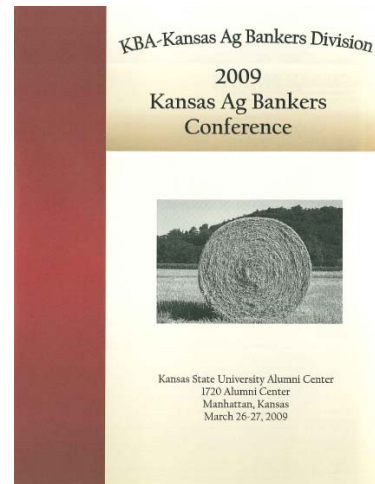


Farm Land Values and Leasing Trends

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Returns to land

- Capital gains (growth)
- Cash returns (rent)
- The two returns to land are similar to other investments such as the stock market (capital gains and dividends)

2

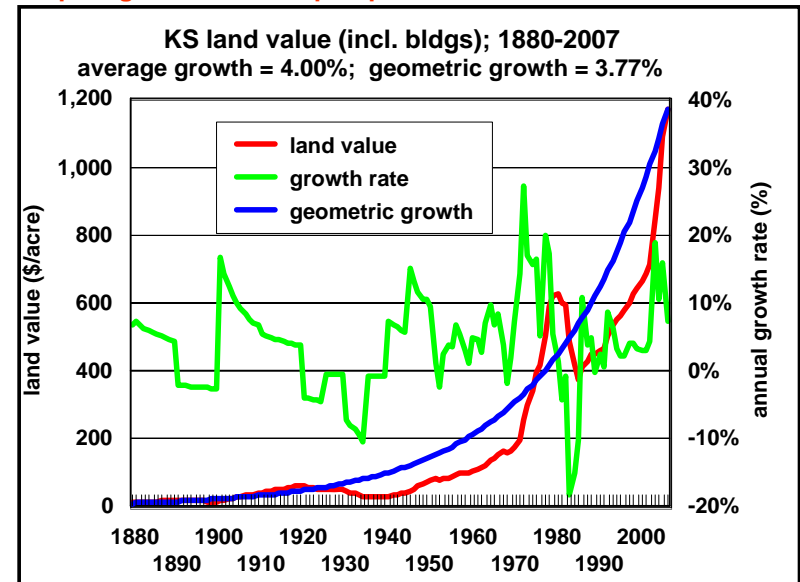
Factors/issues impacting land values

(alphabetical order)

- Farm profitability
- Farm size
- Government programs
- Input costs (e.g., fuel and fertilizer)
- Interest rates
- Outside investors (i.e., stock market money)
- Recreation uses (e.g., hunting)
- Renewable fuels (ethanol and bio-diesel)
- Section 1031 tax exchanges
- Technology (e.g., no-till, precision ag, bio-tech, DNA)
- Urban sprawl
- Weather (i.e., drought, flood)

