DETERMINING A RENTAL PRICE FOR CROP LAND

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Center For Dairy Profitability
Determining a Rental Price for Crop Land

- Rental arrangement options
  - Fixed Cash Rent
  - Flexible Cash Rent
  - Crop-Share
**Landlord**
- Fixed Cash Rent
- Flexible Cash Rent
- Crop-Share
- Custom Farming

**Renter**
- Fixed Cash Rent
- Flexible Cash Rent
- Crop-Share
- Custom Farming

*Risk is real, risk has value, risk must be compensated.* (5-8% Gross Revenue)
(Hay ground- 20% Gross Revenue)

*Risk- Price, cost and production*
RISK EXPOSURE

- Share the wealth
- Share the risk?
Determining a Rental Price for Crop Land

- **Primary Objective**
  - Fun?
  - Profit?

- **Criteria**
  - Personal preference
  - Competition
  - Comparison
  - Yield Potential
  - Gross Income Potential
  - Profit potential
Determining a Rental Price for Crop Land

- **Cash rent** value correlation to:
  - Corn Yield (2008) - $R^2 = .8518$
  - Northern Wisconsin
    - County Average Yield (bu.)
      | Min  | Max  | Avg. |
      |------|------|------|
      | 81.2 | 125.8| 106.8|
    - County Level Cash Rent
      | Min  | Max  | Avg. |
      | $28  | $62  | $45  |

(2003-2007 Five Year Rolling Average)
Cash rent value correlation to;

- Gross Revenue (2009)- 1967 to 2010 data
- Wisconsin

<table>
<thead>
<tr>
<th>Location</th>
<th>Low</th>
<th>Avg.</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin</td>
<td>17%</td>
<td>22%</td>
<td>26%</td>
</tr>
</tbody>
</table>

Corn 100 bushel yield

- @ $4.00/bu.
- @ $5.00

(Five Year Rolling Average)
Cash rent correlation to:
- Land Value
  - Wisconsin
    - 2.0% - 2.5%
    - $2,400/acre X 0.02/0.025 = $48 - $60/acre
# Determining a Rental Price for Crop Land

**AGRICULTURAL CASH RENTS**  
*Wisconsin, 2005-2009*  
** (2010)  
Dollars per acre

<table>
<thead>
<tr>
<th>Year</th>
<th>Cropland rented for cash</th>
<th>Pasture rented for cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>70.00</td>
<td>38.00</td>
</tr>
<tr>
<td>2006</td>
<td>71.00</td>
<td>38.00</td>
</tr>
<tr>
<td>2007</td>
<td>72.00</td>
<td>38.00</td>
</tr>
<tr>
<td>2008</td>
<td>85.00</td>
<td>36.00</td>
</tr>
<tr>
<td>2009</td>
<td>87.00</td>
<td>36.00</td>
</tr>
<tr>
<td>2010</td>
<td>121.00</td>
<td>24.00</td>
</tr>
</tbody>
</table>
## Agricultural Land Values: Average Value Per Acre, Wisconsin, 2005-2009 1/

<table>
<thead>
<tr>
<th>Year</th>
<th>Farm real estate 2/</th>
<th>Cropland</th>
<th>Pasture</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2,790</td>
<td>2,540</td>
<td>1,450</td>
</tr>
<tr>
<td>2006</td>
<td>3,100</td>
<td>2,900</td>
<td>1,740</td>
</tr>
<tr>
<td>2007</td>
<td>3,640</td>
<td>3,370</td>
<td>2,000</td>
</tr>
<tr>
<td>2008</td>
<td>3,850</td>
<td>3,600</td>
<td>2,130</td>
</tr>
<tr>
<td>2009</td>
<td>3,750</td>
<td>3,650</td>
<td>2,050</td>
</tr>
<tr>
<td>2010</td>
<td>2,940</td>
<td>2,770</td>
<td>1,400</td>
</tr>
</tbody>
</table>

