

2. Kansas Rental Values -- What Cash Rent Information is Right?

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Kevin Dhuyvetter assists farmers, landowners, and others throughout Kansas with risk and return assessment of alternative crop and livestock production and marketing systems. He works extensively with land-related issues such as buying and leasing land. Current research projects are looking at factors impacting land values, crop land cash leases, management factors impacting farm profitability, economics of crop-related production technologies, factors affecting feeder cattle and crop basis, and machinery costs. One of Kevin's trademarks is his development of decision tools that can be used by clientele to help them with the many decisions they face.

Mykel Taylor

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Mykel Taylor joined the Department of Agricultural Economics as an Assistant Professor in 2011. Her research and extension programs are focused in the areas of crop marketing and farm management. She grew up on a cattle ranch in Montana and attended Montana State University majoring in Agribusiness Management. Her PhD in Economics is from North Carolina State University. Mykel has worked in extension positions at both Kansas State University and Washington State University. Some of her current research areas include measuring basis risk for commodity grains, understanding the implications of food safety and country of origin labeling on meat demand, and estimating land values for crop and pasture land in Kansas.

Abstract/Summary

Beginning in 2009 Kansas Agricultural Statistics (KAS) has surveyed producers and landowners regarding cash rent for crop land and pasture at the county level. This provides much more information than has been available historically (values were only available at the Crop Reporting District level). However, in recent years with land values increasing significantly, the appropriateness of these survey values as a reflection of the current cash rent market has been questioned. In response to this, an alternative method of estimating cash rents for cropland at the county level has been developed. This session will outline the alternative method developed and report on values from the two approaches and discuss reasons as to why they might vary. While a similar type of approach is not currently available for pasture rents, an alternative approach for estimating pasture rents at the county level will also be presented and discussed.



Kansas Rental Values – What Cash Information is Right?

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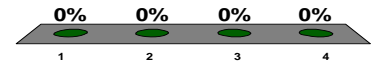
Department of Agricultural Economics
Kansas State University



Test to make sure clickers are working ...

Which best describes the frequency of your use of computer spreadsheets (e.g., Excel)

1. Regular user (e.g., daily/weekly)
2. Moderate user (e.g., monthly)
3. Limited (e.g., 1-2 times/year)
4. What the heck is a spreadsheet?



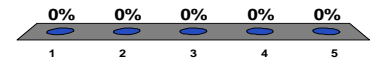
Types of leases on crop land

- Crop-share (share income and some expenses)
 - Net share (share income but not expenses)
 - Fixed cash rent **“Traditional”**
-
- Fixed cash rent with bonus **“Hybrid”**
 - Combination – cash rent + share
 - Cash rent – flex on price (bushel rent)
 - Cash rent – flex on yield (price rent)
 - Cash rent – flex on revenue (i.e., yield x price)

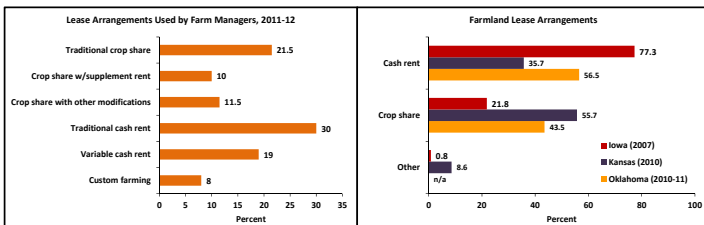
What type of leases do you use?

The lease arrangement for the majority of crop land acres I rent or manage is...

