Kansas Farm Economy Update

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Farm Economy Update

Rental rates and net farm income
- Indicator of short-run profitability in the ag sector

Land values
- Indicator of long-run profitability in ag sector and some other factors

Wider economic factors
- Interest rates and access to credit
- Strength of the dollar and trade
Current Economic Conditions
Returns to Farming

Source: KFMA Enterprise Reports (http://www.agmanager.info/kfma)
Net Farm and Ranch Income

Net Farm Income Per Operator

Returns over Total Costs

$(20,000) - $180,000

Dryland Crop
Cowherd

2009 - 2018

AgManager info
Average Net Farm Income 2018

Average Net Farm Income - 2018

- NW
- SW
- NC
- SE

Income Levels:
- $20,000
- $40,000
- $60,000
- $80,000
- $100,000
- $120,000
- $140,000
- $160,000
- $180,000
- $200,000
Government Payments

Total Net Farm Income

- Farm Income
- Government payments

2014: $140,000
2015: $20,000
2016: $60,000
2017: $80,000
2018: $100,000

($20,000)
Distribution of NFI

21% of farms
## Distribution of NFI

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Income</td>
<td>18.8%</td>
<td>40.3%</td>
<td>32.8%</td>
<td>24.4%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Less than $50,000</td>
<td>36.7%</td>
<td>67.1%</td>
<td>58.7%</td>
<td>55.8%</td>
<td>46.1%</td>
</tr>
</tbody>
</table>

Farms began to recover in 2018
Farm Family Living Expenses

Total Family Living Expenses

$70,065 annual
Bankruptcies Filed by KS Farms

KS Chapter 12 Bankruptcies

<table>
<thead>
<tr>
<th>Year</th>
<th>Bankruptcies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>15</td>
</tr>
<tr>
<td>2014</td>
<td>7</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
</tr>
<tr>
<td>2016</td>
<td>21</td>
</tr>
<tr>
<td>2017</td>
<td>25</td>
</tr>
<tr>
<td>2018</td>
<td>35</td>
</tr>
</tbody>
</table>
Bankruptcies Filed by KS Farms

KS Chapter 12 Bankruptcies
Farms with Consistent Profit and Losses

- Farms with negative net farm income each year from 2014 through 2018
  - Kansas – 1.7%

- Farms with positive net farm income each year from 2014 through 2018
  - Kansas – 32.4%

A number of farms are positioned for opportunity
## Non-Irrigated Cost of Production ($/ac)

<table>
<thead>
<tr>
<th>Year</th>
<th>Corn</th>
<th>Soybean</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$291</td>
<td>$234</td>
<td>$156</td>
</tr>
<tr>
<td>2017</td>
<td>$276</td>
<td>$236</td>
<td>$149</td>
</tr>
<tr>
<td>2016</td>
<td>$279</td>
<td>$232</td>
<td>$176</td>
</tr>
<tr>
<td>2015</td>
<td>$312</td>
<td>$225</td>
<td>$180</td>
</tr>
<tr>
<td>2014</td>
<td>$322</td>
<td>$229</td>
<td>$172</td>
</tr>
<tr>
<td>2013</td>
<td>$308</td>
<td>$224</td>
<td>$182</td>
</tr>
<tr>
<td>2012</td>
<td>$325</td>
<td>$202</td>
<td>$183</td>
</tr>
<tr>
<td>2011</td>
<td>$281</td>
<td>$192</td>
<td>$158</td>
</tr>
<tr>
<td>2010</td>
<td>$268</td>
<td>$176</td>
<td>$148</td>
</tr>
<tr>
<td>2009</td>
<td>$267</td>
<td>$173</td>
<td>$160</td>
</tr>
<tr>
<td>2008</td>
<td>$265</td>
<td>$167</td>
<td>$153</td>
</tr>
<tr>
<td>2007</td>
<td>$231</td>
<td>$145</td>
<td>$117</td>
</tr>
<tr>
<td>2006</td>
<td>$191</td>
<td>$125</td>
<td>$98</td>
</tr>
</tbody>
</table>
2018 Enterprise Information

- Kansas Corn – 2018 Yield at the previous 5 year average
  - Revenue - $367 per acre
  - Variable Cost - $291 per acre
  - Total Cost - $405 per acre
- Kansas Soybeans – 2018 Yield 2% above previous 5 year average
  - Revenue - $412 per acre
  - Variable Cost - $234 per acre
  - Total Cost - $341 per acre
- Kansas Wheat – 2018 Yield 15% above the previous 5 year average
  - Revenue - $196 per acre
  - Variable Cost - $156 per acre
  - Total Cost - $232 per acre

