The True Cost of Land:

Land Rental Values in Manitoba

Darren Bond, P.Ag.
Farm Management Specialist
Manitoba Agriculture
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 ...

[CROP] 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.
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.
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...
Characteristics of good rental agreements

• The landlord and producer should be open and honest with each other, and be able to resolve disagreements cordially.
• To maximize long term profit, the terms of the lease should be fair to both the landlord and producer.
• Written agreements help to prevent conflict between the landlord and producer, and force them to think through an equitable and reasonable lease.
Characteristics of good rental agreements

• Leases should be flexible enough to permit fair adjustments to any unexpected situations.
• A lease should be adapted to suit each individual situation, yet remain simple enough to work.
• The lease period should also be long enough to allow the producer to adopt good farming practices.
But this doesn’t answer the question...
What is Land Rent??

- Excluding the market influences of competition (which can be considerable), rent comes down to 2 things:
  1. Production cost based land rental rate calculation
  2. Land value based land rental rate calculation
Factors in Production Cost Method

- Grain Yield
- Grain Price
- Operating Costs
  - Seed
  - Fertilizer
  - Pesticides
- Labour Costs
- Equipment Costs
- Storage Costs
- Producer Profit Expectation
Red Spring Wheat Average Yield 2012-2017

bu/ac: 47.8, 61.1, 49.7, 51.1, 51.6, 67.3


Source: MASC
Canola Average Yield 2012-2017

Source: MASC
2013-2018 CWRS ranged from $4.35/bu - $8.65/bu; Average - $6.41/bu

2017 Crop Year CWRS ranged from $6.24/bu - $7.59/bu; Average - $6.73/bu
2013-2018 Canola ranged from $8.08/bu - $11.84/bu; Average - $10.53/bu

2017 Crop Year Canola ranged from $10.39/bu - $11.84/bu; Average- $11.15/bu

2017 Crop Year Soybean ranged from $9.29/bu-$11.52/bu; Average-$10.39/bu
Machinery Costs 2013-2018

Source: Alberta Agriculture
Production Costs Method Conclusions

• Yields for the most part are increasing at a modest rate
• Prices overall are flat to slightly increasing
• Operating costs of production are generally increasing 2-3%/year (depending on fertilizer costs)
• Machinery and labour costs are increasing
• Generally flat margins on a per acre basis
  – Farm expansion used to mitigate this
What do we do with this information to help determine land rents?

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

*Ronald Reagan*
Rentplan resource

• Basic premise:
  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><strong>Reset Initial Default Values</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>A. Operating Costs</strong></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>
</tr>
<tr>
<td>Fertilizer</td>
<td>$88.57</td>
<td>$69.36</td>
<td>$19.59</td>
</tr>
<tr>
<td>Herbicide</td>
<td>$14.41</td>
<td>$30.83</td>
<td>$10.67</td>
</tr>
<tr>
<td>Fungicide</td>
<td>$16.25</td>
<td>$16.50</td>
<td>$0.00</td>
</tr>
<tr>
<td>Insecticide</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Fuel</td>
<td>$24.21</td>
<td>$25.95</td>
<td>$22.86</td>
</tr>
<tr>
<td>Machinery Operating</td>
<td>$10.00</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Rental and Custom</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td><strong>Crop Insurance - 80% Insured Value</strong></td>
<td>$7.47</td>
<td>$7.70</td>
<td>$12.66</td>
</tr>
<tr>
<td><strong>Hail Insurance - $200/Acre</strong></td>
<td>$8.32</td>
<td>$6.40</td>
<td>$9.60</td>
</tr>
<tr>
<td>Other Costs</td>
<td>$7.75</td>
<td>$7.75</td>
<td>$7.75</td>
</tr>
<tr>
<td>Drying Costs</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Interest on Operating</td>
<td>$6.87</td>
<td>$5.71</td>
<td>$5.41</td>
</tr>
<tr>
<td><strong>Total Operating</strong></td>
<td>$245.84</td>
<td>$204.20</td>
<td>$193.64</td>
</tr>
<tr>
<td><strong>B. Fixed Costs</strong></td>
<td></td>
<td></td>
<td></td>
</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>
</tr>
<tr>
<td><strong>Total Fixed</strong></td>
<td>$71.49</td>
<td>$73.30</td>
<td>$71.49</td>
</tr>
<tr>
<td><strong>Total Operating &amp; Fixed</strong></td>
<td>$317.33</td>
<td>$277.50</td>
<td>$265.13</td>
</tr>
<tr>
<td><strong>Total Costs</strong></td>
<td>$343.73</td>
<td>$303.90</td>
<td>$291.53</td>
</tr>
</tbody>
</table>
## 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>% 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>

