

# Kansas Agricultural Land Values

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May 30, 2014

Webinar sponsored by: Porter Cattle Company of Reading, KS



## KANSAS AG LAND VALUES

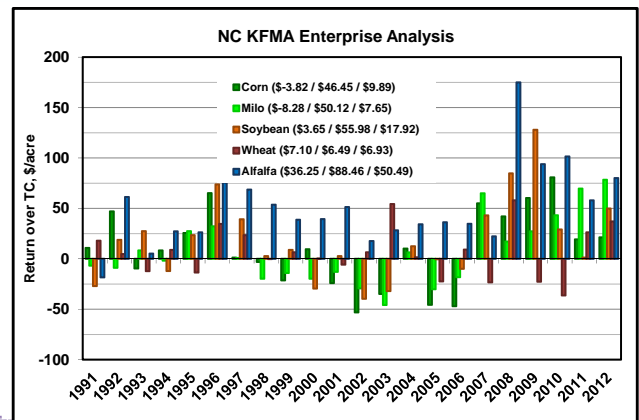


## Land Markets

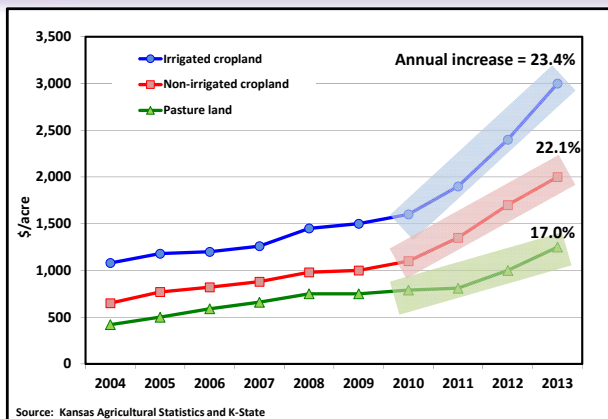
- Why the rapid increase in land values?
  - Interest rates are LOW and are expected to stay that way for the near-term (through 2015?)
  - If you are holding cash...
    - Savings rates are near zero
  - If you want to borrow...
    - Lock in a historically low fixed rate
    - Agriculture (especially crops) has seen several good years
    - Farmers are holding cash



## Land Markets



## Kansas Land Values

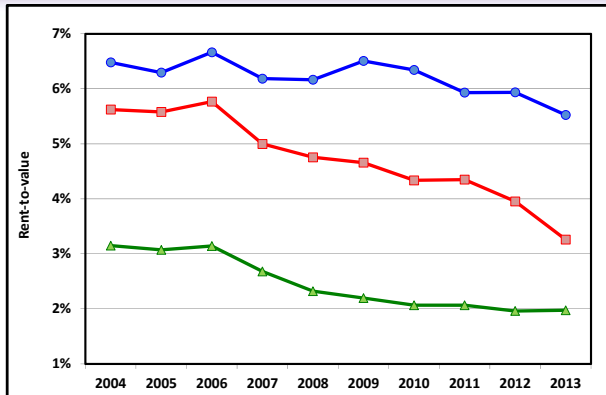


## Land Markets

- Land as an investment
  - Historic cash returns-to-values have been 5-7% for cropland and 3% for pasture
- But that has been changing over the last 5 years...



## Cash Returns to Farm Land



Source: Kansas Agricultural Statistics and K-State



## Kansas Land Values

- Where do we get information on land values?
- KS Ag Stats Service
  - Annual survey series
  - Dropped CRD-level data for land values in 2010
  - Added county-level data for cash rents in 2009



**KANSAS FARMER ESTATE VALUE AND CROPLAND RENT HIGHER**

TOPEKA, KS, August 2, 2013 – Kansas's farm and estate value, a measurement of the value of all land and buildings on farms, increased from 2012, according to USDA's National Agricultural Statistics Service. Farms and estate value for 2013 averaged \$1,900 per acre. This is up \$270 per acre or 16 percent higher than last year's record level.

