Kansas Agricultural Land Values

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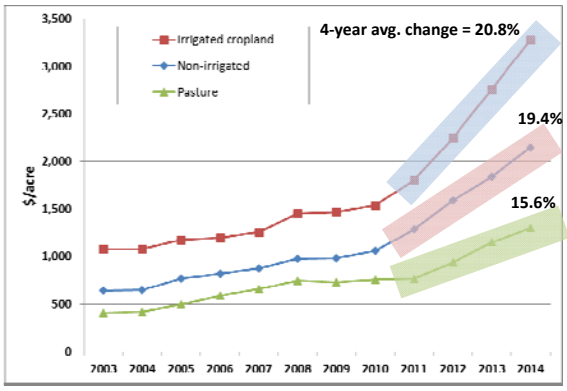
April 22, 2015

Webinar sponsored by: **Porter Cattle Company** of Reading, KS

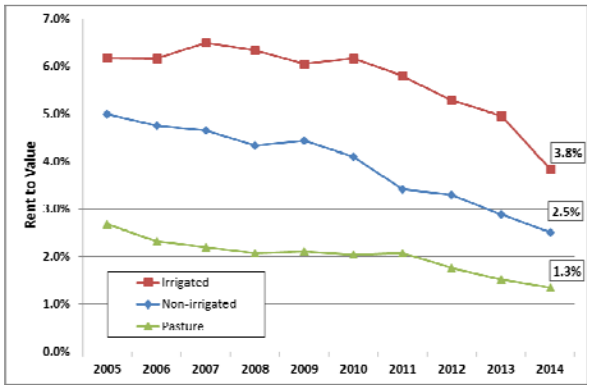
KANSAS AG LAND VALUES

Kansas Land Values



Source: USDA-NASS

Rent-to-Land Value Ratio



Source: USDA-NASS

Kansas Land Values

- Where do we get information on land values?
- KS Ag Stats Service
  - Annual survey series
  - Dropped CRD-level estimates in 2013
  - Only have a state value for irrigated, non-irrigated, and pasture land in Kansas

USDA
United States Department of Agriculture
National Agricultural Statistics Service

News Release

KANSAS FARM REAL ESTATE VALUE AND CROPLAND RENT HIGHER

TOPEKA, KS, August 2, 2013 – Kansas's farm real 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. Farm real estate value for 2013 averaged $1,900 per acre. This is up $200 per acre or 18 percent higher than last year's revised level.

Cropland value increased 19 percent from last year to $2,100 per acre. Dryland cropland value averaged $2,000 per acre, up $300 from last year. Irrigated cropland value averaged $3,000 per acre, up $800 from a year ago. Pastureland, at $1,250 per acre, increased $250 from a year ago.

Cash rent paid to landlords in 2013 for cropland also increased from last year. Irrigated cropland rent averaged $197 per acre, an increase of $18. Dryland cropland rent averaged $53 per acre, up slightly from a year earlier. Pasture rented for cash, which averaged $17.50 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 6 and will be available through NASS Quick Stats. Quick Stats is located at http://quickstats.nass.usda.gov/.

Access the National publication for this release at http://usda01.library.cornell.edu/usda/current/AgriLandVa/AgriLandVa-08-02-2013.pdf

Find agricultural statistics for your county, State, and the Nation at www.nass.usda.gov

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High Plains Land Values

- Where do we get information on land values?
- KC Federal Reserve
  - Quarterly survey of bankers
  - 10th 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 USDA-KASS 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
- 2010-14 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

PVD Sales Data

- 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)

PVD Sales Data 2010-14

2014	Average
Acres in Sale, 2014	229.7
CRP Contracts, 2014	1.80%
Sales Per County, 2014	15.0
All Years	
Total Sales Transactions:	8,743
2014	17.8%
2013	16.1%
2012	19.3%
2011	20.5%
2010	26.3%

PVD Sales Data 2014

Land Type	Average $/ac	% of All Transactions
Non-Irrigated	$2,833	54.7%
Irrigated	$3,478	4.9%
Pasture	$1,991	40.4%
All Cropland and Pasture	$2,524	100%

