

2011-2012
Kansas State University
AG PROFITABILITY CONFERENCE

January 11, 2012

Girard United Methodist Church Fellowship Hall
West 47 Highway
Girard, KS



Crop Leases

Kevin Dhuyvetter
785-532-3527 – kcd@ksu.edu
Department Agricultural Economics
Kansas State University

www.agmanager.info



Over the years, the majority of land leasing questions we receive pertain to:

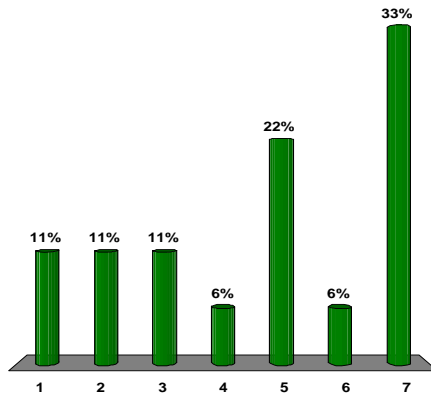
- Impact of adopting new technologies
- Cash renting (folks always want the “going rates”)
- “Non-traditional” leases
 - Net share rent
 - Flexible cash rent
 - Bushel rent
 - Combination cash/cropshare
- Terminating leases

... regardless of the topic pertaining to lease terms, method of addressing questions does not change.

Identifying my audience ...

Which of the following best describes you?

-  1. Farmer – no cattle
- 2. Farmer with cattle
- 3. Mix of crops & cattle
-  4. Rancher with crops
- 5. Rancher – no crops
- 6. Landowner
- 7. Other



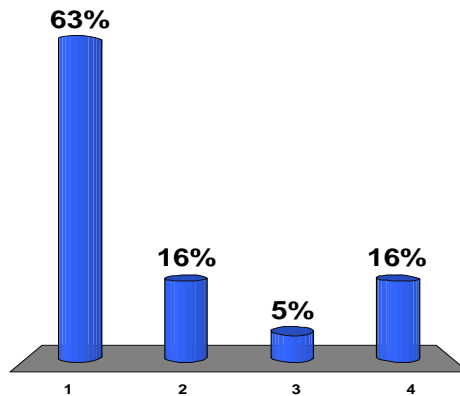
Types of leases on crop land

- Crop-share
 - Landowner receives a share of annual revenues (grain sales and government payments) and typically shares certain production costs
- Cash rent
 - Landowner receives a fixed annual cash payment in exchange for use of the land
- Numerous variations around these two

What type of leases do you use?

The lease arrangement for the majority of non-irrigated crop acres I rent or manage is...

1. Crop share
2. Cash rent
3. Other
4. Does not apply



Distribution of non-irrigated crop leases by type of lease...

Region	Cash	Share	Other
Northwest	35.2%	54.6%	10.2%
West Central	21.3	58.5	20.2
Southwest	20.8	76.1	3.1
North Central	41.3	54.8	3.9
Central	32.8	53.8	13.4
South Central	34.0	63.0	3.0
Northeast	48.7	42.4	8.9
East Central	50.9	39.6	9.5
Southeast	35.9	58.2	5.9
State	35.7	55.7	8.6

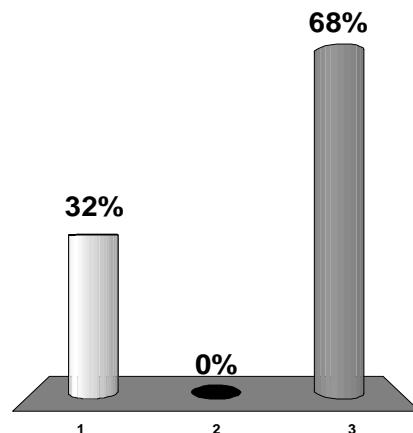
Source: Schlegel and Tsoodle -- 2010 KAS/KSU survey