Soybeans regained profitability
# Shifting Crop Mix

<table>
<thead>
<tr>
<th>Crop</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>4-Year % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>3,920</td>
<td>4,920</td>
<td>5,200</td>
<td>5,000</td>
<td>6,000</td>
<td>53%</td>
</tr>
<tr>
<td>Sorghum</td>
<td>3,200</td>
<td>2,950</td>
<td>2,360</td>
<td>2,650</td>
<td>2,400</td>
<td>-25%</td>
</tr>
<tr>
<td>Soybean</td>
<td>3,860</td>
<td>4,010</td>
<td>5,100</td>
<td>4,690</td>
<td>4,540</td>
<td>18%</td>
</tr>
<tr>
<td>Wheat</td>
<td>8,700</td>
<td>8,200</td>
<td>6,950</td>
<td>7,300</td>
<td>6,600</td>
<td>-24%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>19,680</td>
<td>20,080</td>
<td>19,560</td>
<td>19,640</td>
<td>19,540</td>
<td>-0.7%</td>
</tr>
</tbody>
</table>

Shifting Crop Mix to Find Profitability?
Debt Repayment Capacity

- 2011: 149.39%
- 2012: 128.63%
- 2013: 117.34%
- 2014: 94.88%
- 2015: 22.42%
- 2016: 36.85%
- 2017: 53.85%
- 2018: 74.14%
Debt to Asset ratio is increasing, but much lower than 1986 to 2003.
KFMA Debt Levels

$0 $100,000 $200,000 $300,000 $400,000 $500,000 $600,000 $700,000


$359,115 $368,413 $377,196 $397,728 $411,067 $440,996 $470,288 $491,032 $530,893 $578,587 $613,975 $604,491 $618,262 $640,266

AgManager Info
Kansas Farm Economy

Debt has increased

Majority of debt is current liabilities

2018 was a year of increasing debt with some intermediate liabilities repaid
MFP Payments Dwarfing Farm Bill Payments

Kansas MFP I crop payments averaged $37,492 per farm:

- 91.7% of farmers received payments
  - Average for those that received payments was $40,867
- 87.2% received payments > $2,500
- 50.6% received payments > $25,000
- 7.8% received payments > $100,000
MFP Payments Dwarfing Farm Bill Payments

Kansas MFP 2 crop payments expected to average $58,158 per farm:

- 93.6% of farmers expected to receive payments
  - Average for those that receive payments is $62,113
- 91.9% of farms payment expected to be > $2,500
- 67.8% of farms payment expected to be > $25,000
- 15.7% of farms payment expected to be > $100,000
Rental Rates
Returns to Farming

How have we adjusted to this new level of profitability?

◦ Reduced machinery turnover?
◦ Reduced use of inputs?
◦ Negotiated for lower rents?
Kansas Cash Rents

Source: USDA-NASS
Rents Estimated from Budgets

Use a budgeting approach that reflects *expected* returns to farming
- County average yields
- Futures prices with basis adjustments

Production practices based on information from KSRE agronomists
- Custom rates for machinery costs

Calculate shares based on contributions of operator and landowner
- Use equitable shares to estimate a cash rent
Projected Rental Rates

What do they represent?

Budgeting approach with expected prices and county yields gives an estimate of

- What a representative farmer could afford to pay

Ignores

- Working capital (carry over from previous years)
- Debt obligations and other cash outlays
- Alternative rental arrangements (subsidization)
- Above average yields
## Non-Irrigated Rental Rates