3

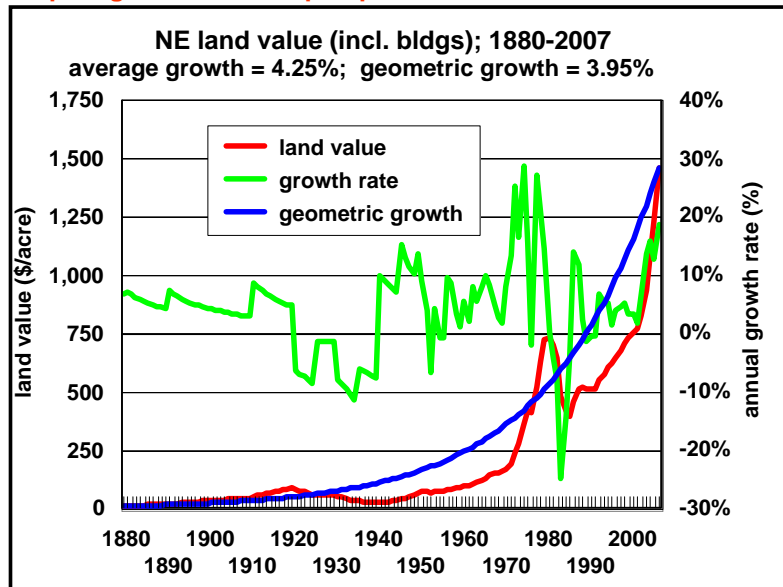
Capital gains historical perspective



1879 starting land value for Kansas was \$10.30

4

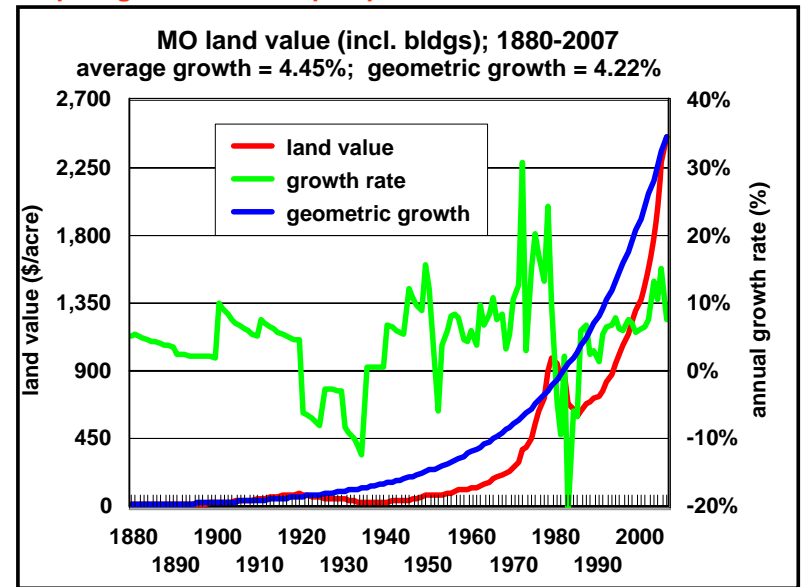
Capital gains historical perspective



1879 starting land value for Nebraska was \$10.30

5

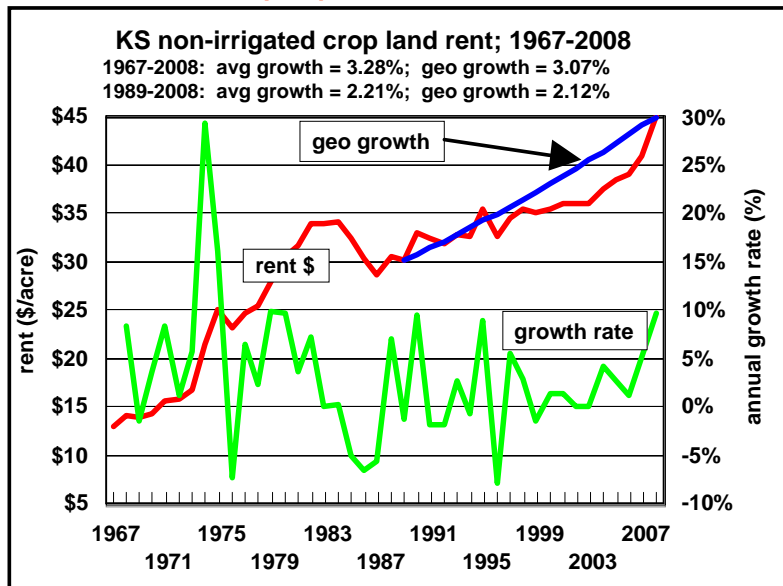
Capital gains historical perspective



1879 starting land value for Missouri was \$12.37

6

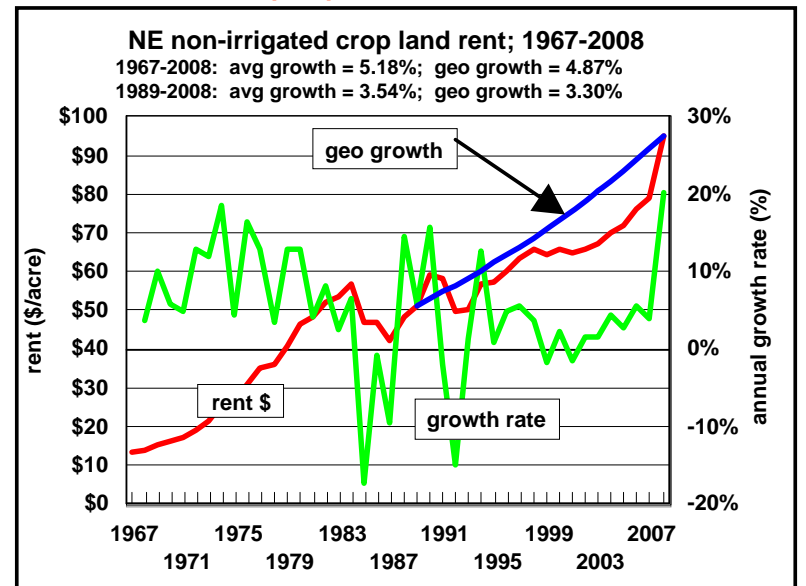
Cash rent historical perspective



1967-2007 average land value growth = 5.62%

9

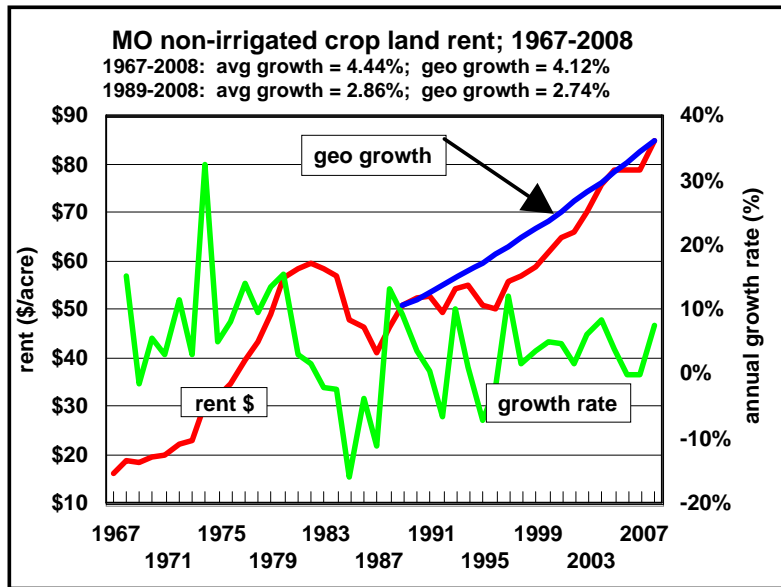
Cash rent historical perspective



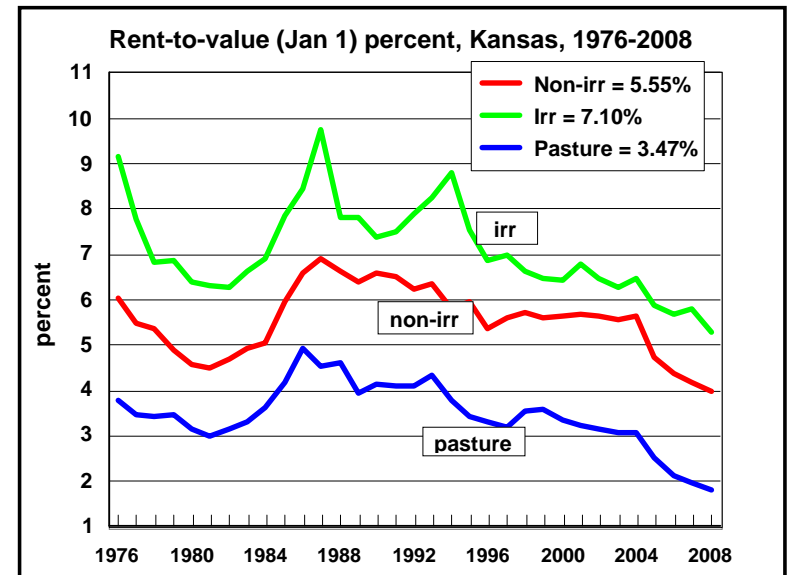
1967-2007 average land value growth = 6.57%

11

Cash rent historical perspective



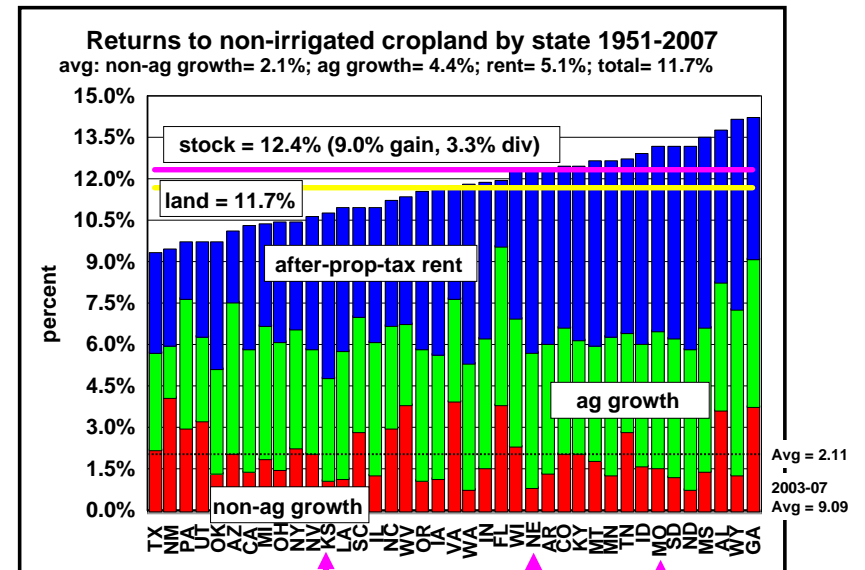
1967-2007 average land value growth = 6.86%



Downtrend hints at something else going on . . .