Land Model

Land Type	2014 Data Sample Average $/ac	2014 USDA-NASS $/ac
Non-Irrigated	$2,833	$2,150
Irrigated	$3,478	$3,280
Pasture	$1,991	$1,300

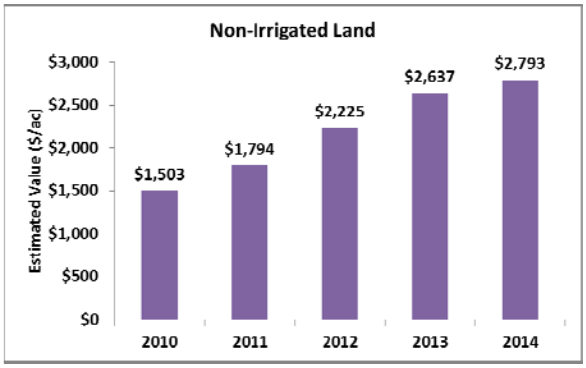
- Use of a regression model to estimate land values
  - Alternative to summary statistics (average, range)
  - Accounts for variability in land found in sample

Land Model

- 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

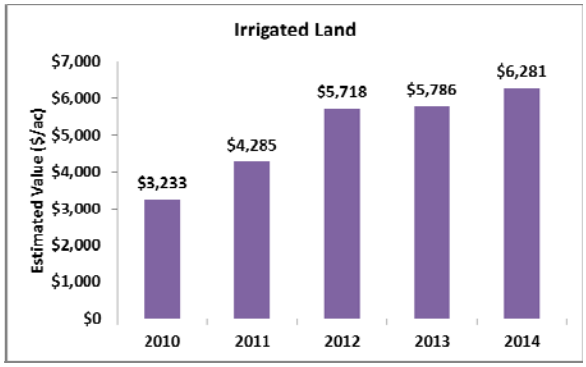
LAND MODEL RESULTS

Land Model Results



Source: Taylor, 2015

Land Model Results



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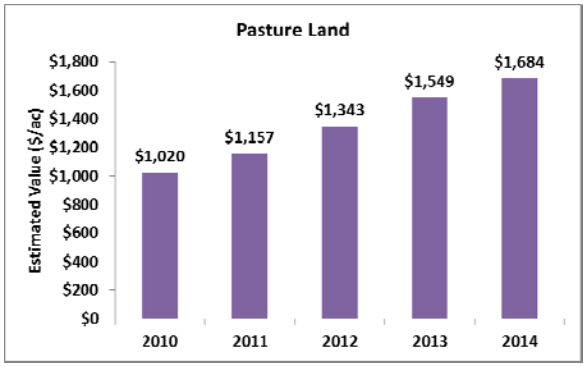

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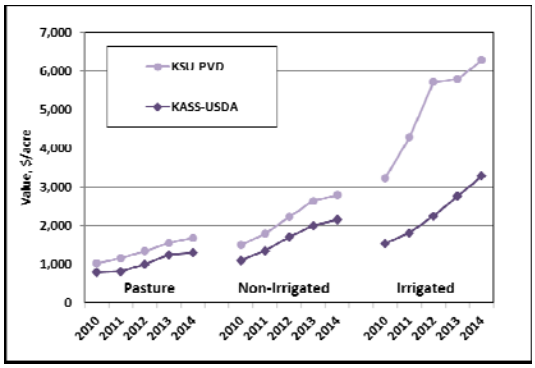
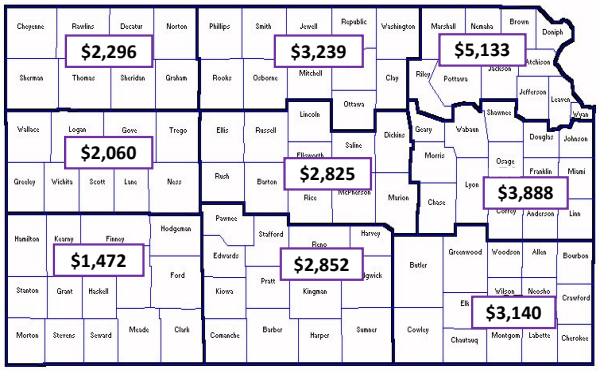


