Kansas Land Values and Rental Rates

Mykel Taylor
Associate Professor
K-State Dept. of Agricultural Economics
mtaylor@ksu.edu
Current Economic Conditions
Returns to Farming

NC KFMA Enterprise Analysis

Source: KFMA Enterprise Reports (http://www.agmanager.info/kfma)
Returns to Farming

Source: KFMA Enterprise Reports (http://www.agmanager.info/kfma)
Returns to Farming

Source: KFMA Enterprise Reports (http://www.agmanager.info/kfma)
Returns to Farming

NC KFMA Enterprise Analysis

Returns over Total Costs ($/ac)

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

Net Income Per Operator

Returns over Total Costs ($/ac)

$180,000
$130,000
$80,000
$30,000
$(20,000)


Dryland Crop
Cowherd
Average Net Farm Income

($/ac)

$110,000

$90,000

$70,000

$50,000

$30,000

$10,000

$(10,000)

NW  SW  NC  SC  NE  SE
Farm Family Living Expenses

Total Family Living Expenses

$70,385 annual
Bankruptcies Filed by KS Farms

No. of Bankruptcies Filed

- 2012
- 2013
- 2014
- 2015
- 2016
- 2017

Number of bankruptcies filed over the years.
### Bankruptcies Filed by KS Farms

#### KS Chapter 12 Bankruptcies

<table>
<thead>
<tr>
<th>Year</th>
<th>Bankruptcies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>265</td>
</tr>
<tr>
<td>1988</td>
<td>67</td>
</tr>
<tr>
<td>1989</td>
<td>37</td>
</tr>
<tr>
<td>1990</td>
<td>32</td>
</tr>
<tr>
<td>1991</td>
<td>31</td>
</tr>
<tr>
<td>1992</td>
<td>20</td>
</tr>
<tr>
<td>1993</td>
<td>30</td>
</tr>
<tr>
<td>1994</td>
<td>35</td>
</tr>
<tr>
<td>1995</td>
<td>24</td>
</tr>
<tr>
<td>1996</td>
<td>25</td>
</tr>
<tr>
<td>1997</td>
<td>22</td>
</tr>
<tr>
<td>1998</td>
<td>19</td>
</tr>
<tr>
<td>1999</td>
<td>19</td>
</tr>
<tr>
<td>2000</td>
<td>6</td>
</tr>
<tr>
<td>2001</td>
<td>2</td>
</tr>
<tr>
<td>2002</td>
<td>28</td>
</tr>
<tr>
<td>2003</td>
<td>24</td>
</tr>
<tr>
<td>2004</td>
<td>15</td>
</tr>
<tr>
<td>2005</td>
<td>16</td>
</tr>
<tr>
<td>2006</td>
<td>16</td>
</tr>
<tr>
<td>2007</td>
<td>15</td>
</tr>
<tr>
<td>2008</td>
<td>24</td>
</tr>
<tr>
<td>2009</td>
<td>25</td>
</tr>
<tr>
<td>2010</td>
<td>6</td>
</tr>
<tr>
<td>2011</td>
<td>15</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
</tr>
<tr>
<td>2014</td>
<td>21</td>
</tr>
<tr>
<td>2015</td>
<td>25</td>
</tr>
</tbody>
</table>
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
2017 Cropland Values

$/Acre

- more than 8,000
- 5,701 - 8,000
- 3,601 - 5,700
- 2,601 - 3,600
- 2,600 or less
- NP

United States 4,090 NC

USDA - NASS August 3, 2017
2017 Pasture Land Values
Kansas Land Values

Source: USDA-NASS
Rent-to-Land Value Ratio

Source: USDA-NASS
Market-Based Land Values
Kansas Land Values

Source for market transaction data
- Property Valuation Department, Topeka

2014-16 sales data
- County location, population density
- Acres in sale
- Mixture of irrigated, non-irrigated and pasture in parcel
- 20-year average rainfall and water-holding capacity
- Enrollment in CRP
- Value of improvements is removed for bare land value
- Parcels under 40 acres are omitted
- Johnson and Wyandotte County parcels removed
## PVD Sales Data 2014-2016

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres in Sale</td>
<td>155.8</td>
<td></td>
</tr>
<tr>
<td>CRP Contracts</td>
<td>4.5%</td>
<td></td>
</tr>
<tr>
<td>Sales Per County</td>
<td>24.7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>All Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales</td>
<td>6,845</td>
</tr>
<tr>
<td>Transactions:</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2,117</td>
</tr>
<tr>
<td>2015</td>
<td>2,502</td>
</tr>
<tr>
<td>2014</td>
<td>2,333</td>
</tr>
</tbody>
</table>

**18% drop in sales**
# Model-Predicted Sales Price ($/ac)

<table>
<thead>
<tr>
<th>Land Type</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Irrigated</td>
<td>2,398</td>
<td>2,897</td>
<td>2,835</td>
</tr>
<tr>
<td>Irrigated</td>
<td>4,896</td>
<td>5,540</td>
<td>5,444</td>
</tr>
<tr>
<td>Pasture</td>
<td>1,726</td>
<td>1,871</td>
<td>1,684</td>
</tr>
<tr>
<td>All Cropland and Pasture</td>
<td>$3,027</td>
<td>$3,378</td>
<td>$3,321</td>
</tr>
</tbody>
</table>

10.4% decline from 2015
Land Model Results
Land Model Results

Non-Irrigated Land

17% decline

Estimated Value ($/ac)