7

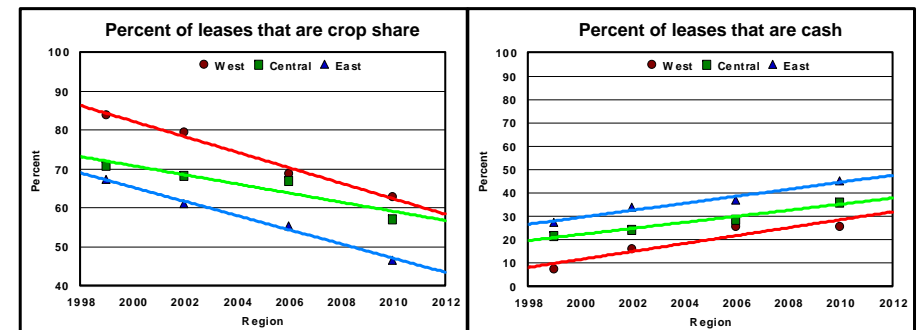
Crop share versus cash leases...

Relative to equitable crop share leases, fixed cash leases are...

1. A good thing
2. A bad thing
3. Neither (just different)



Trend towards more cash rent...



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

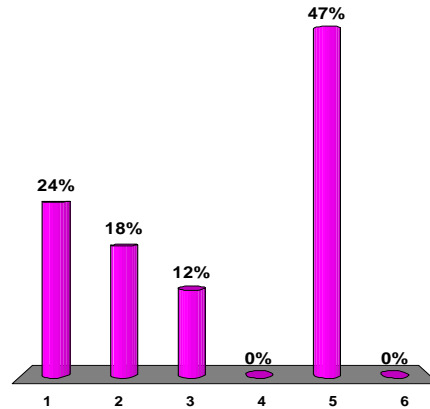
Crop share continues to be the most prevalent, but the trend has been a shift from crop share arrangements towards more cash rent leases.

- 1) What factors have been behind this trend?
- 2) Will this trend continue, stabilize, or reverse?

Timing of cash lease payments...

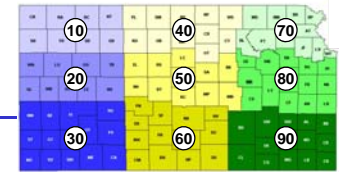
On cash leases, payments are due...

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



Length of cropland leases...

KAS Crop Reporting Districts



Region	Years rented
Northwest (10)	16.7
West Central (20)	17.6
Southwest (30)	21.0
North Central (40)	17.8
Central (50)	16.0
South Central (60)	18.1
Northeast (70)	21.9
East Central (80)	20.4
Southeast (90)	18.9
State	18.6

Producers tend to lease land from the same landowner for a long time.

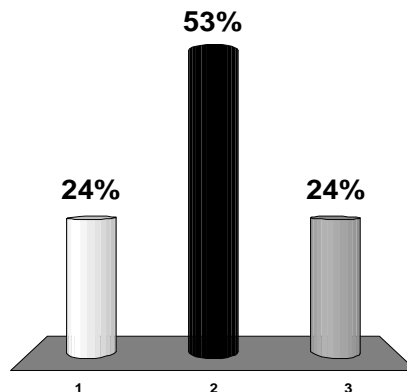
Long-term relationships can be good or bad...

Source: Schlegel and Tsoodle -- 2010 KAS/KSU survey

Crop share versus cash leases...

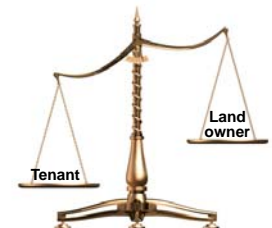
Relative to crop share leases, the length of leases (number of years) for fixed cash rent tend to be...

1. Longer
2. Shorter
3. Basically the same



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.



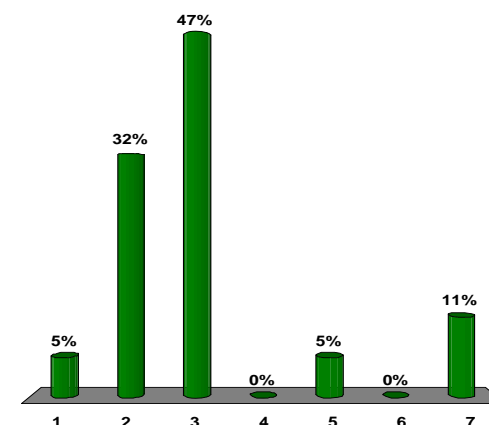
Identifying “the market” established rates through the use of surveys...