Cropland value increased 10 percent from last year to \$2,300 per acre. Cropland value averaged \$2,300 per acre, up \$300 from last year. Irrigated cropland value averaged \$3,100 per acre, up \$400 from a year ago. Pastureland, at \$1,250 per acre, increased \$200 from a year ago.

Cash rent paid to landlords in 2013 for cropland also increased from last year. Irrigated cropland now averaged \$125 per acre, an increase of \$10. Cropland cash rent averaged \$10 per acre, an increase of \$1 per acre. Pasture rent for cash, which averaged \$11.50 per acre, is up \$1.00 from the previous year.

County level averages of 2013 cash rents paid to landlords will be released on September 9 and will be available through 2015. Quick facts: Quick facts is located at <http://www.ksre.k-state.edu>.

Access the National publication for this release at: [http://nass.usda.gov/publications/cropland/cropland\\_val\\_13.pdf](http://nass.usda.gov/publications/cropland/cropland_val_13.pdf)

Did not publish a report in 2013 – reported state averages and provided a link to NASS website.

Find agricultural statistics for your county, state, and the Nation at [www.nass.usda.gov](http://www.nass.usda.gov)



## High Plains Land Values

- Where do we get information on land values?
- KC Federal Reserve
  - Quarterly survey of bankers
  - 10<sup>th</sup> District includes CO, KS, NE, OK, WY and parts of NM and MO
  - Report percent change from previous year by land type



## Kansas Land Values

- Potential problems with these data
  - Surveys ask for an opinion (read: guess)
  - NOT a market-based estimate
  - Don't know the spread, only the average
  - Funding for KAS is declining
- Can we add to the available information and improve our estimates of land value trends?



## MARKET-BASED LAND VALUES



## Kansas Land Values

- Source for market transaction data
  - Property Valuation Department, Topeka
- 2010-13 sales data
  - County location
  - Acres in sale
  - Mixture of irrigated, non-irrigated and pasture
  - Soil types found on parcel
  - Enrollment in government set-asides
  - Value of improvements



- Data were 'cleaned' to remove outliers
  - Removed parcels under 40 acres
  - Bare land sales only (no houses)
  - Arm's length sales only
- Other aspects of data
  - Wyandotte and Johnson counties not in dataset
  - Soil type data used to create a productivity measure (AUM capacity)



	Average
Acres in Sale	230.8
CRP Contracts	1.68%
Sales Per County	69

Total Sales Transactions:	7,190
2013	19.7%
2012	23.5%
2011	24.8%
2010	32.1%



Land Type	Average \$/ac	% of All Transactions
Non-Irrigated	\$1,852	55.2%
Irrigated	\$2,609	5.9%
Native Grass Pasture	\$1,366	33.7%
Tame Grass Pasture	\$1,822	5.2%
All Cropland and Pasture	\$1,731	100%



Land Type	2013 Data Sample Average \$/ac	2013 USDA-NASS \$/ac
Non-Irrigated	\$2,368	\$2,000
Irrigated	\$3,183	\$3,000
Native Grass Pasture	\$1,619	\$1,250

- Use of a regression model to estimate land values
  - Alternative to summary statistics (average, range)
  - Accounts for variability in land found in sample



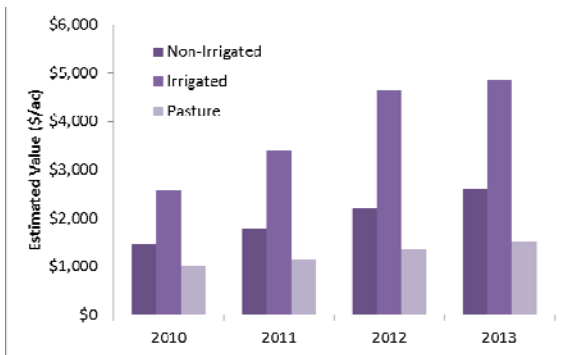
- Allows specification of unique characteristics of land parcels
  - Location (rain fall, taxes, proximity to development)
  - Parcel size, size squared
  - Productivity by soil type (AUM)
  - Land type (dryland, irrigated, pasture)
  - When the sale occurs (year, quarter)
  - CRP enrollment



