Iowa Farmland Market Update: What’s Ahead?

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Ag Law Seminar, September 21st, 2017
The new Mike Duffy since Aug 2015
Farm sector assets, inflation adjusted, 1970-2017F

Why Care About Farmland Market?

Note: F = forecast; data for 2016 and 2017 are forecasts. The GDP chain-type price index is used to convert the nominal (current-dollar) statistics to real (inflation adjusted) amounts (2009=100).
Guiding Framework

Land Value = \frac{\text{localized net income}}{\text{universal interest rate}}
## Percent change in dollar value of “good” farmland

**Top:** April 1, 2017 to July 1, 2017  
**Bottom:** July 1, 2016 to July 1, 2017

<table>
<thead>
<tr>
<th>State</th>
<th>April 1, 2017 to July 1, 2017</th>
<th>July 1, 2016 to July 1, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>0</td>
<td>-3</td>
</tr>
<tr>
<td>Indiana</td>
<td>+2</td>
<td>-1</td>
</tr>
<tr>
<td>Iowa</td>
<td>+2</td>
<td>+3</td>
</tr>
<tr>
<td>Michigan</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>+1</td>
<td>+1</td>
</tr>
<tr>
<td>Seventh District</td>
<td>+1</td>
<td>+1</td>
</tr>
</tbody>
</table>

**Iowa**

<table>
<thead>
<tr>
<th>County</th>
<th>Change 2016-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REALTORS® Land Institute- Iowa Chapter**  
**September 1, 2017**  
**September 2016—September 2017**

**Nine Crop Reporting Districts**

- **Top** – March 2017  
- **Bottom** – September 2017
ISU survey results echo other surveys.
Quarterly land value change 2004-2017 for 7th district
US Farm Income 1990-2026

U.S. farm income indicators

Source: USDA OCE 2016
Long-term interest rate expectations
What the Fed Reserve thinks the interest rate should be

FED DOT PLOT

June 2017

SOURCE: Federal Open Market Committee
The “temporary break” in continued declines results from limited land supply.
The “temporary break” in continued declines results from limited land supply.

Figure 2. Number of public auctions by month, 2011 – 2016

Data Source: Jim Knuth, Farm Credit Services of America

Source: Ag Decision Maker
Farm Crises and this downturn

• Positives
  – High income in pre-crisis “golden” eras
  – Low interest rate environment
  – Prudence among ag lenders and bank regulators
• Uncertainty in government support
• Concerns
  – Deteriorating farm income and ag credit
  – High reliance on ag exports, US $
  – Uncertainty in farmland supply and turnover
• Looking Ahead
Inflation-adjusted Iowa Ag Real Estate Values 1850-2016

Source: USDA-NASS; Ag Census, Iowa Farmland Value Portal
### Positive 1: Real Income Accumulation 2003-2013

#### Average % change in inflation-adjusted values per year

<table>
<thead>
<tr>
<th>Golden Eras</th>
<th>Land</th>
<th>Gross Income</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910-1920</td>
<td>1.2%</td>
<td>0.8%</td>
<td>0.2%</td>
</tr>
<tr>
<td>1973-1981</td>
<td>9.7%</td>
<td>0.9%</td>
<td>-3.2%</td>
</tr>
<tr>
<td>2003-2013</td>
<td>11.1%</td>
<td>4.5%</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

#### Crises and Declines

<table>
<thead>
<tr>
<th>Crises and Declines</th>
<th>Land</th>
<th>Gross Income</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1921-1933</td>
<td>-5.8%</td>
<td>-1.9%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>1981-1987</td>
<td>-15.0%</td>
<td>-2.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>2013-2017</td>
<td>-4.5%*</td>
<td>-4.5%</td>
<td>-9.8%</td>
</tr>
</tbody>
</table>

Note: The average land value change from 2013 to 2017 is approximate because 2017 land values are unknown. The 1910–1933 gross and net farm income changes are for the whole United States due to limited data at the state level. Land values are based on USDA Census of Agriculture and USDA NASS Land Value and Cash Rent Survey, while the data on farm income is from the USDA Economic Research Service Farm Income and Wealth Statistics database.

