Prospects for Land Values and Leases

Paul Ellinger
University of Illinois
PELLINGE@ILLINOIS.EDU

2008 Illinois Farm Economics Summit
The Profitability of Illinois Agriculture: Looking Ahead in Extraordinary Times

Total Assets Used in Farming: United States

- Real estate 87%
- Machinery 5%
- Livestock and poultry 3%
- Crops stored 1%
- Financial assets 4%

$2.34 Trillion

Trillion
- Real Estate Assets $2.042
- Real Estate Debt $0.111

Source: Economic Research Service

2008 Illinois Farm Economics Summit
Assets of Average Farmer

- Real Estate: 42%
- Machinery and Equipment: 29%
- Crop Inventory: 20%
- Financial Assets: 5%
- Other: 4%

$1.925 Million

2007 Illinois FBFM Data

2008 Illinois Farm Economics Summit
Relative Stability

Good Times

Bad Times

Relative Stability

Good Times

Good Times

2008 Illinois Farm Economics Summit

27 year average: S&P 500, 20.17

27 year average: Farmland, 30.15

Farmland based of returns to farmland, not average rental rates

2008 Illinois Farm Economics Summit
- Net returns to land
  - Level
  - Volatility
- Housing crisis
- Scope & economic situation of buyers
- Demand for recreational land
- Interest rates
- Capital gains tax rates

2008 Illinois Farm Economics Summit

<table>
<thead>
<tr>
<th></th>
<th>$4.50 corn price</th>
<th>$10.00 soybean price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Northern</td>
<td>$178</td>
<td>$253</td>
</tr>
<tr>
<td>Central-High</td>
<td>$232</td>
<td>$307</td>
</tr>
<tr>
<td>Central-Low</td>
<td>$155</td>
<td>$232</td>
</tr>
<tr>
<td>Southern</td>
<td>$117</td>
<td>$188</td>
</tr>
</tbody>
</table>

Assume a $50/acre return for operator
Interpreted as maximum available for cash rent
Low: Pre-meltdown costs, High: Post-meltdown costs
$3.50 corn price
$10.00 soybean price

<table>
<thead>
<tr>
<th>Region</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>$63</td>
<td>$138</td>
</tr>
<tr>
<td>Central-High</td>
<td>$110</td>
<td>$185</td>
</tr>
<tr>
<td>Central-Low</td>
<td>$45</td>
<td>$122</td>
</tr>
<tr>
<td>Southern</td>
<td>$18</td>
<td>$89</td>
</tr>
</tbody>
</table>

Assume a $50/acre return for operator
Interpreted as maximum available for cash rent
Low: Pre-meltdown costs, High: Post-meltdown costs

At $3.50 corn price:
- Low: $696, high: $2,363
- 3.3% rate: $3,222

Corn price (soybean price = 2.22x)
At $3.50  low: $1,705, high: $3,372   3.3% rate: $4,598  
Corn price (soybean price = 2.22x)

2008 Illinois Farm Economics Summit
2008 Illinois Farm Economics Summit

The Profitability of Illinois Agriculture: Looking Ahead in Extraordinary Times

- **Cash Rent**
  - 0%
  - 10%
  - 20%
  - 30%

- **Crop Share**
  - 40%
  - 50%
  - 60%
  - 70%
  - 80%

- **Owned**
  - 90%

2004 2005 2006 2007
Moderate movement towards cash leases
- Adjustments tend to favor land owner
- Time lags
- Average cash rents do not tend to decrease
- More interest in variable cash rental arrangements
- Some custom farming still part of mix

Per Acre Cash Rents for Top 1/3, Mid 1/3 and Low 1/3
Cash Rent Leases by Land Quality, 2008

<table>
<thead>
<tr>
<th>Lease Type</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td>High 1/3</td>
<td>$295</td>
<td>$258</td>
<td>$201</td>
<td>$155</td>
</tr>
<tr>
<td>Mid 1/3</td>
<td>$241</td>
<td>$207</td>
<td>$172</td>
<td>$138</td>
</tr>
<tr>
<td>Low 1/3</td>
<td>$200</td>
<td>$173</td>
<td>$148</td>
<td>$120</td>
</tr>
</tbody>
</table>

Source: Illinois Society of Professional Farm Managers and Rural Appraisers, March 2008
Comments from Mid-Year (August, 2008) Land Value and Leasing Survey...

- $43 per acre increase in cash rents from 2008 to 2009
- Overall, cash rents in 2008 averaged $238 on professionally managed farmland
- The average cash rent is expected to increase to $281 in 2009.
- Cash rent will vary with land productivity

Why more interest now in variable cash rent leases?

- Use of cash rent leases in general are increasing.
- Increase in farm profitability (short term?), pressure to raise cash rents.
- Currently, more variability in corn and soybean prices, uncertainty about future price directions.
- Higher input costs result in potential for larger losses if drop in prices and/or yields.

Source: Schnitkey and Lattz, farmdoc FEFO 08-17
Cash rent = base rent × \[ \frac{\text{actual yield} \times \text{actual price}}{\text{base yield} \times \text{base price}} \]

- Base rent plus bonus payment, bonus payment based on yield, price or both.
- Cash rent is based on $ per bushel harvested.
- Fixed percentage of gross revenue.

Source: Schnitkey and Lattz, farmdoc FEFO 08-17

\[ \text{Cash rent} = \$185 \times \frac{200 \text{ bu actual yield} \times \$3.50 \text{ actual price}}{180 \text{ bu base yield} \times \$4.20 \text{ base price}} \]

Example assumptions
- Base rent is $185 / acre
- Base is set at 180 bu/acre and $4.20 corn price
- Actual yields: 200 bu and corn price of $3.50

Source: Schnitkey and Lattz, farmdoc FEFO 08-17
- Maximum and minimum levels
- How to determine price?
- Yields determined: farm vs. county
- FSA payments

- Downward pressure on land values
- Landowner/tenant: communication a key
- Operator may want to be proactive and consider taking the lead in proposing changes to farm leasing terms.
- Farm operators are assuming a higher level of risk
▪ Try to avoid long term agreements in volatile economic conditions unless returns and costs are locked in.

▪ If fixed cash rent arrangement, may want to consider flexible cash rent arrangement or crop share lease.

▪ If fixed cash rent arrangement, may want to delay setting rent until more reasonable expectations for corn and soybean prices can be made.

Dr. Paul Ellinger, professor
University of Illinois
217-333-5503
PELLINGE@ILLINOIS.EDU
www.farmdoc.uiuc.edu/ellinger/