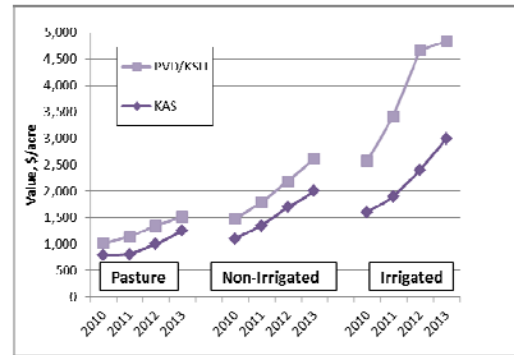
## LAND MODEL RESULTS



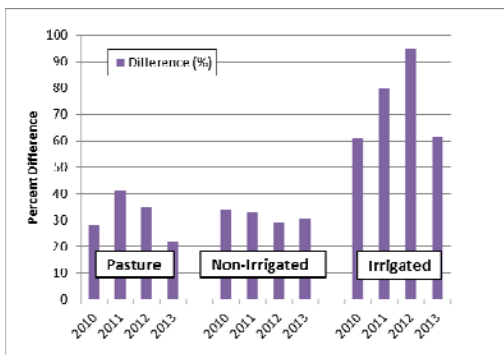
## Land Model Results



## Land Model Results



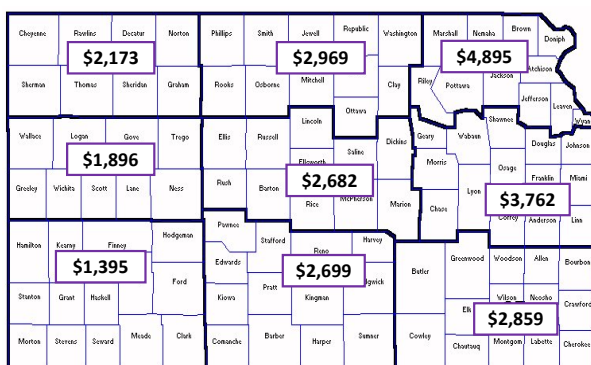
## Land Model Results



## Results of the Land Model

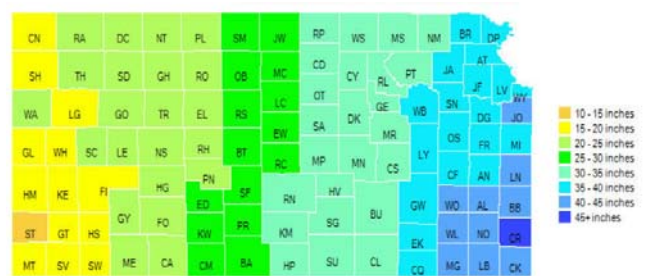
- 2013 estimate for non-irrigated cropland
  - \$2,814/acre
  - 40.7% higher than 2013 KAS state estimate of \$2,000/acre

## 2013 Non-Irrigated Land Values



## Rainfall

- County Average (1971 – 2000)

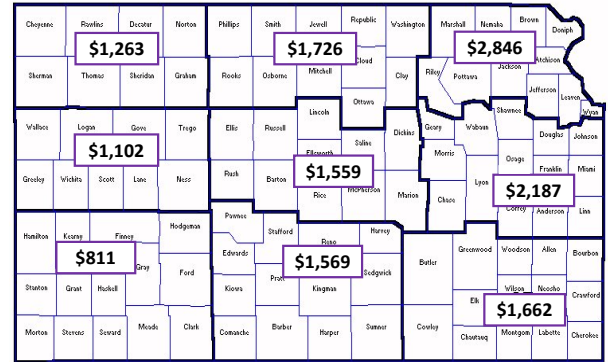


## Results of the Land Model

- 2013 estimate for pasture
  - \$1,636 /acre
  - 30.9% higher than 2013 KAS estimate of \$1,250/acre