1/Value at which the land could be sold under current market conditions. 2/Value includes land and buildings.
## Determining a Rental Price for Crop Land

- **Crop Land Rent/Acre (WASS) dollars/acre**

<table>
<thead>
<tr>
<th>County</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashland</td>
<td>1/</td>
<td>17.50</td>
</tr>
<tr>
<td>Clark</td>
<td>51.50</td>
<td>52.00</td>
</tr>
<tr>
<td>Lincoln</td>
<td>28.50</td>
<td>30.00</td>
</tr>
<tr>
<td>Marathon</td>
<td>49.50</td>
<td>50.00</td>
</tr>
<tr>
<td>Taylor</td>
<td>42.00</td>
<td>47.00</td>
</tr>
<tr>
<td>North Central</td>
<td>45.50</td>
<td>41.00</td>
</tr>
</tbody>
</table>
The amount the landlord desires
The amount the renter can afford or is willing to pay
Flexible Cash Rent

“Price”

- Base grain price and rental rate/acre
- Base rent X current price/base price = adjusted rent/acre
  
  $50 \times \left(\frac{5.00}{4.75}\right) = $52.63/acre for current year

- Base rent with stated adjustments outside of price range
- Minimum base rent with upward adjustments only
“Price and Yield”
- Base rent $ \times $ (current price/base price) $ \times $ (current yield/base yield) = adjusted current year's rent
- Current year’s yield $ \times $ current year’s price $ \times $ agreed %
- Base rent, yield & price + % increase in crop value/acre over base amount

“Yield”
- Fixed number of bushels/year
- Avoids renegotiating cash rents annually
- Bottom Line- *Compromise!*
DETERMINING A RENTAL PRICE FOR CROP LAND

- “Crop-Share” Rent (50/50; 60/40; 70/30?)
  - Grower
    - Value of crop produced/Cost inputs
    - Machinery cost/acre (Deprec., interest, repairs, insurance)
    - Labor (2-5 hrs/acre @ $10.00/hr.)
    - Management (6% Gross revenue)
  - Landlord- land ownership costs
    - Value of crop produced/Cost inputs
    - Interest on investment
    - Real estate tax
    - Deprec. (tile, fences), interest, repairs & insurance
Determining a Rental Price for Crop Land

Joe Lauer, UW-Extension Corn Agronomist
DETERMINING A RENTAL PRICE FOR CROP LAND

Joe Lauer, UW-Extension Corn Agronomist
“Volatility is here to stay in grain and oilseed markets, according to Rabobank Food & Agribusiness Research and Advisory (FAR) vice president Sterling Liddell.”

DairyProfit Weekly September 2010
What costs do you want covered?

- Total cash expenses
- Non-cash
  - Change in Accounts Receivable
  - Change in Accounts Payable
- Interest paid
- Wages and Benefits
- Depreciation
What costs do you want covered? Cont.

- Debt service
- Family living
  + Household replacement
  + Health insurance
- Asset replacement
  + Equipment
  + Pickup
- College fund/Savings
DETERMINING A RENTAL PRICE FOR CROP LAND

- **Profit**
  - Partial Budgets
    - [http://www.uwex.edu/ces/ag/teams/grains/](http://www.uwex.edu/ces/ag/teams/grains/)
    - Corn after Soybeans budget
      - [http://cdp.wisc.edu/crop%20enterprise.htm](http://cdp.wisc.edu/crop%20enterprise.htm)
      - Many!
  - Cash Rent Evaluator
    - Bruce Jones homepage [http://www.aae.wisc.edu/jones/](http://www.aae.wisc.edu/jones/)
Determining a Rental Price for Crop Land

- Corn Silage after Alfalfa
  [http://www.uwex.edu/ces/crops/uwforage/Silage.htm](http://www.uwex.edu/ces/crops/uwforage/Silage.htm)
- Alfalfa and Pasture Budgets
  [http://cdp.wisc.edu/crop%20enterprise.htm](http://cdp.wisc.edu/crop%20enterprise.htm)
Determining a Rental Price for Crop Land