1. Crop share (share inputs)
2. Net share rent (no inputs shared)
3. Fixed cash rent
4. Flexible cash rent
5. Does not apply



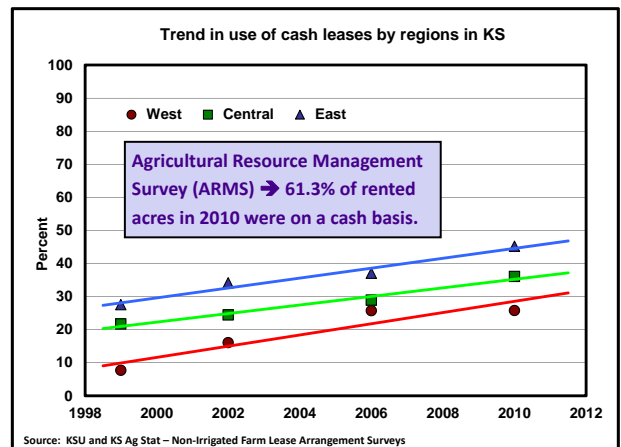
Distribution of crop leases by type of lease...



Sources: IL – Schnitkey; IA – Duffy, et al.; KS – Schlegel and Tsoodle

- Corn Belt generally has a higher percentage of cash rent – Why?
- Trend is towards more cash rent most everywhere – Why?
- The use of “non-traditional” leases is increasing – Why? (speed of adoption varies considerably regionally)

Crop share is very common lease type in Kansas, but the trend is for more cash rent...

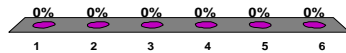


Source: KSU and KS Ag Stat – Non-Irrigated Farm Lease Arrangement Surveys

Timing of cash lease payments...

On cash leases, rent payments are due...

1. Jan 1 (approximately)
2. At planting
3. At harvest
4. Dec 31 (approximately)
5. Multiple times
6. Other



Length of cropland leases in years...

State	Share	Cash	All
Iowa (2007)	18.1	9.5	11.4
Kansas (2010)	n/a	n/a	18.6
Oklahoma (2010-2011)	17.0	14.0	15.3

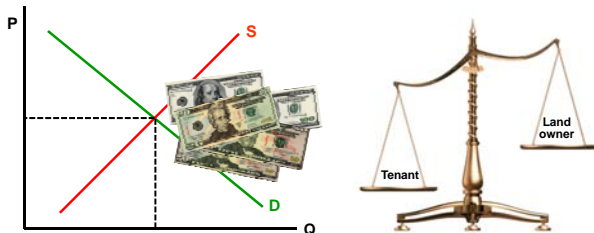
Sources: IA – Duffy, et al.; KS – Schlegel and Tsoodle; OK – Doye and Sahs

Producers tend to lease land from the same landowner for a relatively long time, but cash leases tend to be for fewer years.

Why is this?

Determining the terms of a lease...

- How are cash lease rates or the terms of crop share leases established?
 - Short answer is “the market”
 - That is, the terms of a lease are determined by Producers (demand) negotiating with Landowners (supply)



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

Examples of market established crop shares...

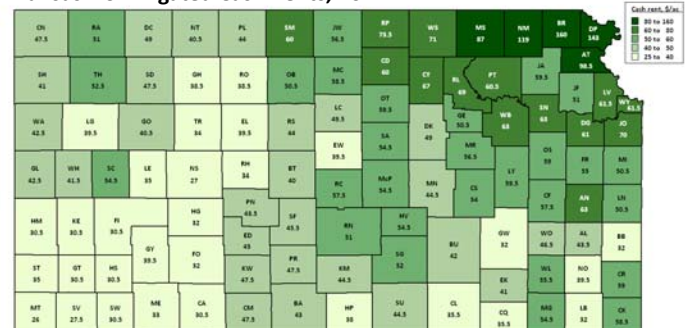
Percent of Leases by Crop Share Percentage