## 2013 Pasture Land Values



## PARCEL-SPECIFIC FACTORS



## Land Model Results

- CRP enrollment decreases values
  - Approx. a 18% discount if enrolled acres included in the parcel
  - We don't know residual years on contract
- Pasture to non-irrigated cropland value ratio
  - Statewide estimate: 55.4% discount
- Irrigated to non-irrigated cropland value ratio
  - Statewide estimate: 62.8% premium

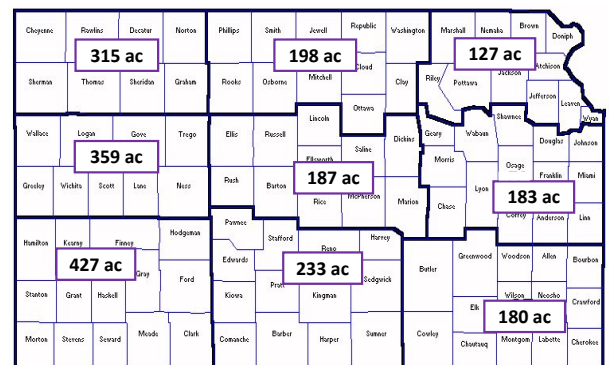


## Land Model Results

- Example of this effect in Lincoln County (Central KS)
  - 600 acre parcel of non-irrigated cropland
    - \$1,896/acre (tot: \$1,137,600)
  - 200 acre parcel of non-irrigated cropland
    - \$2,222/acre (tot: \$444,400)

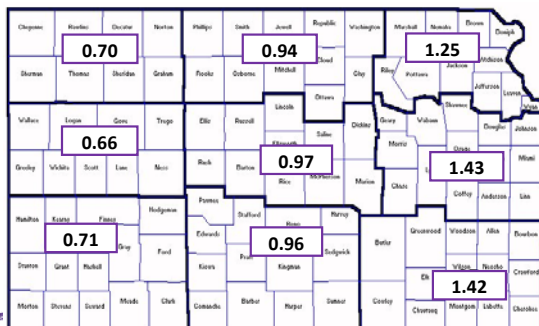


## Average Parcel Size



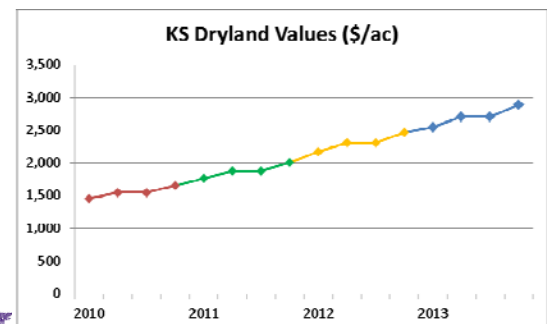
## Land Model Results

- Higher quality ground fetches higher price
  - 5.9% increase in land value from a 1 AUM increase in productivity index (NRCS)



## Land Model Results

- Selling season effects
  - Strongest prices: Oct.-Dec. (8.1% > summer)
  - Weakest prices: Jan.-Mar. (5.1% < summer)



## SUMMARY



- A word of caution when comparing county-level estimates of value to your land...
- Location and productive capacity are important drivers of price
  - Measureable and parcel-specific
- Model doesn't capture other factors in market
  - Expected returns to agriculture in future
  - Excess liquidity in the real estate market



## Kansas Agricultural Land Values

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- 2013 Kansas Agricultural Land Values  
[http://www.agmanager.info/farmmgmt/land/county/CountyLandValues\(May2014\).pdf](http://www.agmanager.info/farmmgmt/land/county/CountyLandValues(May2014).pdf)
- 2013/14 Rental Rates for Non-Irrigated Cropland  
[http://www.agmanager.info/farmmgmt/land/county/CountyNon-irrigatedRents\(Jan2014\).pdf](http://www.agmanager.info/farmmgmt/land/county/CountyNon-irrigatedRents(Jan2014).pdf)
- 2013/14 Rental Rates for Irrigated Cropland  
[http://www.agmanager.info/farmmgmt/land/county/CountyIrrigatedRents\(Jan2014\).pdf](http://www.agmanager.info/farmmgmt/land/county/CountyIrrigatedRents(Jan2014).pdf)