- Land Use Value Project of the K-State 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
- With surveys there is often a trade-off between statistical validity and level of aggregation

Sharing of expenses...

On non-irrigated crop share leases, we share the following:

1. Nothing
2. Fertilizer
3. Fert & chem
4. Fert & seed
5. Fert, chem & seed
6. Other
7. Does not apply



Example of market established crop shares...

Crop	Landlord's Percent of Crop Received (or of Costs Paid)*			
	33% Share	40% Share	50% Share	Other % Share
Wheat (6 Leases)	6	No Responses	No Responses	No Responses
% of Total Leases in Lease Arrangement	100.0%			
% of Leases Sharing Fertilizer Costs	83.3%			
% of Leases Sharing Herbicide Costs	66.7%			
% of Leases Sharing Insecticide Costs	33.3%			
Corn (16 Leases)	15	No Responses	1	No Responses
% of Total Leases in Lease Arrangement	93.7%		6.3%	
% of Leases Sharing Fertilizer Costs	86.7%		100.0%	
% of Leases Sharing Herbicide Costs	60.0%		100.0%	
% of Leases Sharing Insecticide Costs	40.0%		100.0%	
Soybeans (26 Leases)	23	No Responses	2	1
% of Total Leases in Lease Arrangement	88.5%		7.7%	3.8%
% of Leases Sharing Fertilizer Costs	95.7%		100.0%	0.0%
% of Leases Sharing Herbicide Costs	78.3%		100.0%	0.0%
% of Leases Sharing Insecticide Costs	47.8%		100.0%	0.0%

* The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 66.7% of landlords receiving 33% of the wheat crop paid 33% of herbicide expenses.

Source: Schlegel and Tsoodle -- 2011 KAS/KSU survey (available at www.agmanager.info)

Crop share percentages by region...

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% (dark red), 50-80% (red), 20-50% (orange), 5-20% (yellow), < 5% (light yellow)

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

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 rate of return = 0)

* On average, in the long run

A good crop share lease should follow five basic principles ...

1. Yield increasing inputs should be shared
 2. Share arrangements should be re-evaluated as technology changes
 3. Total returns divided in same proportion as resources contributed
-
4. Compensation for unused long-term investments at termination
 5. Good landlord/tenant communications

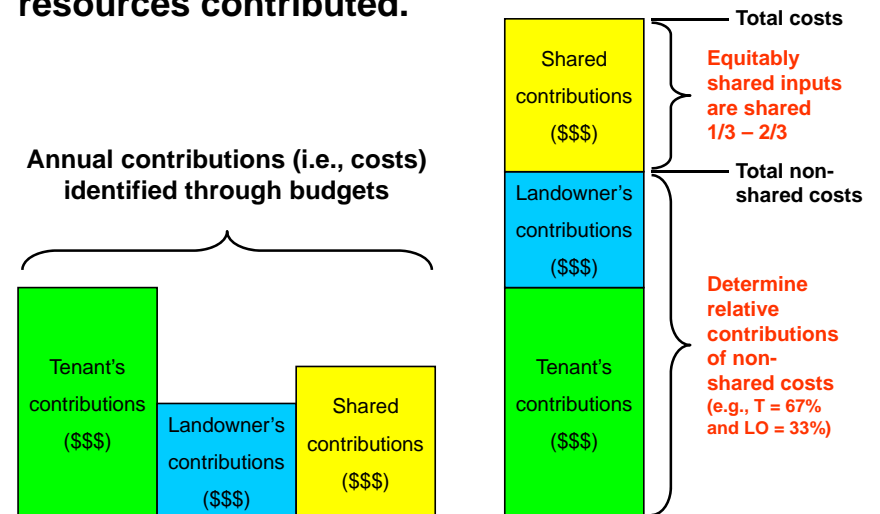
Principle #3:
Returns divided in same proportion as resources contributed.

This requires annual contributions of both parties to be identified (budgeting type approach).