Landlord Share	Crop Reporting District								
	NW-10	WC-20	SW-30	NC-40	C-50	SC-60	NE-70	EC-80	SE-90
20.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
25.0%	0.0%	3.5%	1.4%	0.0%	0.7%	0.0%	5.3%	1.0%	0.0%
33.3%	96.2%	96.5%	94.5%	62.7%	83.4%	90.8%	22.3%	70.7%	94.4%
40.0%	0.0%	0.0%	1.4%	28.9%	13.1%	6.4%	27.7%	9.1%	0.0%
50.0%	0.0%	0.0%	2.7%	6.3%	0.7%	2.1%	44.7%	17.2%	4.2%
66.7%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.0%	0.0%
75.0%	1.9%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%
Other	1.9%	0.0%	0.0%	0.7%	0.7%	0.7%	0.0%	1.0%	1.4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Color coding scale: >80% (red), 50-80% (orange), 20-50% (yellow), 5-20% (light green), <5% (white)

Source: Schlegel and Tsoodle -- 2010 KAS/KSU survey (available at www.agmanager.info)

Kansas Nonirrigated Cash Rents, 2012*



* Cash rent values as reported by USDA NASS and Kansas Agricultural Statistics (KAS). 2013 values will be released on Sept 6, 2013.

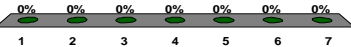
KAS did not report values for 24 counties – values for these counties were filled in with multi-county averages.

State average = \$52.50 compared to \$44.00 in 2011 (+19.3%)

KAS cash rent survey values vs. your observations

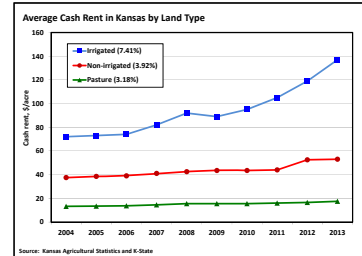
For cash rents you are aware of, how do they compare with KAS values on map?

1. More than 25% lower
2. 10-25% lower
3. About even (+/- 10%)
4. 10-25% higher
5. 25-50% higher
6. 50-100% higher
7. More than 100% higher

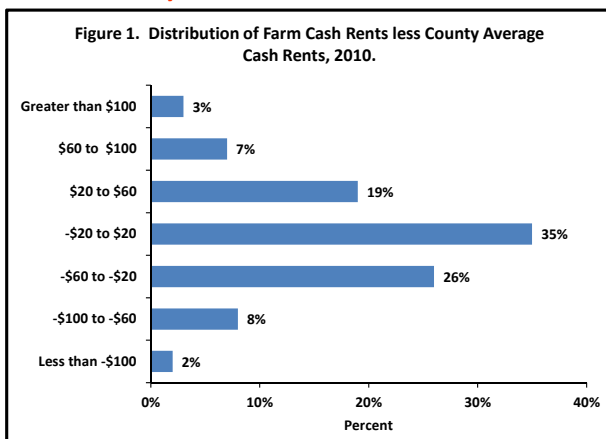


Potential issues with KAS surveyed rental rates...

1. Does the average value reflect your situation?
 - Not all land is equal
 - Not all relationships are equal
2. Missing counties: 2009=4, 2010=6, 2011=7, 2012=24
3. How well do averages reflect the “current” market?



Wide variability in rents exists...



Source: FEFO 11-21, Schnitkey, Department of Agricultural and Consumer Economics, University of Illinois.

Large differences in observed/reported rents...

- Partly due to land quality differences
- Big portion due to relationships
- Landowners and tenants are generally aware of differences that exist and much of these differences are consistent with their desires

Implications...

- Average cash rents are not a good indication of what it takes to acquire land
- High cash rents we hear about are not an indicator of average rents

Source: FEFO 11-21, Schnitkey, Department of Agricultural and Consumer Economics, University of Illinois.

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”
- When market reported rates are not sufficient to answer the question at hand, what do we do?
- While landowners and tenants (i.e., the market) ultimately determine terms of leases, we use economic theory and the equitable concept to arrive at a starting point for negotiations – and to better understand the market.