Source: USDA-ERS, Ag DM C2-70
Zhang and Beek 2016
Positive 2: Historically low interest rates

Source: http://www.multpl.com/10-year-treasury-rate
Positive 3: Prudence in Ag Lenders/Regulators

• Banking Regulations
  – More stringent, frequent stress-test
  – BASEL III, liquidity requirements for banks
  – (Ron Hansen – Iowa Division of Banking Superintendent) walk into this “with eyes wide open”

• Changes in Loan Practices (FCS, Iowa)
  – Before 1987: loan to value ratio is 85%
  – 1987-2008: loan to value ratio is 65%
  – After 2008: use cash-flow method for collateral ($4 corn, $10 bean) and 50% of cash flow value

Source: Jim Knuth, FCS
Annual Mortgage Payments vs. Cash Rents for Iowa Farmland Loan

Cash Rent vs. Mortgage Payments ($/acre)

- 20-yr PMT
- 30-yr PMT
- 15-yr PMT

Source: Zhang and Tidgren 2017
Loan Repayment Index and Loan Delinquency Rates 1970-2017

Loan Repayment Index (x-axis) vs. Loan Delinquency Rate (%) (y-axis)

- **Ag loan delinquency rate**
- **Farmland loan delinquency rate**
- **Loan repayment index**

Source: Zhang and Tidgren 2017
Gov't Safety Net: Broader Coverage

Federal Crop Insurance
Revenue coverage not available in 1980s

Source: Chad Hart
Broader Coverage ≠ Stronger Income Support

- Dwindling support level from ARC-CO
- Farmers now cannot re-select PLC under current 2014 Farm Bill ($35/acre in 2016/17)
- CRP reaching acreage cap, cannot serve as supply reduction as it did in the 1980s through set-asides
- Almost all producer already enrolled in crop insurance, so not much room for additional support

Source: Zhang and Tidgren 2017
## Cash Crop Price Predictions for Nov 2017, 2018, 2020 as of May 2017 - SMLV Conference

<table>
<thead>
<tr>
<th>Region</th>
<th>Cash Corn Prices</th>
<th>Cash Soybean Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwest</td>
<td>$3.34</td>
<td>$3.65</td>
</tr>
<tr>
<td>North Central</td>
<td>$3.42</td>
<td>$3.59</td>
</tr>
<tr>
<td>Northeast</td>
<td>$3.41</td>
<td>$3.59</td>
</tr>
<tr>
<td>West Central</td>
<td>$3.34</td>
<td>$3.59</td>
</tr>
<tr>
<td>Central</td>
<td>$3.36</td>
<td>$3.50</td>
</tr>
<tr>
<td>East Central</td>
<td>$3.42</td>
<td>$3.58</td>
</tr>
<tr>
<td>Southwest</td>
<td>$3.31</td>
<td>$3.56</td>
</tr>
<tr>
<td>South Central</td>
<td>$3.36</td>
<td>$3.59</td>
</tr>
<tr>
<td>Southeast</td>
<td>$3.50</td>
<td>$3.83</td>
</tr>
<tr>
<td><strong>STATE</strong></td>
<td>$3.38</td>
<td>$3.60</td>
</tr>
</tbody>
</table>
Farmland Price Expectations, 12 months from now

- Higher Farmland Prices
- Lower Farmland Prices

% of respondents

Nov '15  Feb '16  March '16  May '16  July '16  Nov. '16  Feb '17  May '17  Aug. '17

Most Recent Observation: Aug. 2017

Source: Purdue Ag Barometer
Iowa Landowners tend to hold the farmland

<table>
<thead>
<tr>
<th>Years of ownership</th>
<th>% of Iowa Farmland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10 years</td>
<td>24%</td>
</tr>
<tr>
<td>10-20 Years</td>
<td>21%</td>
</tr>
<tr>
<td>20-30 Years</td>
<td>19%</td>
</tr>
<tr>
<td>30-40 Years</td>
<td>15%</td>
</tr>
<tr>
<td>&gt; 40 Years</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: Ag DM PM1980
2012 Iowa Farmland Ownership and Tenure Survey
http://card.iastate.edu/farmland

Iowa Farmland Value Portal

twitter #ISUIland value

IOWA STATE UNIVERSITY Extension and Outreach
Thank You!

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