A number of years back we began to incorporate non-agricultural aspects into agricultural land values

We separated land returns into various components



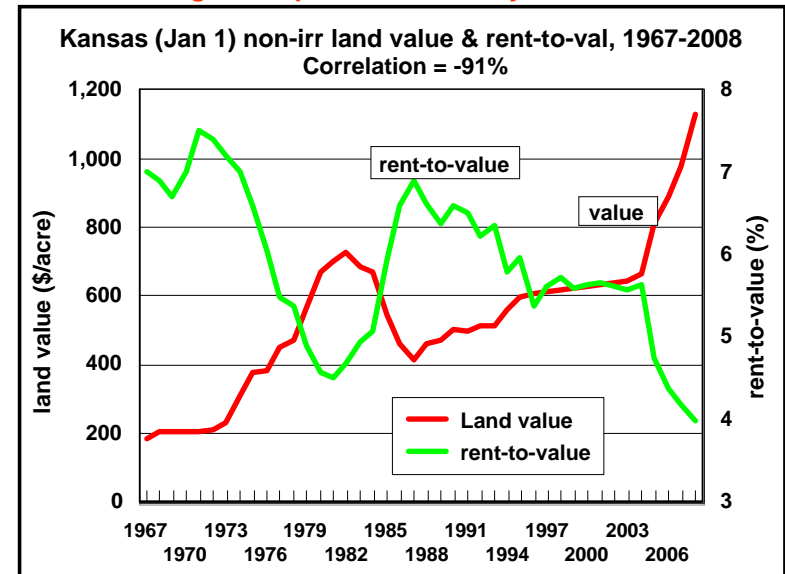
39 states ranked by total returns to land

Non-ag growth is:

- True non-ag growth
 - Recreation, hunting, homesites, 1031 exchanges
 - Subject to the broader economic forces
 - Unemployment rate, taxation issues, competing investments
- Speculation
 - A portion of true non-ag growth is speculation on future trends about such things
 - Speculation among ag buyers (farmers and investors) about future ag trends
- Not easy to sort out the two!

20

Are we seeing a land price bubble today?



21

Buying Land – How much can I afford?

- Valuing the capital gains portion
 - Pick a “selling point,” say 30 years from now
 - What will the land be worth then?
 - Assume some annual capital gain % -- ag and non-ag
 - What is left after “sell” & pay cap gains tax?
 - What is that amount worth today?
- Valuing the rent portion
 - What is cash rent today, ag and non-ag?
 - How will rents evolve (grow) over time?
 - What is the future stream of rents worth today?
- Maximum bid = today’s value of the capital gain + today’s value of the rent stream

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Microsoft Excel - KSU-Landbuy.xls spreadsheet for land investment decisions (example represents 2008 average values for North Central KS (KAS))

Inputs				Label			
KS	KS	KS	Average	Label			
Crop	Pasture	Waste		State where land is located (enter as two letter abbreviation, e.g., Kansas = KS)			
120	35	5	160	Land classification (e.g., cropland, pasture, woods)			
\$1,110	\$770	\$0	\$1,001	Enter the market (e.g., ag, non-ag)			
\$1,110	\$770	\$0	\$1,001	Purchase price (\$/acre)			
\$52.00	\$16.00	\$0.00	\$42.50	Ag rent (\$/acre)			
\$3.50	\$2.70	\$0.00	\$3.50	Real estate tax rate (%)			
\$0.00	\$0.00	\$0.00	\$0.00	Non-ag rent (\$/acre)			
30	30	30	30	Time horizon (years)			
43%	43%	43%	43%	Income tax rate (%)			
15%	15%	15%	15%	Capital gains tax rate (%)			
7.00%	7.00%	7.00%	7.00%	Interest rate on loans (discount rate)			
40.0%	40.0%	40.0%	40.0%	Percent of purchase price that is financed (only needed for return on equity calculation)			
3.01%	3.01%	3.01%	3.01%	Growth rate on ag rent and ag portion of land value (see column G in Guidelines)			
0.00%	0.00%	0.00%	n/a	Growth rate on non-ag rent (normally >= inflation rate)			
4.00%	4.00%	4.00%	4.00%	Growth rate on total (ag and non-ag) land value (see column I in Guidelines)			
0.96%	0.96%	0.96%	0.96%	Calculated non-ag growth rate on land value			
Calculated Outputs				Label			
3.99%	3.99%	3.99%	3.99%	After-tax interest rate on land loans (discount rate)			
\$27.43	\$7.58	\$0.00	\$22.23	After-tax rent, \$/acre (now property taxes are removed as well)			
\$712.85	\$197.12	\$0.00	\$577.75	Discounted value of all future after-tax ag rents			
\$0.00	\$0.00	\$0.00	\$0.00	Discounted value of all future after-tax non-ag rents			
\$3,600.17	\$2,497.42	\$0.00	\$3,246.44	Present value of all future after-tax ag rents			
\$2,702.12	\$1,874.44	\$0.00	\$2,436.62	Present value of all future after-tax non-ag rents			
\$997.71	\$692.10	\$0.00	\$899.68	Present value less market price			
\$761.68	\$528.37	\$0.00	\$686.84	Present value less purchase price			
\$1,710.55	\$889.22	\$0.00	\$1,477.43	Approximate pre-tax rate of return on assets			
86%	82%	n/a	86%	Approximate pre-tax rate of return on equity			
65%	26%	n/a	65%				
\$600.55	\$119.22	\$0.00	\$476.50				
\$600.55	\$119.22	\$0.00	\$476.50				
10.50%	7.99%	n/a	10.07%				
12.83%	8.65%	n/a	12.13%				

We provide quite a bit of background on the inputs you need to inject to make an informed land ownership decision.

More and more we tend to focus on ROA and ROE, especially for making good micro land purchases

So, what is “rent today?”

24

Basic Lease Types on Crop Land

- **Crop-share**
 - Landowner shares in annual revenues and typically in certain annual costs
- **Cash rent**
 - Landowner gets a fixed annual cash amount for use of land
- **Numerous variants around these two**

25

Determining the terms of a crop lease ...

- **How are cash lease rates or the terms of crop share leases established?**
 - Short answer is “the market”

26

Market established rates...

- **Land Use Value Project of the KSU Ag Econ Dept annually conducts one of four surveys (irrigated, non-irrigated, pasture, input costs)**
- **Kansas Agricultural Statistics (KAS) annually surveys landowners and producers regarding land values and cash rents**
- **Local and regional surveys of leasing practices**
- **With surveys there is often a trade-off between statistical validity and level of aggregation**

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Distribution of leases by type of lease ...