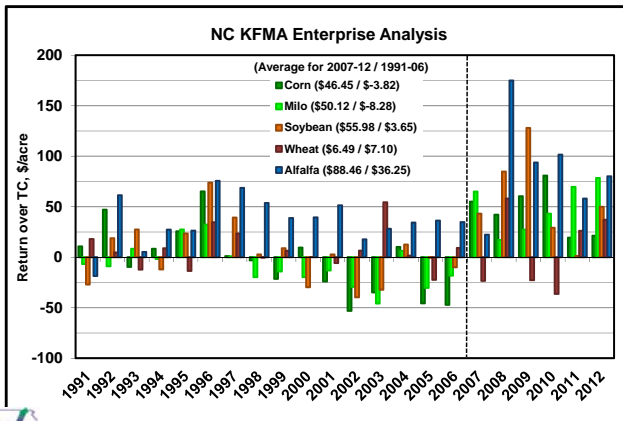


Principles embodied in an equitable lease...

- Profit maximization ($MR=MC$)
- Economic profits (expected profit = 0*)
- Opportunity costs
- Risk across lease types
- Equal rates of return on annual investment (if economic profit = 0, then return on *annual investment* = 0)

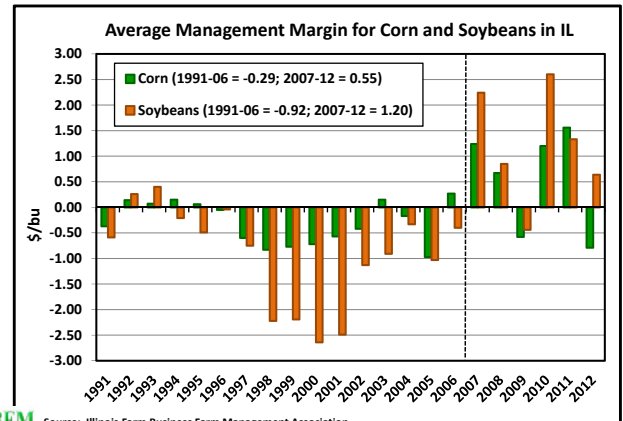
* On average, in the long run

On average, we seldom cover total costs. Why?



Source: KFMA Enterprise Analysis Report

On average, we seldom cover total costs. Why?



Source: Illinois Farm Business Farm Management Association

Methods of establishing cash rent values...

- Market going rate (if available and believable)

- Crop share equivalent (adjusted for risk)

- Landowner's cost

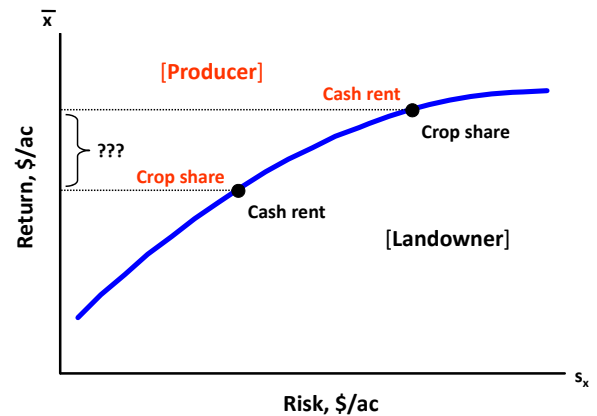
- Amount tenant can afford to pay

I typically focus on these two



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

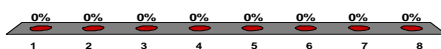
Landowner/producer risk-return tradeoff



Risk premium...

How should cash rent for non-irrigated land compare with expected returns from equitable crop share...