Base input values on expectations consistent with the time-frame of the lease (if expectations end up being significantly off, be willing to make adjustments).

Principle #3:
Returns divided in same proportion as resources contributed.



“Non-traditional” leases ...

- Cash rent
- Net share rent
- Bushel rent
- Flexible cash rent
- Combination cash and crop share rent

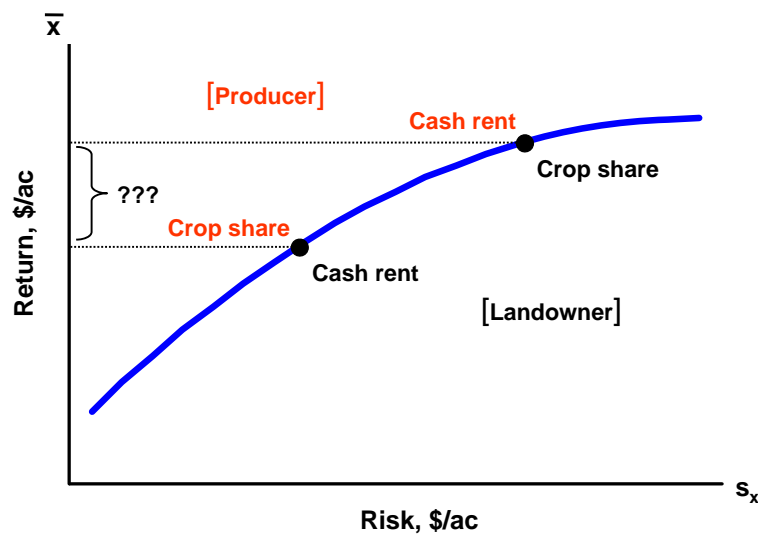
Because there is currently much interest in these types of leases, there must be good reasons to use them ...

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

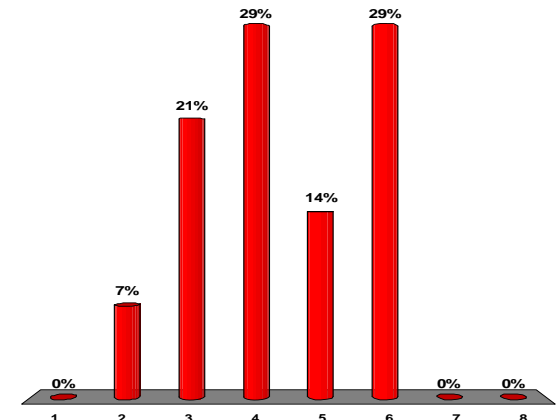
Landowner/producer risk-return tradeoff



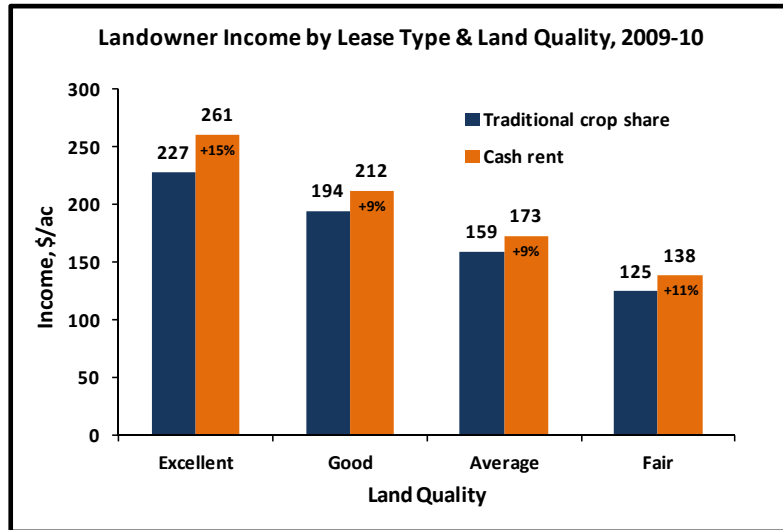
Risk premium...

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



Comparison of landowner income by lease type...



Source: Schnitkey, G. University of Illinois

39

Why might producers pay a higher rent with a cash lease than crop share?