Region	Cash	Share	Other
Northwest	36.3%	59.8%	3.9%
West Central	24.3	71.7	4.0
Southwest	16.5	75.5	8.0
North Central	34.9	60.5	4.6
Central	30.9	64.6	4.5
South Central	21.0	76.4	2.6
Northeast	38.8	53.5	7.7
East Central	36.0	54.3	9.6
Southeast	36.2	58.9	4.9
State	30.5	63.9	5.6

Source: Schlegel and Tsoodle -- 2006 KAS/KSU survey

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Distribution of crop share percentages...

Percent of Leases by Crop Share Percentage

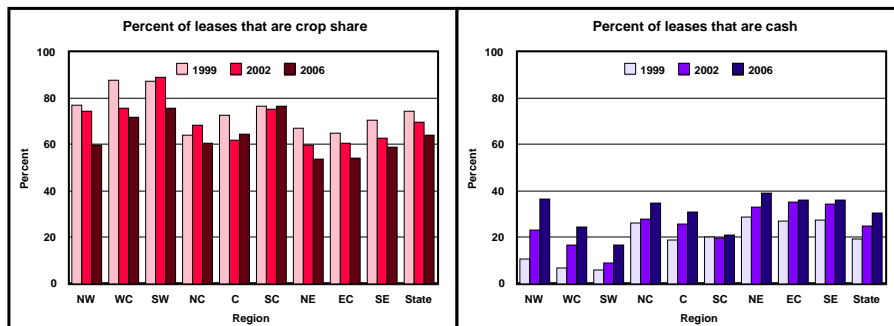
Landlord Share	Crop Reporting District								
	NW-10	WC-20	SW-30	NC-40	C-50	SC-60	NE-70	EC-80	SE-90
10.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%
16.5%	1.7%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.6%
20.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.7%	0.0%
25.0%	2.9%	0.0%	4.1%	0.4%	0.3%	0.9%	3.8%	1.3%	1.1%
33.3%	90.1%	96.1%	89.5%	69.4%	85.2%	94.3%	20.5%	79.5%	92.6%
40.0%	0.0%	1.7%	0.9%	25.9%	9.4%	3.5%	25.7%	10.6%	4.0%
45.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
50.0%	4.1%	2.2%	3.2%	3.5%	2.8%	1.3%	50.0%	7.9%	1.7%
60.0%	0.0%	0.0%	0.5%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
66.7%	0.0%	0.0%	1.8%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%
100.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Schlegel and Tsoodle -- 2006 KAS/KSU survey

Wheat belt
Corn belt

31

Basic Lease Types in Kansas



Source: KSU and KS Ag Stat - Non-Irrigated Farm Lease Arrangement Surveys

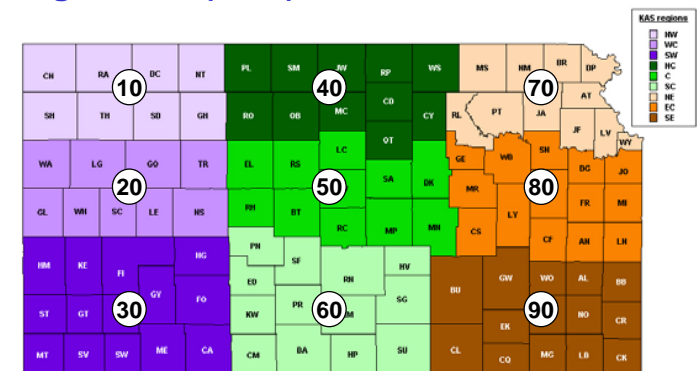
Crop share continues to be the most prevalent, but the trend has been a shift from crop share arrangements towards more cash rent leases.

- 1) What factors have been behind this trend?
- 2) Do we expect this trend to continue?

32

Market going rate ...

- Kansas Agricultural Statistics (KAS) reports average cash rent values for non-irrigated, irrigated, and pasture land at the crop reporting district (CRD) level



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KAS surveyed market rates ...

United States Department of Agriculture
National Agricultural Statistics Service, Kansas Field Office
AGRICULTURAL LAND VALUES & RENTS
Kansas Agricultural Statistics
Cooperating with the Kansas Department of Agriculture
Released August 10, 2007

Highlights

Kansas' average value of all farmland and buildings for 2007 is estimated to be \$1,050 per acre. This compares with \$940 in 2006 and \$600 in 2005. Kansas' average value of all farmland and buildings increased by 10 percent from 2006 to 2007. The total value of all farmland and buildings was \$51.4 billion dollars or an increase of almost 10 percent from last year. Irrigated cropland values rose 8.5 percent, non-irrigated was up 10.1 percent, and pasture land values increased 15.6 percent. Rental rates for non-irrigated cropland increased by \$2.00 per acre and irrigated cropland was up \$0.50 per acre. Pasture rents for 2007 rose \$30 per acre to \$14.50 per acre.

Kansas Farmland Values and Rents¹, 1996-2007

Year	Cropland			Pasture and Rangeland		All Farmland and Buildings	Total Value		
	Irrigated	Non-Irrigated	All Crop Land	Value	Rent				
1996	966	607	638	68.30	32.70	361	11.90	553	28,268
1997	990	615	649	69.00	34.50	365	11.60	566	29,618
1998	1,010	620	655	67.00	33.50	367	13.00	577	29,618
1999	1,020	625	660	66.00	35.00	370	13.30	600	30,520
2000	1,040	630	666	67.00	35.50	365	12.80	626	31,488
2001	1,050	635	673	72.00	36.00	390	12.90	640	30,500
2002	1,080	640	679	70.00	36.00	400	12.60	666	31,455
2003	1,090	645	684	69.00	37.00	410	12.60	690	32,332
2004	1,110	648	705	72.00	37.50	430	13.20	715	33,748
2005	1,240	610	940	72.00	36.50	530	13.40	850	40,120
2006	1,300	690	927	74.00	39.00	640	13.70	940	44,568
2007	1,410	850	1,020	82.00	41.00	740	14.50	1,050	51,445

¹Rental rates are for land only.

Survey Background

The Agriculture Land Values & Rents Survey was conducted during May/June 2007. Survey respondents were asked to provide information on the value of the land they operate and the rental rates for any land they rented. Additional land value and rent data were collected in the June Agricultural Survey.

The Census provides the official base for estimates of all farmland values. However, the Census occurs once every five years and only estimates the value of all agricultural land and buildings. The Land Values & Rents Survey and Agricultural Survey provide data to make annual estimates of both market values and rental rates for different categories of farmland.

The average values in this report encompass a wide range of soil types and pastures. These data are more appropriate for studying overall trends and should not be used to establish rental rates or market values.