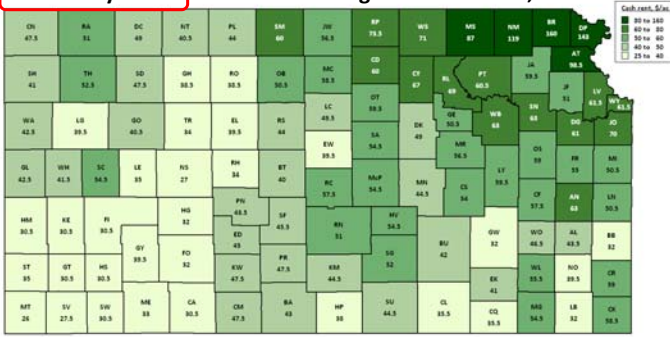
1. 5-10% higher
2. Roughly equal
3. 5-10% less
4. 10-15% less
5. 15-20% less
6. 20-30% less
7. 30-40% less
8. >40% less



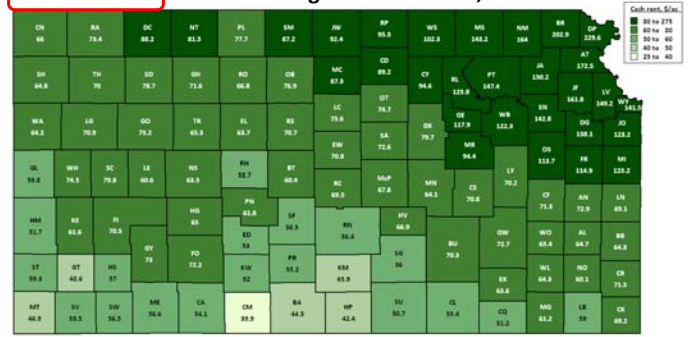
Method of calculating "KSU" rental rates...

1. Used KSU-Lease.xls and regional crop budgets to estimate equitable netshare percentages for each region
 - Used average yield scenario from FM Guides
 - Long-run price projections (~5-year average)
 - Custom rate machinery costs increased 20%
 - Set land value such that returns = total non-land costs x 10% (i.e., profit > \$0 -- resulted in profits of ~\$14-\$30/acre)
2. Applied equitable percentage to income at each county
 - Yield = 8-yr average (wheat, sorghum, corn, and soybeans)
 - Price = 2013-17 price forecast
 - Crop mix based on average values in 2002 & 2007 census
3. Multiplied "landowner income" by 80% to account for risk

KAS-survey values of Kansas Nonirrigated Cash Rents, 2012

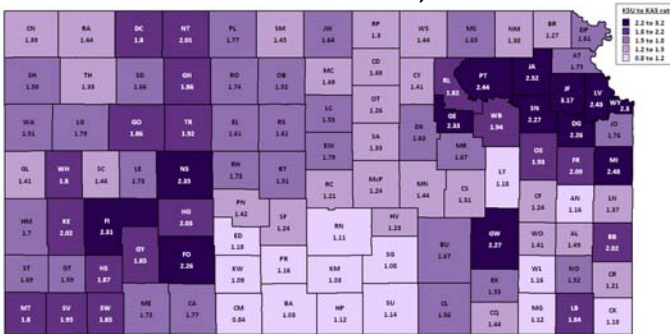


KSU-Estimated Kansas Nonirrigated Cash Rents, 2012*



* Estimated in the fall of 2012 based on county-average yields and regional prices and using an equitable net share lease (adjusted for risk) approach.

Ratio of KSU-to-KAS Estimated Cash Rents, 2012*



Values reflect the amount the KAS value would need to be multiplied by to equal the KSU estimated value. For example, a value of 1.5 would imply the KSU estimate was 50% higher than KAS value.

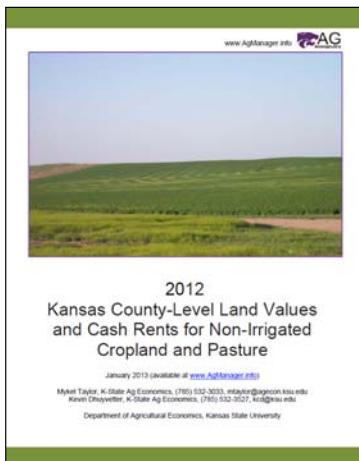
Average ratio = 1.63 (min = 1.03 and max = 3.17)

KAS versus KSU-estimated rental rates...