Source: Taylor, 2015

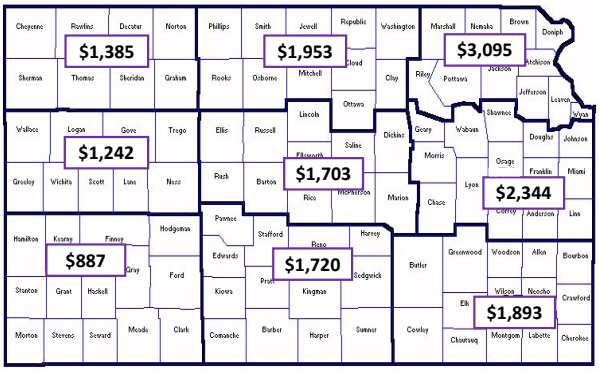
Land Model Results

Year	Non-Irrigated	Irrigated	Pasture
	Annual % Change in Value		
2010-11	19%	33%	13%
2011-12	24%	33%	16%
2012-13	19%	1%	15%
2013-14	6%	9%	9%

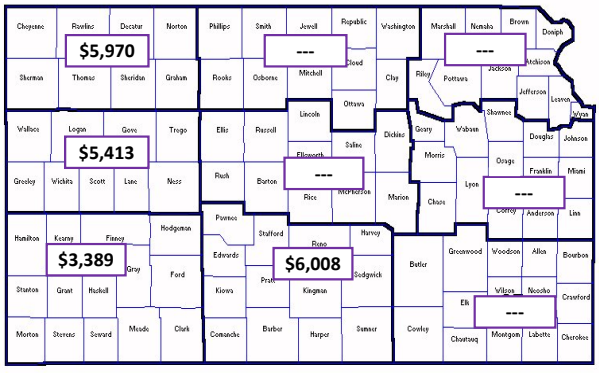
2014 Non-Irrigated Land Values



2014 Pasture Land Values

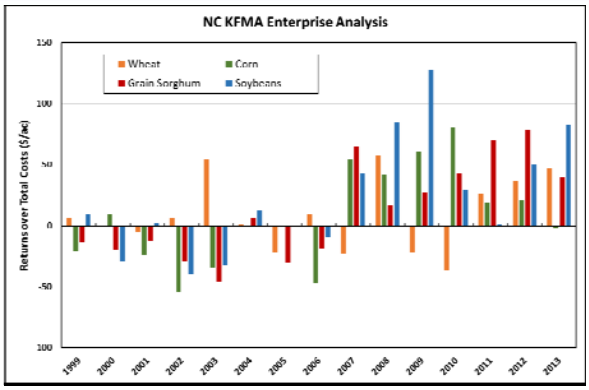


2014 Irrigated Land Values



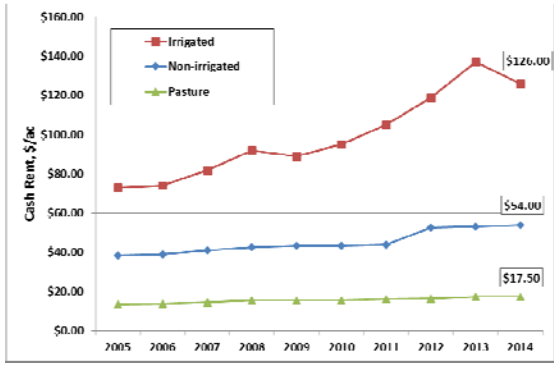
RENTS AND NET FARM INCOME

Returns to Farming



Source: KS Farm Management Association

Cash Rents



Source: USDA-NASS

Rental Rates

- Survey results tend to lag market due to
  - Survey reflect average rents paid (masks quality differences)
  - Doesn't consider when the rental rates were negotiated
  - May include non-market activities
- Are there alternatives to the USDA-KASS survey?