KAS report (2 years of cash rent data)

Farm Management Guide MF-1100
Kansas Land Prices and Cash Rental Rates
Department of Agricultural Economics - www.agsci.ksu.edu
Kansas State University Agricultural Experiment Station and Cooperative Extension Service

Kevin C. Dreyer
Agricultural Economist
Farm Management

Terry R. Kruse
Agricultural Economist
Crop Production

The Farm Management guide reports Kansas land prices and cash rents for 2007. These data are useful to farm managers as determining cash rent rates, to determine whether to purchase additional land, to determine whether to lease additional land, to determine whether to purchase additional land, and to determine whether to lease additional land. The average prices in this guide encompass periods of land that are widely in production. Thus, these data are more appropriate for analyzing trends than for establishing cash rents or rental rates for specific tracts of land.

Kansas Land Prices

Table 1 through 5 show average prices of land and buildings in each district and an average for the state for the same year. The districts are Southwest (SW), West Central (WC), Southwest (SW), South Central (SC), Central (C), South Central (SC), Northeast (NE), East Central (EC), and Southwest (SW). These 10% Kansas Agricultural Statistics land values price information on three types of land: non-irrigated cropland, irrigated cropland, and pasture.

Kansas Agricultural Statistics

Table 1 through 5 show average prices of land and buildings in each district and an average for the state for the same year. The districts are Southwest (SW), West Central (WC), Southwest (SW), South Central (SC), Central (C), South Central (SC), Northeast (NE), East Central (EC), and Southwest (SW). These 10% Kansas Agricultural Statistics land values price information on three types of land: non-irrigated cropland, irrigated cropland, and pasture. The annual data are based on February 1 for 1996-2006, and January 1 for 1995-2007.

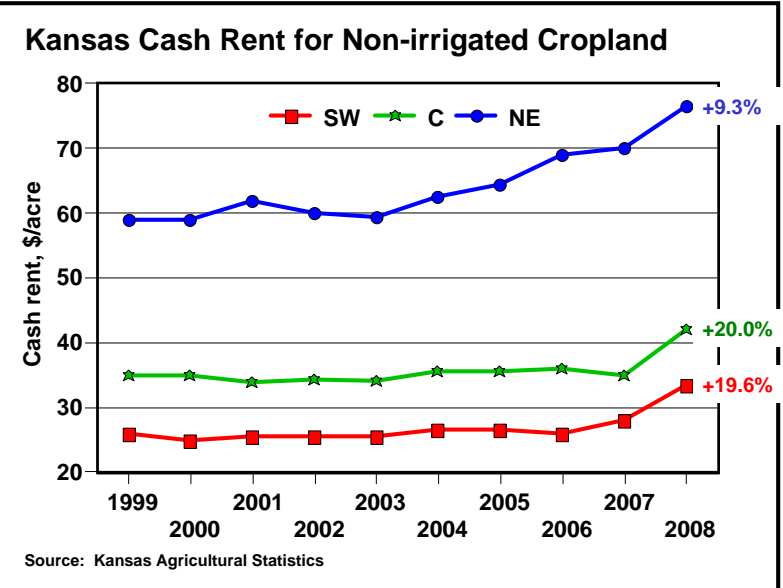
Table 1. Price per acre of land in farms and buildings, Kansas Agricultural Districts, 1999-2007

Year	SW	WC	SW	SC	C	SC	NE	EC	SE	SW
1999	310	310	310	310	310	310	310	310	310	310
2000	310	310	310	310	310	310	310	310	310	310
2001	310	310	310	310	310	310	310	310	310	310
2002	310	310	310	310	310	310	310	310	310	310
2003	310	310	310	310	310	310	310	310	310	310
2004	310	310	310	310	310	310	310	310	310	310
2005	310	310	310	310	310	310	310	310	310	310
2006	310	310	310	310	310	310	310	310	310	310
2007	310	310	310	310	310	310	310	310	310	310

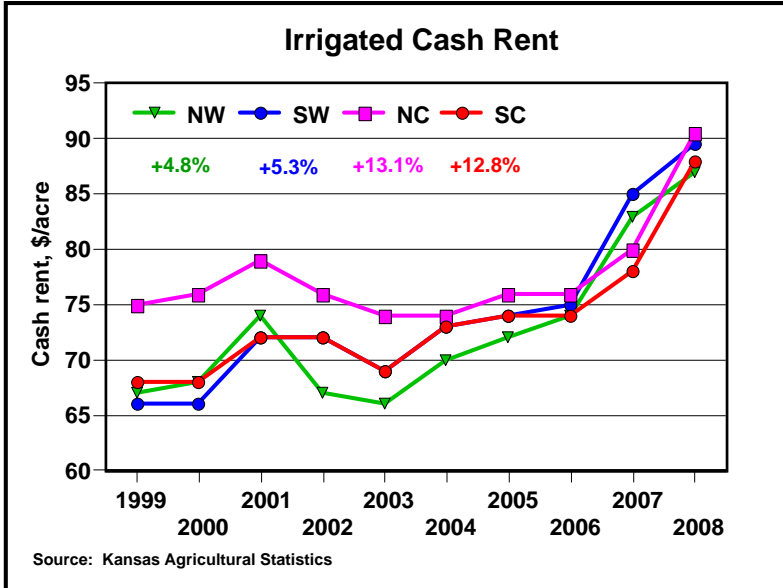
Land Economics 1 - Revised October 2007

KSU report (20 years of cash rent data)

Market going rate ...



Market going rate ...



In recent years, the majority of leasing questions received pertain to:

- Impact of adopting new technologies
- Cash renting
- “Non-traditional” leases
 - Net share rent
 - Flexible cash rent
 - Bushel rent
 - Combination cash/cropshare

... while “hot topic” has varied over time, the method of addressing questions has not changed.

“Non-traditional” leases ...

Numerous good reasons to use these different types of leases, but landowners and producers need to recognize several things when doing so ...

- Communication is critical
- Rules-of-thumb really don't exist
- More important to have a written lease
- Pay special attention to FSA rulings

40

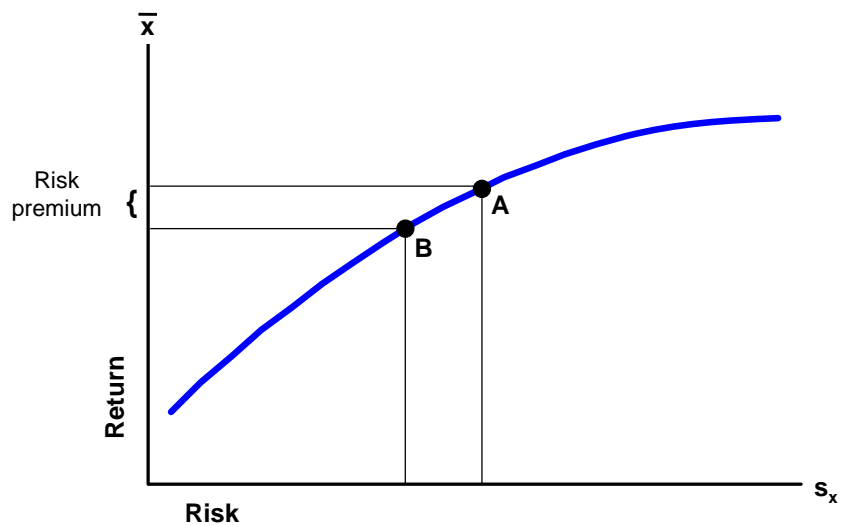
Cash rents ...