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay</td>
<td>94.60</td>
<td>115.80</td>
<td>79.90</td>
<td>56.30</td>
<td>37.60</td>
<td>64.70</td>
<td>64.60</td>
</tr>
<tr>
<td>Cloud</td>
<td>89.20</td>
<td>108.80</td>
<td>75.10</td>
<td>53.40</td>
<td>34.00</td>
<td>57.40</td>
<td>59.70</td>
</tr>
<tr>
<td>Jewell</td>
<td>92.40</td>
<td>109.10</td>
<td>75.40</td>
<td>53.70</td>
<td>34.20</td>
<td>58.10</td>
<td>60.50</td>
</tr>
<tr>
<td>Mitchell</td>
<td>87.30</td>
<td>105.40</td>
<td>72.80</td>
<td>51.70</td>
<td>32.30</td>
<td>53.60</td>
<td>56.70</td>
</tr>
<tr>
<td>Osborne</td>
<td>76.90</td>
<td>86.00</td>
<td>59.50</td>
<td>42.40</td>
<td>26.30</td>
<td>43.10</td>
<td>46.00</td>
</tr>
<tr>
<td>Ottawa</td>
<td>74.70</td>
<td>92.50</td>
<td>63.70</td>
<td>45.10</td>
<td>28.60</td>
<td>49.00</td>
<td>51.20</td>
</tr>
<tr>
<td>Phillips</td>
<td>77.70</td>
<td>84.00</td>
<td>57.90</td>
<td>41.40</td>
<td>26.00</td>
<td>43.90</td>
<td>46.00</td>
</tr>
<tr>
<td>Republic</td>
<td>95.50</td>
<td>115.60</td>
<td>79.50</td>
<td>56.40</td>
<td>37.50</td>
<td>65.80</td>
<td>65.30</td>
</tr>
<tr>
<td>Rooks</td>
<td>66.80</td>
<td>66.20</td>
<td>45.70</td>
<td>32.60</td>
<td>20.30</td>
<td>37.20</td>
<td>39.50</td>
</tr>
<tr>
<td>Smith</td>
<td>87.20</td>
<td>98.60</td>
<td>68.10</td>
<td>48.60</td>
<td>30.50</td>
<td>50.30</td>
<td>52.90</td>
</tr>
<tr>
<td>Washington</td>
<td>102.30</td>
<td>123.00</td>
<td>84.80</td>
<td>59.90</td>
<td>40.40</td>
<td>67.30</td>
<td>66.80</td>
</tr>
</tbody>
</table>

**Average:** $85.87  100.45  69.31  49.23  31.61  53.67  55.38
Returns to Land

Has every farmer dropped their cash rents?

Answer: No, but they are starting to...

What is keeping the adjustment from occurring quickly?
Returns to Land

Residual cash from better revenue years will allow farmers to be competitive a little longer
- Neighbors with more carry-over cash will keep bids high
- But adjustments will occur if commodity prices remain low

Contracts length in Kansas averages 3 to 5 years
- Farmers are locked in for the short run
- Adjustments will be made as the contracts are renewed
Land Value Trends
Land Values

Affected by profitability in ag sector

But land values do not adjust as quickly as profitability to changes in commodity prices

Adjustment period due to

- Long-run reasons for buying and holding land
- Expectations of buyers/sellers
Rent-to-Land Value Ratio

Source: USDA-NASS
Market-Based Land Values
PVD Sales Data 2015-2018

Kansas Land Sales

Number of Sale Transactions

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>4,000</td>
</tr>
<tr>
<td>2016</td>
<td>2,000</td>
</tr>
<tr>
<td>2017</td>
<td>3,000</td>
</tr>
<tr>
<td>2018</td>
<td>3,500</td>
</tr>
</tbody>
</table>
Land Model Results

Non-Irrigated Land

21.8% decline
Land Model Results

27.9% decline
Land Model Results

Pasture Land

17.9% decline
Long-Run Values
USDA Land Values 1960-2019

[Graph showing land value trends in Iowa and Kansas from 1960 to 2017.]

- Iowa
- Kansas
USDA Land Values 1960-2019

The graph shows the land value per acre in Iowa and Kansas from 1960 to 2017. The values for Iowa are represented by blue lines, and those for Kansas are represented by red lines. The land value has generally increased over the years, with a significant spike around 2008.
Market Going Forward

Resiliency in the land market, given commodity prices and economic/trade uncertainty

Interest rates remain low

2018 Farm Bill increased loan limits on direct and guaranteed loans

MFP made a big difference in 2018 and 2019 cash flows, but isn’t likely to factor into long-run expectations for land values

Values in the coming year...
Viewer Poll Data

Where are you from?

101 responses
Viewer Poll Data

What is your primary occupation?

101 responses

- Lender: 37.6%
- Farmer/Rancher: 27.7%
- Landlord: 17.8%
- Other: 16.8%
Viewer Poll Data

Direction of Land Values in 2019

- Down: 28%
- Down Slightly: 19%
- Stable: 26%
- Up Slightly: 11%
- Up: 8%
- ?: 9%

[AgManager Info]
Online Resources

2018 Kansas County-Level Ag Land Values
  ◦ www.agmanager.info/land-leasing/land-buying-valuing

2019 Rent Estimates: Non-Irrigated Cropland
  ◦ www.agmanager.info/land-leasing/land-rental-rates

Pasture Rental Rate Tool
  ◦ www.agmanager.info/land-leasing/land-rental-rates/pasture-rental-rate-decision-tool
Land Value Information

2018 Kansas County-Level Land Values for Cropland and Pasture

April 2019 (available at www.AgManager.info)
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