- Lower costs (easier to manage)
- Increased production flexibility
- Ability to manage risk with crop insurance
- Easier method of expansion
- Timing of when rates were negotiated
- Other???

40

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

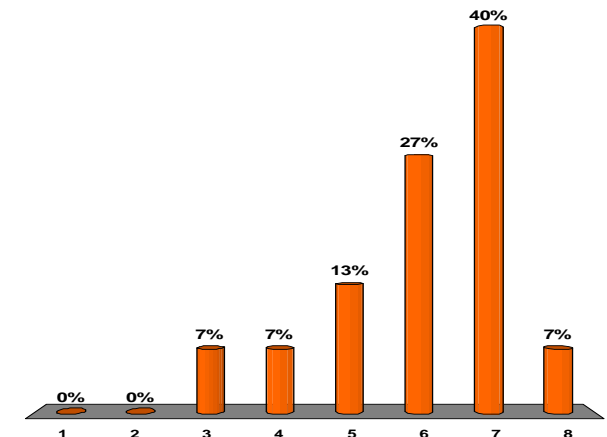


The last three require yield, price, and government payment projections (as well as cost information used for crop share).


Market rate for average cash rent...

Average cash rent per tillable acre for non-irrigated crop land in 2011 in my area was...

1. < \$30
2. \$30-\$35
3. \$35-\$40
4. \$40-\$50
5. \$50-\$60
6. \$60-\$70
7. \$70-\$80
8. > \$80



KAS surveyed market rates ...



United States Department of Agriculture
National Agricultural Statistics Service, Kansas Field Office

AGRICULTURAL LAND VALUES & CASH RENTS

Kansas Agricultural Statistics
Cooperating with the Kansas Department of Agriculture
910 West 10th, Topeka, KS 66604-3034 • (785) 232-2222 • www.ksas.usda.gov • www.ksda.usda.gov
Released: September 12, 2011

2011 Kansas Farmland Value Up 14 Percent

The average value of all farmland and buildings for 2011 in Kansas is estimated to be \$1,250 per acre. This compares with \$1,100 in 2010 and \$1,030 in 2009. Kansas' average value of all farmland and buildings increased 14 percent from 2010 to 2011. Irrigated cropland values rose 13 percent from 2010 while non-irrigated cropland increased 14 percent in value from last year. The value of Kansas pasture land increased 3 percent from 2010 to \$810 per acre.

2011 Cash Rents Up from Previous Year

The 2011 average cash rent farmers pay for non-irrigated cropland in Kansas was \$44 per acre, up from \$43.50 in 2010. The cash rent rates for non-irrigated cropland ranged from a low in the Southwest District of \$30.50 per acre to the high in the Northeast District of \$54.50 per acre. Following the Northeast District was the East Central with \$46.50, down \$1.50 from 2010, and the North Central with \$47.50 per acre.


The 2011 cash rent rate for irrigated cropland in Kansas averaged \$105 per acre, up from \$95 per acre in 2010. The Northeast District had the highest rent with \$125 per acre, followed by the North Central at \$122 and the Northwest at \$111 per acre. The Southwest District had the lowest irrigated rent with \$63 per acre, followed by the Central District with \$65.50 and East Central with \$64 per acre.

The pasture cash rent averaged \$16 per acre in 2011, up from \$15.50 in 2010. The rent for pasture in Kansas ranged from \$9.00 per acre in the Southwest District for a low to \$21.50 per acre in the Northeast District for the high. The Northeast District was followed by the East Central with \$21 and the North Central with \$18.50. Douglas County has the highest average cash rental rate in Kansas at \$33 per acre, up \$1 from last year.