Numerous good reasons to go to cash rent, but landowners and producers need to recognize several things when doing so ...

- Land tends to change hands more often
- Relative risks change

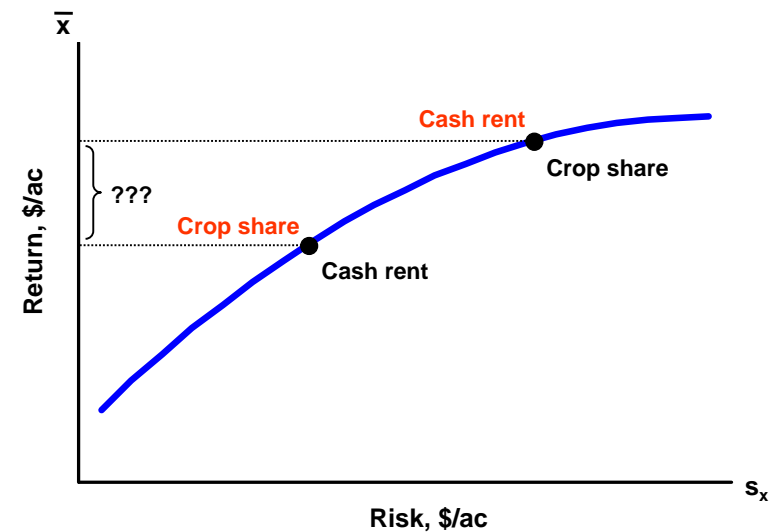
41

Risk-return tradeoff



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Landowner/producer risk-return tradeoff



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Risk

- Risk: variation about expected outcome
 - Suggests that the cash-equivalent of a share lease will be greater than cash rent
- Hasn't helped much in understanding rents
 - Tenant's risk lower recently (1990s thru 2006)
 - Cash rent is not riskless
 - Costs may be higher with share rents
 - So cash rents may be higher than share rents i.e., tenants bid up cash rents to avoid costs
- Crop share rent shares are sticky
 - Only way to bid up rents is through cash rent

Just when we got used to ignoring risk, it seems to come back into play . . .

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Flexible cash rents (method of paying bonuses)

1) Establish base cash rent

2) Flex/modify base rent based on...

- price deviation from base (fixed bushel rent)
 - yield deviation from base
 - price and yield (revenue) deviation from base
- Does flex work both ways?
 - Communication and documentation are extremely important to make sure everybody understands what they are agreeing to

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Determining the terms of a crop lease ...

- How are cash lease rates or the terms of crop share leases established?
 - Short answer is “the market”
- While landowners and tenants (i.e., the market) ultimately determine terms of crop share and cash leases, we use the equitable concept to arrive at a starting point for negotiations – and to better understand the market.
 - Equitable lease: Total returns divided in same proportion as resources contributed (cost-based)

50

Methods of establishing cash rent values ...

- Market going rate (if available)
-
- Crop share equivalent (adjusted for risk)
 - Landowner's cost
 - Amount tenant can afford to pay



The last three require yield, price, and government payment projections (as well as cost information used for crop share).

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KSU-Lease.xls

- A what-if spreadsheet to analyze rents
- Delineates relative contributions
- Allows considering cash vs. crop-share
 - Can deal with a risk premium
- Very flexible; can handle
 - Net share leases
 - Fixed bushel rents
 - Cash transfers
- Important purpose is to allow people to move beyond traditional leases when they need to change (and to analyze impact of cash rent)

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KSU Lease.xls ----- A spreadsheet budgeting program to determine equitable crop share and cash lease rental arrangements.

Version -- 12.20.08

INPUTS vs CALCULATED VALUES
 In the *Crop budgets*, *Shares*, and *Lease budgets* sheets all blue numbers are inputs and all black numbers are calculated from these inputs. The spreadsheet automatically recalculates every time an additional input is entered. Thus, it is important to wait until all data have been entered and reviewed before interpreting any of the calculated results (i.e., black numbers).

DESCRIPTION OF INPUTS
 The paper titled *KSU/Lease.pdf* serves as a "users guide" and provides a brief overview of this spreadsheet. Also, several of the input cells (i.e., blue numbers) have a red diamond in the upper right hand corner of the cell. By moving your mouse cursor over this diamond, a brief description of the input will be displayed on the screen.

COMPANION PUBLICATIONS
 This spreadsheet was developed as a decision-aid tool based on the principles of equitable leases outlined in several publications that can be found on the K-State Ag Econ departmental website (www.agecon.ksu.edu). Additionally, the budget format of this spreadsheet was designed to follow that of the K-State Farm Management Guide crop budgets, which are also available on the Ag Econ website, so they can also be a useful resource when analyzing leasing alternatives.

Developed by: Kevin C. Dhuyvetter, Extension Agricultural Economist, Kansas State University
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 FAX: (785) 532-6925
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 email: tkastens@ksu.edu
 website: www.agmanager.info

Various tabs: Intro, Crop budgets, Shares, Lease budgets, Flex, Irr energy costs, Notes

KSU-Lease.xls -- 2009 NC KS crop budgets (with crop and fertilizer price adjustments)