Projected Rental Rates

- Another way to obtain an estimate of cash rental rates for cropland
  - Budgeting approach that reflects *expected* returns to farming
  - Marginal rental rate versus average rental rate
- Calculate crop share revenues based on long-term profit expectation and apply a risk premium

Projected Rental Rates

- Crop share revenues
  - Used predicted crop share % obtained by budgets using current inputs costs and production practices
  - County-level yields from a 20 year trend
  - Expected cash prices from futures and local basis
  - Adjust expected revenues down by 15% risk premium
- Biggest different between 2014 and 2015 cash rent projections…

Projected Rental Rates

- Expected crop prices dropped significantly between 2014 and 2015

Year	Expected Prices ($/bu)			
	Wheat	Corn	Soybeans	Grain Sorghum
2014	6.61	4.60	10.70	4.35
2015	5.79	4.09	9.30	3.94
$ change	-0.82	-0.51	-1.40	-0.41

Note: Prices are the average price of harvest futures contracts in preceding November

Non-Irrigated Rental Rates

Region	2014 KSU ($/ac)	2015 KSU ($/ac)	Change in Rent (%)
Northwest	70.90	38.75	-45.3
West Central	65.51	30.18	-53.9
Southwest	57.29	22.03	-61.5
North Central	102.55	69.31	-32.4
Central	86.27	53.79	-37.6
South Central	69.29	42.61	-38.5
Northeast	167.65	119.50	-28.7
East Central	103.84	63.84	-38.5
Southeast	55.83	31.64	-43.3

Source: Taylor, 2015

Irrigated Rental Rates

Region	2014 KSU ($/ac)	2015 KSU ($/ac)	Change in Rent (%)
Northwest	179.13	112.75	-37.1
West Central	141.00	81.00	-42.6
Southwest	139.54	71.62	-48.7
North Central	239.88	167.13	-30.3
Central	183.20	114.20	-37.7
South Central	147.64	77.45	-47.5

Note: Estimated values reflect tenant-owned pivot
Source: Taylor and Tsoodle, 2015

Returns to Land

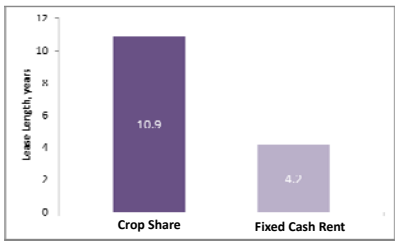
- Has every farmer dropped their cash rents for 2015?
- Answer: no

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

Returns to Land

- 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



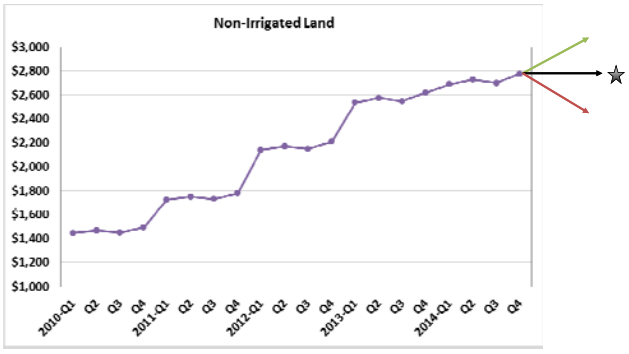
Source: KS Farm Management Association

SUMMARY

Summary

- Land values are up for 2014, but rate of growth has slowed for all land types
- Appears to be reflecting 2014 net farm income and expected income for 2015
- Are we headed for a big drop in land values?
  - Not likely, due to continued low interest rates
  - Would also need a large increase in supply of land on market to see a repeat of 80's decline in values

Non-Irrigated Land Values



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Online Resources

- 2014 Kansas Agricultural Land Values

http://www.agmanager.info/farmmgt/land/county/CountyValues_April_2015.pdf

- 2014/15 Rental Rates for Non-Irrigated Cropland

http://www.agmanager.info/farmmgt/land/county/CountyNon-irrigatedRents(Jan2015).pdf

- 2014/15 Rental Rates for Irrigated Cropland

http://www.agmanager.info/farmmgt/land/county/CountyIrrigatedRents_Feb-2015.pdf