2013 2014 2015 2016

KSU USDA
Land Model Results

9% decline
Land Model Results

Pasture Land

- Estimated Value ($/ac)

- 5% decline

- 2013
- 2014
- 2015
- 2016

- KSU
- USDA
2016 Non-Irrigated Land Values
2016 Pasture Land Values

- Cheyenne: $1,278
- Rawlin: $1,271
- Decatur: $1,821
- Norton: $3,133
- Phillips: $1,271
- Smith: $1,821
- Jewell: $1,656
- Republic: $1,417
- Washington: $1,836
- Marshall: $2,253
- Nemaha: $1,278
- Brown: $3,133
- Donip: $2,253
- Atchison: $1,278
- Atchison: $3,133
- Jackson: $1,271
- Leon: $1,271
- Leaven: $1,271
- Lyon: $1,271
- Shawnee: $1,271
- Johnson: $1,271
- Osage: $1,271
- Franklin: $1,271
- Miami: $1,271
- Linn: $1,271
- Chautauqua: $1,271
- Montgomery: $1,271
- Labette: $1,271
- Cherokee: $1,271

Map shows the 2016 pasture land values across different counties in Kansas.
2016 Irrigated Land Values
2017 Projections
Land Model Results

Non-Irrigated Land

Estimated Value ($/ac)

- 25% decline

KSU USDA
Land Model Results

Irrigated Land

Estimated Value ($/ac)

- 4% decline

2013 2014 2015 2016 2017p

KSU USDA
Land Model Results

Pasture Land

15% decline

Estimated Value ($/ac)

2,000
1,500
1,000
500
-

2013 2014 2015 2016 2017p

KSU USDA
Long-Run Growth
Kansas Land Values

Red (1962-2017)  
Green (1962-2009)  

9.8% decline  
31.6% decline  
47.6% decline
Rental Rates
Rental Rates-Ellis Co.

Source: USDA-NASS
Rental Rates-Ellis Co.

Source: USDA-NASS
Public Information

Limited public information on rental rates
  ◦ Surveys (USDA, some KS Counties)
  ◦ K-State budgeting approach: what a representative farmer could afford to pay

Comparisons need to be done carefully
  ◦ One measures what is actually being paid
  ◦ One measures what we expect could be paid
## KSU Non-Irrigated Rental Rates

<table>
<thead>
<tr>
<th>Central District</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barton</td>
<td>48.20</td>
<td>34.10</td>
<td>17.40</td>
<td>34.10</td>
</tr>
<tr>
<td>Dickinson</td>
<td>65.70</td>
<td>46.00</td>
<td>24.60</td>
<td>48.40</td>
</tr>
<tr>
<td><strong>Ellis</strong></td>
<td>36.70</td>
<td>25.90</td>
<td>13.10</td>
<td>24.70</td>
</tr>
<tr>
<td>Ellsworth</td>
<td>53.40</td>
<td>37.60</td>
<td>19.20</td>
<td>35.30</td>
</tr>
<tr>
<td>Lincoln</td>
<td>58.00</td>
<td>40.90</td>
<td>21.10</td>
<td>39.70</td>
</tr>
<tr>
<td>Marion</td>
<td>58.90</td>
<td>41.50</td>
<td>21.90</td>
<td>43.20</td>
</tr>
<tr>
<td>McPherson</td>
<td>61.30</td>
<td>43.10</td>
<td>22.30</td>
<td>44.50</td>
</tr>
<tr>
<td>Rice</td>
<td>60.10</td>
<td>42.50</td>
<td>22.00</td>
<td>42.00</td>
</tr>
<tr>
<td>Rush</td>
<td>42.20</td>
<td>30.00</td>
<td>15.10</td>
<td>28.90</td>
</tr>
<tr>
<td>Russell</td>
<td>46.40</td>
<td>32.90</td>
<td>16.60</td>
<td>32.00</td>
</tr>
<tr>
<td>Saline</td>
<td>60.80</td>
<td>42.50</td>
<td>22.30</td>
<td>43.00</td>
</tr>
<tr>
<td><strong>Average:</strong></td>
<td><strong>$53.79</strong></td>
<td><strong>$37.91</strong></td>
<td><strong>$19.60</strong></td>
<td><strong>$37.80</strong></td>
</tr>
</tbody>
</table>
USDA vs. KSU - Ellis

Non-Irrigated Rental Rates ($/ac)

- 2013: $63.70
- 2014: $55.00
- 2015: $36.70
- 2016: $40.00
- 2017: $13.10
- 2018: $24.70

Source: USDA-NASS and www.AgManager.info/land-leasing
Why are rents staying high?

Multi-year leases
- Consider signing 3-5 year leases but renegotiate rate annually

Good yields in 2016, soybeans profitable
- Kept some profitability in sector to pay rents that wouldn’t be affordable with average or below average yields

People are willing to pay more than they can afford in the short run
- Length of the short run is going to vary by producer
Online Resources

2016 Kansas County-Level Ag Land Values
- www.agmanager.info/land-leasing/land-buying-valuing

2017 Rent Estimates: Non-Irr. & 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
Pasture Rental Rate Tool
Welcome to Web Soil Survey (WSS)

Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation’s counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

Soil surveys can be used for general farm, local, and wider area planning. Onsite investigation is needed in some cases, such as soil quality assessments and certain
Kansas Land Values and Rental Rates

Mykel Taylor
Associate Professor
K-State Dept. of Agricultural Economics
mtaylor@ksu.edu