Crop/System	Wht (C)	Wht (R)	Corn	Milo	Soybean	SF	Total	Per Acre Planted	Per Acre Tillable
Planted acres of each crop	30.0	30.0	5.0	21.5	12	1.5	100.0		
Tillable acres per planted acre	1.00	1.00	1.00	1.00	1.00	1.00	100.0		
INCOME PER ACRE									
A. Yield per acre	52.0	57.0	90.0	90.0	35.0	1,600.0			
B. Price per unit	\$5.00	\$5.00	\$3.23	\$2.81	\$7.16	\$0.15			
C. Net government payments	\$14.16	\$14.16	\$14.16	\$14.16	\$14.16	\$14.16	\$14.16	\$14.16	\$14.16
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
F. Returns/acre (A x B) + C + D + E)	\$274.16	\$299.16	\$304.86	\$267.06	\$264.76	\$246.16	\$28,012	\$280.12	\$280.12
COSTS PER ACRE									
1. Seed	\$14.40	\$16.00	\$76.32	\$14.76	\$35.00	\$20.02	\$2,061	\$20.61	\$20.61
2. Herbicide	6.14	6.14	32.09	38.58	29.98	19.47	1,747	17.47	17.47
3. Insecticide / Fungicide	20.25	20.25	0.00	0.00	0.00	12.92	1,234	12.34	12.34
4. Fertilizer and Lime	64.41	89.58	66.79	68.73	31.44	59.84	6,898	68.98	68.98
5. Crop Consulting	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
6. Crop Insurance	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
7. Drying	0.00	0.00	11.70	11.70	0.00	6.24	319	3.19	3.19
8. Miscellaneous	6.25	6.25	6.25	6.25	6.25	6.25	625	6.25	6.25
9. Machinery Expense	93.44	64.89	82.27	84.09	67.25	68.11	7,878	78.78	78.78
10. Non-machinery Labor	10.53	7.28	9.36	9.49	7.54	7.67	887	8.87	8.87
11. Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
12. Land Charge / Rent	57.00	57.00	57.00	57.00	57.00	57.00	5,700	57.00	57.00
G. SUB TOTAL	\$272.41	\$267.39	\$344.78	\$290.59	\$234.45	\$257.53	\$27,350	\$273.50	\$273.50
13. Interest on 1/2 Nonland Costs	7.36	7.55	9.82	7.75	6.20	6.86	748	7.48	7.48
H. TOTAL COSTS	\$279.77	\$274.93	\$351.60	\$298.34	\$240.65	\$264.39	\$28,098	\$280.98	\$280.98
I. RETURNS OVER COSTS (F - H)	(\$5.61)	\$24.23	(\$46.74)	(\$31.28)	\$24.11	(\$18.23)	(\$86)	(\$0.86)	(\$0.86)
J. TOTAL COSTS/UNIT (H/A)	\$5.38	\$4.82	\$3.91	\$3.31	\$6.88	\$0.17			
K. RETURN TO TOTAL COST ((H+I)/G)	0.64%	11.88%	-10.80%	-8.10%	12.93%	-4.41%		-0.31%	-0.31%

Equitable crop-share arrangement -- NC KS

Landowner: Average landowner, North Central KS, 555-987-6543
 Operator: Average farmer, North Central KS, 555-123-4567
 Basis for equitable share calculations: For the entire rotation (L4 = 0), Crop-by-crop (L4 = 1)

Crop/System	Wht (C)	Wht (R)	Corn	Milo	Soybean	SF	Total
Planted acres	30.0	30.0	5.0	21.5	12.0	1.5	100.0
Seed	100%	100%	100%	100%	100%	100%	
Fertilizer:							
82-0-0	-100%	-100%	-100%	-100%	-100%	-100%	
N (dry/liquid)	-100%	-100%	-100%	-100%	-100%	-100%	
P	-100%	-100%	-100%	-100%	-100%	-100%	
K	-100%	-100%	-100%	-100%	-100%	-100%	
Lime	-100%	-100%	-100%	-100%	-100%	-100%	
Herbicide							
Bicep II Magnum (PRE)	-100%	-100%	-100%	-100%	-100%	-100%	
Status	-100%	-100%	-100%	-100%	-100%	-100%	
Buctril + Atrazine	-100%	-100%	-100%	-100%	-100%	-100%	
Glyphosate	-100%	-100%	-100%	-100%	-100%	-100%	
+ 2% Ammonium Sulfate	-100%	-100%	-100%	-100%	-100%	-100%	
Finesse	-100%	-100%	-100%	-100%	-100%	-100%	
+ Surfactant	-100%	-100%	-100%	-100%	-100%	-100%	
Roundup Weather Max	-100%	-100%	-100%	-100%	-100%	-100%	
2,4-D IV Ester	-100%	-100%	-100%	-100%	-100%	-100%	
Prowl H20	-100%	-100%	-100%	-100%	-100%	-100%	
Insecticide / Fungicide							
Seed treatment	-100%	-100%	-100%	-100%	-100%	-100%	
Headline	-100%	-100%	-100%	-100%	-100%	-100%	
Warrior 1EC	-100%	-100%	-100%	-100%	-100%	-100%	
xxx	-100%	-100%	-100%	-100%	-100%	-100%	
Crop consulting	100%	100%	100%	100%	100%	100%	
Crop insurance	-100%	-100%	-100%	-100%	-100%	-100%	
Drying cost	-100%	-100%	-100%	-100%	-100%	-100%	

Entering a number between 0-100% (or -100%) by crop and by input provides flexibility to handle most any situation.

Equitably sharing fertilizer (excluding lime), herbicides, and insecticides in this example.

Microsoft Excel - KSU Lease - (NC) .xls

Equitable crop-share arrangement – NC KS

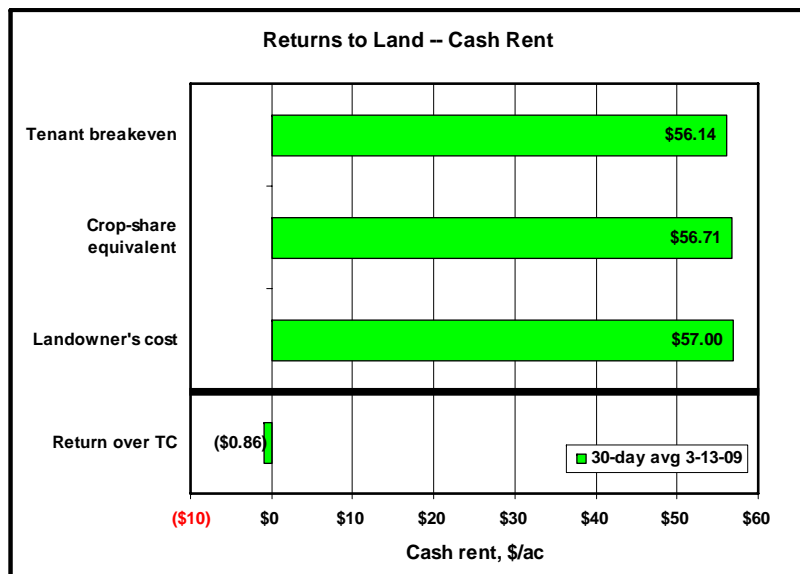
Crop/System	Wht (C)	Wht (R)	Corn	Milo	Soybean	SF	Total
Planted acres	30.0	30.0	5.0	21.5	12.0	1.5	100.0
OPERATOR'S share of machinery, labor, irrigation, and land (enter -100% if shared equitably)							
Drill/Plant	100%	100%	100%	100%	100%	100%	
Tillage and Chemical Applications:							
Chisel	100%	100%	100%	100%	100%	100%	
Disk	100%	100%	100%	100%	100%	100%	
Field cultivate	100%	100%	100%	100%	100%	100%	
Cultivate with sidedress	100%	100%	100%	100%	100%	100%	
Anhydrous application	100%	100%	100%	100%	100%	100%	
Fertilizer application	100%	100%	100%	100%	100%	100%	
Herbicide application	100%	100%	100%	100%	100%	100%	
Insecticide application	100%	100%	100%	100%	100%	100%	
Harvest							
Harvest	100%	100%	100%	100%	100%	100%	
Hauling	100%	100%	100%	100%	100%	100%	
Miscellaneous							
Non-machinery labor	100%	100%	100%	100%	100%	100%	
Irrigation expenses							
Labor	100%	100%	100%	100%	100%	100%	
Fuel and oil	100%	100%	100%	100%	100%	100%	
Repair and maintenance	100%	100%	100%	100%	100%	100%	
Irrigation investment							
Well, pump and gearhead	0%	0%	0%	0%	0%	0%	
Motor	0%	0%	0%	0%	0%	0%	
Irrigation system	0%	0%	0%	0%	0%	0%	
Land	0%	0%	0%	0%	0%	0%	
Cash payment to landowner, \$/acre	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Operator's equitable share (OS%)	66.3%	68.0%	75.3%	66.8%	69.6%	63.0%	66.8%
Landowner's equitable share (LS%)	33.6%	32.0%	24.7%	33.2%	30.4%	36.9%	33.2%