Why the big discrepancy?

1. Do the values represent the same thing?
2. Multi-year fixed rate leases?
3. Rates that have not been renegotiated for years?
4. Productivity of land/producer may not be the same?
5. We don't know the terms of the lease for KAS values (e.g., are bonuses included?)
6. Landowner/tenant relationship?
7. Other?

Land value and cash rent information



MAJOR change from what was reported in this paper previously

1. KAS **survey** data for land values and cash rents (same as in the past) and
2. KSU **estimates** of county-level land values and rents (**new stuff**)

KSU estimates of both land values (based on market transactions) and rents (based on crop share) are significantly higher than KAS reported values

Work in progress to do something similar with pasture rents.

Kansas State UNIVERSITY
Department of Agricultural Economics

Some random things to think about...

Responsibility for rental rates...

Whose responsibility is it to see to it that a landowner's cash rental rate is equitable considering current conditions?

1. Landowner
2. Tenant

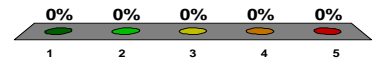
Who typically has better information?



Cash rent auctions...

Whether you have participated in them or not, what is your opinion of cash rent auctions?

1. I love them
2. They are okay
3. I'm indifferent
4. Don't care for them
5. I hate them

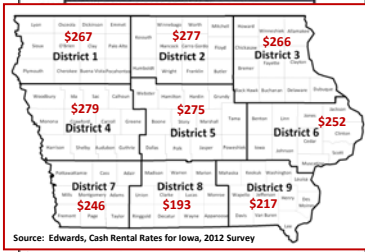


Cash rent auctions – a solution to asymmetric information?

Cash Rent Auctions in Iowa -- Feb 2-4, 2012
2 Year lease (2012 and 2013) -- Money up front for 2012

Ac-wtd avg	\$486	3347.7	71.0	\$6.72
Average	\$476	139.5	73.5	\$6.52
Min	\$325	52.1	51.8	\$5.57
Max	\$530	421.1	92.5	\$8.15
Corr with \$/acre		0.362	0.748	0.072

Tract	County	\$/acre	Acres	CSR	\$/CSR
1	Cass	\$475	132.6	79	\$6.01
2	Guthrie	\$525	153.4	81.5	\$6.44
3	Guthrie	\$525	167.0	76.3	\$6.88
4	Hardin	\$520	78.1	77.9	\$6.68
5	Hardin	\$460	59.6	78.6	\$5.85
6	Hardin	\$510	101.3	83	\$6.14
7	Hardin	\$530	113.3	92.5	\$5.73
8	Franklin	\$520	108.4	76	\$6.84
9	Franklin	\$425	102.1	67.8	\$6.27
10	Franklin	\$425	199.4	59.6	\$7.13
11	Franklin	\$490	170.3	70.7	\$6.93
12	Franklin	\$475	53.9	73.1	\$6.50
13	Franklin	\$495	139.7	81.1	\$6.10
14	Franklin	\$490	252.7	68.9	\$7.11
15	Franklin	\$445	60.2	77	\$5.78
16	Franklin	\$460	52.1	82.6	\$5.57
17	Franklin	\$325	62.1	51.8	\$6.27
18	Butler	\$435	121.7	67.7	\$6.43
19	Butler	\$520	421.1	71.6	\$7.26
20	Cerro Gordo	\$490	145.0	72	\$6.81
21	Cerro Gordo	\$500	148.0	71.4	\$7.00
22	Hancock	\$450	214.3	55.2	\$8.15
23	Mitchell	\$530	221.0	86.1	\$6.16
24	Mitchell	\$400	70.4	62	\$6.45



Cash rent auction in NW KS ...

Cash rent auction in NW KS ...