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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

<table>
<thead>
<tr>
<th>Item</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 Costs</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>

= Maximum Breakeven Land Rental (before profit)

Producer Profit Expectation (range)

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

= Production Cost Based Rental Rate $52 to $67 (Avg. $60/acre)
Production Costs 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
Production Costs Method 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 and $6.50/bu CWRS:

### Calculation Option #1 - Production Cost Based Land Rental Rate

<table>
<thead>
<tr>
<th>Gross revenue</th>
<th>Per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$382.59</td>
</tr>
<tr>
<td>- Operating Costs</td>
<td>$218.75</td>
</tr>
<tr>
<td>- Labour/Owner Salary Costs</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>= Maximum Breakeven Land Rental (before profit)</strong></td>
<td><strong>$65.23</strong></td>
</tr>
</tbody>
</table>

Producer Profit Expectation (range)  

- **Per Acre**  
  - $15  
  - $30

**= Production Cost Based Rental Rate**  

$35 to $50 (Avg. $43/acre)
Factors in Land Value Based Method

• Land Value
  – On the rise
• Investment rate
  – Use a similar type investment like a GIC
• Property taxes
  – Follows the rise of land values
Calculation Option #2 - Land Value Based Rental Rate

Land Value (local market or assessed value) \( \times \) Investment Rate of Return - (approx. 5 year GIC rate) \( \begin{array}{ll}
\text{1.50 \%} & \text{to} & \text{2.00 \%}
\end{array} \)

+ Property taxes (area average value) \( \text{\$15 /acre} \)

\[ \text{= Land Value Based Rental Rate} \] \( \text{\$59 to \$74/acre (Avg. \$67/acre)} \)
Land Value Based 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?
Land Value Based Method 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

- Production Cost Rent (Low Range): $52
- Production Cost Rent (High Range): $67
- Land Value Rent (Low Range): $59
- Land Value Rent (High Range): $74

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
\[ x \times 80\% = \frac{53.7 \times 6.75}{100} = 48 \text{ /acre} \quad \text{Minimum Rental Rate} \]
\[ x \times 120\% = \frac{53.7 \times 6.75 	imes 1.20}{100} = 71 \text{ /acre} \quad \text{Maximum Rental Rate} \]
Flexible Land Rental Rate Calculation

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

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

Step #6

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
  – Grain cart scale/weigh scale slips for yield determination
  – If done properly, an effective way to deal with variability
Further Considerations

• When is the rent payment made?
  – Payments in spring carry a discount – less risk; time value of money

• Consider nutrient levels within the soil
  – ‘Mining’ the soil carries a cost

• Who are you dealing with?
  – Dealing with the best producers/landlords will bring the highest profitability in the long run

• Sleep at night factor
  – Happy tenant, happy landlord, happy life
Obviously you’re telling me...

- The market ultimately determines land rental rates
- Trust, communication and cooperation will result in the best land rental situations
- Well written agreements clearly state responsibilities and expectations
- The highest (or lowest) dollar paid for land rent doesn’t necessarily make for the best arrangement
- Rentplan allows both producers and landlords to appreciate each other’s position
Farm Software & Worksheets


- Sample Land Rental Agreements
  - Cash Lease Agreement
  - Crop Share Lease Agreement
  - Cow-Calf Share Lease Agreement
  - Custom Cattle Feeding Agreement
  - Custom Pasture Agreement
  - Flexible Cash Lease Agreement
  - Pasture Cash Lease Agreement

- Rentplan

- Farm Machinery Custom & Rental Rate Guide Calculator – 2018/19
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 us:
Roy Arnott, P.Ag.    Darren Bond, P.Ag.
roy.arnott@gov.mb.ca  darren.bond@gov.mb.ca
Killarney Ag Office    Teulon Ag Office
204.523.6424          204.861.2581