- Lease forms
  - [http://agecon.uwyo.edu/riskmgmt/legalrisk/CashFarmLease.pdf](http://agecon.uwyo.edu/riskmgmt/legalrisk/CashFarmLease.pdf) Form only

- Machinery cost determination
  - [http://www.uwex.edu/ces/ag/teams/grains/](http://www.uwex.edu/ces/ag/teams/grains/)
Put agreement in writing!
+ Assure better understanding of what was agreed on by both parties
+ Serves as a reminder of specifics agreed on
+ Serves as a legal document
  - Establish material participation/not
  - Estate settlement of either party
  - Settle disputes
WRITTEN AGREEMENT; CONTINUED

- Who, what, when and how
- Property description
- Use of property
- Reservations
- Term of the lease
EVALUATING COMPARATIVE RENTAL OPTIONS

- **Products**
  - Corn Silage 7.37 TDM @ 92.57 = $682.24
  - Crop Insurance = 40.09
  - Total $722.33/acre
EVALUATING COMPARATIVE RENTAL OPTIONS

- Cash Rent
- Crop Share
Fixed Expenses

- Land $73
- Management 43
- Labor 17
- Machinery Deprec. 32
- Machinery, Int, insur. 19
EVALUATING COMPARATIVE RENTAL OPTIONS

- Expenses/acre; Variable
  - Fertility 120
  - Seed 65
  - Misc. 44
  - Herbicide 60
  - Insecticide 0
  - Fuel & Oil 19
  - Repairs/Main. 10
  - Int. Operating 7
### Evaluating Comparative Rental Options

**Contributions:** Cash Rent

<table>
<thead>
<tr>
<th></th>
<th>Owner (Lessor)</th>
<th>Renter (Lessee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Machinery</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Labor</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Variable Expenses</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>% Contribution</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>$ Share</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
### Evaluating Comparative Rental Options

**Contributions: Crop Share**

<table>
<thead>
<tr>
<th></th>
<th>Owner (Lessor)</th>
<th>Renter (Lessee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Machinery</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Labor</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Variable Expenses</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>% Contribution</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>$ Share</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
## Evaluating Comparative Rental Options

<table>
<thead>
<tr>
<th>Contributions:</th>
<th>Cash/Share</th>
<th>Cash/Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Owner (Lessor)</td>
<td>Renter (Lessee)</td>
</tr>
<tr>
<td>Land</td>
<td>$ 0/73</td>
<td>$ 73/0</td>
</tr>
<tr>
<td>Machinery</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Labor</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>Variable Expenses</td>
<td>0</td>
<td>325</td>
</tr>
<tr>
<td>% Contribution</td>
<td>0/15.28%</td>
<td>100/84.72%</td>
</tr>
<tr>
<td>$ Share</td>
<td>$73/103</td>
<td>$723/620</td>
</tr>
<tr>
<td>Diff.</td>
<td>$33 (Risk?)</td>
<td>$103-73=30 (Risk?)</td>
</tr>
<tr>
<td>Return OTC</td>
<td>$73/73 +37</td>
<td>$245/208</td>
</tr>
</tbody>
</table>
EVALUATING COMPARATIVE RENTAL OPTIONS

Contributions: “50:50” Crop Share

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<thead>
<tr>
<th></th>
<th>Owner (Lessor)</th>
<th>Renter (Lessee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>$73</td>
<td>$0</td>
</tr>
<tr>
<td>Machinery</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Labor</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Management</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>Variable Expenses</td>
<td>163</td>
<td>163</td>
</tr>
<tr>
<td>% Contribution</td>
<td>46.2%</td>
<td>53.8%</td>
</tr>
<tr>
<td>$ Share</td>
<td>$334</td>
<td>$389</td>
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<tr>
<td>Return OTC</td>
<td>$98</td>
<td>$115</td>
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