Microsoft Excel - KSU Lease - (NC) .xls

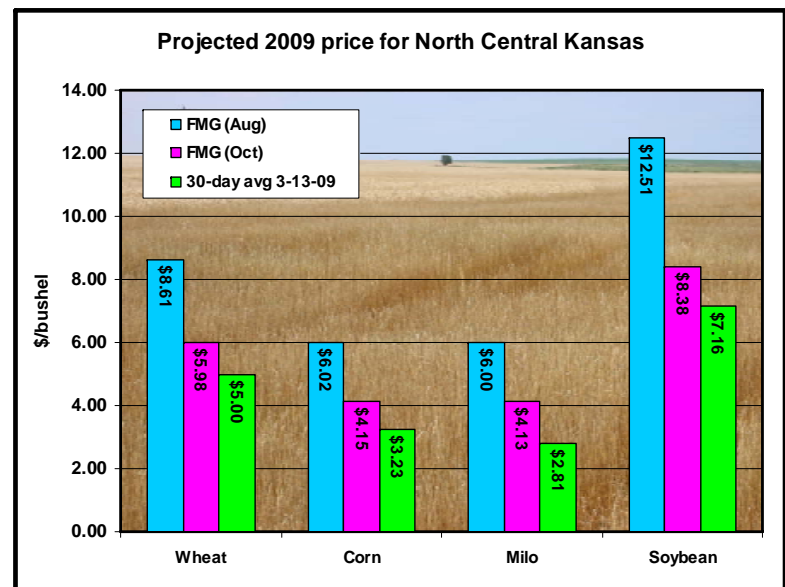
ALTERNATIVE METHODS OF ESTIMATING CASH RENT

Crop/System	Wht (C)	Wht (R)	Corn	Milo	Soybean	SF	Total	Per Planted Acre	Per Tillable Acre
Total tillable acre	30.0	30.0	5.0	21.5	12.0	1.5	100.0	100.0	
A. Landowner's COST									
Land	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00
Irrigation equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
Total	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00	\$57.00
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor 0.0%									
Total income	\$274.16	\$299.16	\$304.86	\$267.06	\$264.76	\$246.16	\$28.02	\$280.12	\$280.12
Landowner's share	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%	33.5%
Landowner's income	\$91.82	\$100.20	\$102.11	\$89.45	\$88.68	\$82.45	\$9.382	\$93.82	\$93.82
Landowner operating expense	33.25	42.02	39.98	42.92	23.02	35.84	3.711	37.11	37.11
Income less operating expense	\$58.57	\$58.18	\$62.12	\$46.53	\$65.66	\$46.60	\$5.671	\$56.71	\$56.71
Less risk adjustment	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
Cash rent equivalent	\$58.57	\$58.18	\$62.12	\$46.53	\$65.66	\$46.60	\$5.671	\$56.71	\$56.71
C. Amount tenant CAN AFFORD TO PAY									
Total income	\$274.16	\$299.16	\$304.86	\$267.06	\$264.76	\$246.16	\$28.02	\$280.12	\$280.12
Total operating expense	\$222.77	\$217.93	\$294.60	\$241.34	\$183.65	\$207.39	\$22.398	\$223.98	\$223.98
Return to land and irr equip	\$51.39	\$81.23	\$10.26	\$25.72	\$81.11	\$38.77	\$5.614	\$56.14	\$56.14
Comparison of alternative cash rent methods									
Low	\$51.39	\$57.00	\$10.26	\$25.72	\$57.00	\$38.77	\$5.614	\$56.14	\$56.14
Average	\$55.65	\$65.47	\$43.13	\$43.08	\$67.92	\$47.46	\$5.662	\$56.62	\$56.62
High	\$58.57	\$81.23	\$62.12	\$57.00	\$81.11	\$57.00	\$5.700	\$57.00	\$57.00
Returns above all costs (profit)	(\$5.61)	\$24.23	(\$46.74)	(\$31.28)	\$24.11	(\$18.23)	(\$86)	(\$0.86)	(\$0.86)

Returns to land (NC KS budgets, current crop and fertilizer prices)...

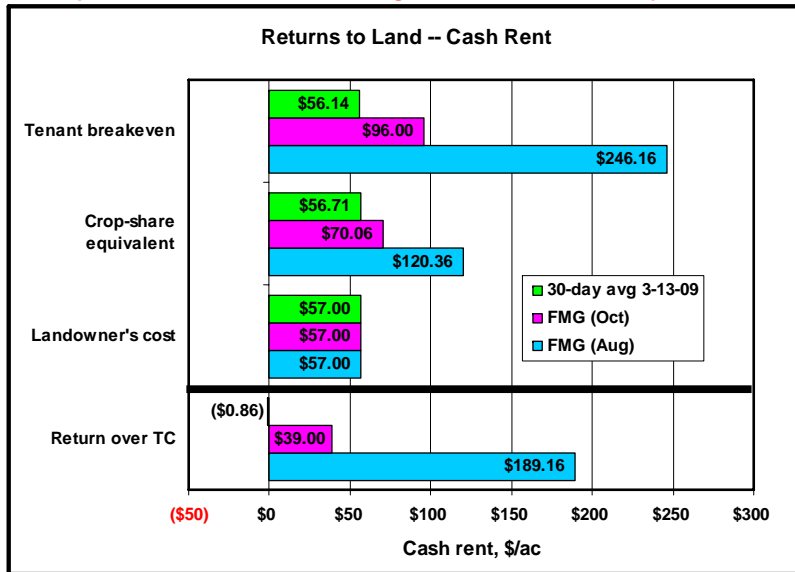


Alternative price scenarios...



NC KS returns to land under alternative price scenarios...

(Fertilizer prices in FMG scenarios were higher than 1/30/09 scenario)



Risk associated with a fixed cash rent that was negotiated at the "wrong" time... 66

Summary...

- Land values have been increasing rapidly in recent years (those days likely over for now)
- Current crop profitability projections support current land values (i.e., no reason to expect land prices will decline sharply)
- Trend for more use of cash rents will likely continue
- However, high volatility will lead to more flexible cash rent types of arrangements

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Questions ???



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