/acre)
Land Value Cost Method

Strengths:

• A clear and easy way to determine an idea of rental values
  ➢ For every $1,000 of land value there is $15-$20/acre land rent (before property taxes)
    • Assuming 1.5-2.0% Investment rate

• Allows landlords to compare investments
  ➢ Analysis of is it worth it to own and rent land?

Limitations:

• What is the land value?
  ➢ Not always easy to determine a value
  ➢ Other influences other than agriculture impacting land values

• What investment rate do you use?
  ➢ Use like quality comparisons
  ➢ Generally low risk, non-registered GIC type comparisons
Land Rent - Summary

<table>
<thead>
<tr>
<th></th>
<th>$ Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Cost Rent</td>
<td></td>
</tr>
<tr>
<td>(Low Range)</td>
<td>$52</td>
</tr>
<tr>
<td>(High Range)</td>
<td>$67</td>
</tr>
<tr>
<td>Land Value Rent (Low</td>
<td>$59</td>
</tr>
<tr>
<td>Range)</td>
<td></td>
</tr>
<tr>
<td>Land Value Rent (High</td>
<td>$74</td>
</tr>
<tr>
<td>Range)</td>
<td></td>
</tr>
</tbody>
</table>

Manitoba Agriculture
Flexible Land Rental Agreements

- Land rental amounts ‘flex’ with actual yields and prices
- Lower rents in poor years, higher rents in better years
  - Allows landlords to give breaks to their producer in a poor year, but benefit more in a good year
  - Allows a producer to limit losses in a poor year
  - Floor and ceiling rental rates can be established
Flexible Land Rental Calculation

Minimum & Maximum Rental Rate Calculation

Step #1: Current Year Crop to be Grown

- Wheat - Hard Red Spring

Step #2: Probable Wheat - Hard Red Spring Yield per Acre 53.7 (bu or lb.)
- Probable Wheat - Hard Red Spring Price per Unit $6.75 (bu or lb.)

Step #3: Land Rental Rate $60 /acre

Step #4:

- $60 \times 80\% = $48 /acre Minimum Rental Rate
- $60 \times 120\% = $71 /acre Maximum Rental Rate
Flexible Land Rental Rate Calculation

Step #5
Enter Your Actual Harvested Yield & Market Price Here

\[ 117\% = \frac{61\text{ bu actual yield}}{53.7\text{ bu probable yield}} \times \frac{\$6.95}{\$6.75} \]

Step #6

\[ \frac{61.0 \text{ Actual Wheat - Hard Red Spring Yield per Acre (bu or lb)}}{53.7 \text{ Probable Wheat - Hard Red Spring Yield per Acre (bu or lb)}} \div \frac{\$6.95 \text{ Actual Wheat - Hard Red Spring Price ($/unit)}}{\$6.75 \text{ Probable Wheat - Hard Red Spring Price per Unit (bu or lb)}} \]

\[ = 117\% \text{ of Probable Yield & Price Factor} \]

\[ \times \frac{\$60 \text{ Land Rental Rate}}{\$70 \text{ /acre Flex Rental Value (after harvest)}} \]

If less than Minimum Rate, then $48/acre
If more than Maximum Rate, then $71/acre

Total Flexible Land Rental Payment Due
\[ = \$70/acre \]
Flexible Land Rental Agreements

• Takeaways:
  ➢ Trust, communication and cooperation required on both sides to make it work
  ➢ Can be complicated so it’s best to keep the ‘flex’ portion to 1 or 2 variables (yield and/or price)
  ➢ Important to determine how the price will be finalized
  ➢ An effective way to share both risk and reward

• Sleep at night factor - happy tenant, happy landlord.....happy life
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

- Crop Land Rental Rate Calculator
- 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

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204.523.6424