Munkres cash rent auction, January 15, 2011

Tract	acres (FSA)	\$/acre rent	Annual dollars	Wheat stubble a	Corn stalks a	Milo stalks a	Govt payments per acre	Govt pymt per acre	Avg % org matter	PPM soil test P
1	214.0	\$110	\$23,540	108.0	106.0		\$3,255	\$15.21	2.00	37.50
2	79.7	\$90	\$7,173		79.7		\$586	\$7.35	1.50	15.00
3	153.1	\$105	\$16,076		153.1		\$597	\$3.90	1.80	17.00
4	160.9	\$135	\$21,722	160.9			\$1,776	\$11.04	1.70	15.00
5	314.6	\$140	\$44,044	226.4	88.2		\$3,638	\$11.56	1.60	23.00
6	156.0	\$140	\$21,840		156.0		\$1,747	\$11.20	1.70	21.00
7	308.7	\$130	\$40,131	240.0						
8	305.9	\$125	\$38,238							
9	299.0	\$135	\$40,365							
10	156.3	\$120	\$18,756							
Total	2,148.2		\$371,084	735.3						
Overall per acre values			\$126.56							

Correlation of cash rent with above columns:
 Only marginal differences in farmability and land quality at all land is non-irrigated, fairly flat, little erosion, and has good soil.
 All land is open, i.e., no growing wheat.
 Land leased for 5 years and tenant must ensure no loss of soil fertility at end of lease for any reduced fertility (both N and P).
 Land located near Rexford and Gem in both Thomas and Sheridan counties.
 Pre-auction expectations likely were centered around \$80/acre.

Kansas county-level non-irrigated crop cash rents...

So, what is the market value?

* 2010 Cash rent values as reported by USDA NASS and Kansas Agricultural Statistics (KAS).

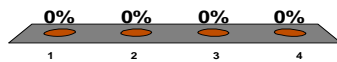
Article about land cash rent auctions in Iowa (The Progressive Farmer / April 2012)

NO SECRETS. Farmland tenants generally dislike public lease auctions for two reasons: 1) They remove the traditional, personal relationship bond between the owner/tenant and reduce it to a numbers game; and 2) It publicizes actual cash rents so all the landlords in the area can compare how their leases stack up.

Your leasing arrangement...

How would you feel about your typical rental arrangement if you were on the other side of it?

1. I'm getting a good deal
2. I think I'm getting taken advantage of
3. Seems about right
4. Not sure what to think



Do you do the "right thing"?

1. Are landowners (especially absentee) treated similar to other input suppliers?
2. Are family members treated similar to other non-relative business partners?
3. Regardless of the size of your operation, treat it like a business.

"The more you treat your family farm like a business, and less like a family operation, the more likely you'll have a family farm to pass on to future generations."

The screenshot shows the website www.agmanager.info/mast. The main heading is "The Management, Analysis & Strategic Thinking Program" (MAST) from Kansas State University. It describes the program as management training for ag producers and agbusiness professionals. A section titled "MAST 2011-12 Underway" features a photo of participants in a classroom setting. Below the photo, it states that the MAST kickoff session was held Nov. 29-30 at Kansas State University and welcomes participants from various states. It also provides contact information for Julie Hubert, the MAST Program Coordinator, including her phone number (785) 532-4493 and email jahubert@ksu.edu.

The screenshot shows the website www.agmanager.info. It features a navigation menu with "Home", "About", "Topics", "Faculty", "Participants", "Sponsors", "Registration", and "Contact". The main content area includes a "Recent Updates" section with a list of news items, a "View AgManager info Sponsors" section, and a "What You'll Learn" section listing topics such as Land Ownership & Leasing, Marketing, Financial Management, and Insurance.

For more information and decision tools related to farm management, marketing, and risk management go to www.AgManager.info

If interested in receiving weekly *AgManager.info Update* or any of our other Ag Econ newsletters via email, please contact Kevin Dhuyvetter or Rich Llewelyn. (Kevin: kcd@ksu.edu -- 785-532-3527 or Rich: rvl@ksu.edu -- 785.532.1504).

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