Year	Cropland			Pasture and Buildings		All Farmland and Buildings		
	Irrigated	Non-Irrigated	Pasture	Buildings				
2002	1,280	675	720	36.00	300	12.60	645	26,428
2003	1,280	640	679	36.00	300	12.60	685	31,485
2004	1,280	640	688	37.00	320	13.20	700	32,790
2005	1,190	770	690	38.00	300	13.00	810	36,260
2006	1,200	620	694	38.00	300	13.00	870	41,262
2007	1,280	680	814	42.00	300	13.00	980	45,374
2008	1,400	660	1,020	42.00	300	13.00	1,120	49,128
2009	1,500	1,000	1,090	43.50	300	13.50	1,230	47,680
2010	1,600	1,100	1,100	43.50	300	13.50	1,300	48,020
2011	1,800	1,200	1,300	44.00	310	14.00	1,380	50,000

* Rental rates are for one acre. * 2011 published in August 2012.

KAS report (switched to county-level in 2009 for rent, dropped CRD-level land values in 2011)



Kansas Land Prices and Cash Rental Rates

Department of Agricultural Economics - www.agmanager.info
K-State
Kansas State University
Kansas City, Kansas
Agricultural Economics
Farm Management
Terry L. Kammer
Professor Emeritus

The Farm Management Guide reports Kansas land prices and cash rents for 1993-2010. These data are useful to farm managers in determining cash rental rates, to develop systems in calculating yields for making time adjustments to land prices, and to benchmark and monitor value changes on historical price and rental levels for farmland. The average prices for the guide represent parcels of land that vary widely in productivity. Thus, these data are more appropriate for analyzing trends than for establishing market value or rental rates for specific tracts of farmland.

Kansas Agricultural Statistics
For reporting purposes, Kansas Agricultural Statistics Service has divided the state into seven agricultural statistical divisions. The divisions are: Northwest (NW), West Central (WC), Southwest (SW), North Central (NC), Central (C), South Central (SC), Northeast (NE), East Central (EC), and Northeast (NE). Data are reported by Kansas Agricultural Statistics in base of one acre asking for minimum of one acre of land irrigated, non-irrigated cropland, and pasture. This information is combined in two additional land groupings: all cropland and all land in farms. The all-cropland land values represent an average-weighted average of irrigated and non-irrigated cropland. Although these two groupings do not represent a particular class of land (i.e., irrigated cropland), they provide a broader classification of interest.

The land values for all land in farms reported also include the value of any buildings that may be on the land. The value of the buildings represents a small portion of the total value, on average, and thus this reporting method does not significantly affect the accuracy of land values reported.

Kansas Land Prices
Tables 1 through 7 show average prices of land and buildings. Table 1 is for each district and an average for the state for the most recent 20 years reported. Data are shown for each of the five land groupings: all land in farms, all cropland, non-irrigated cropland, irrigated cropland, and pasture. The annual land value index was compiled by Kansas Agricultural Statistics in base of one acre asking for minimum of one acre of land irrigated, non-irrigated cropland, and pasture. This information is combined in two additional land groupings: all cropland and all land in farms. The all-cropland land values represent an average-weighted average of irrigated and non-irrigated cropland. Although these two groupings do not represent a particular class of land (i.e., irrigated cropland), they provide a broader classification of interest.

The land values for all land in farms reported also include the value of any buildings that may be on the land. The value of the buildings represents a small portion of the total value, on average, and thus this reporting method does not significantly affect the accuracy of land values reported.

Year	NW	WC	SW	NC	C	SC	NE	EC	NE	State
1993	839	823	819	819	819	819	819	819	819	819
1994	839	823	819	819	819	819	819	819	819	819
1995	839	823	819	819	819	819	819	819	819	819
1996	839	823	819	819	819	819	819	819	819	819
1997	839	823	819	819	819	819	819	819	819	819
1998	839	823	819	819	819	819	819	819	819	819
1999	839	823	819	819	819	819	819	819	819	819
2000	839	823	819	819	819	819	819	819	819	819
2001	839	823	819	819	819	819	819	819	819	819
2002	839	823	819	819	819	819	819	819	819	819
2003	839	823	819	819	819	819	819	819	819	819
2004	839	823	819	819	819	819	819	819	819	819
2005	839	823	819	819	819	819	819	819	819	819
2006	839	823	819	819	819	819	819	819	819	819
2007	839	823	819	819	819	819	819	819	819	819
2008	839	823	819	819	819	819	819	819	819	819
2009	839	823	819	819	819	819	819	819	819	819
2010	839	823	819	819	819	819	819	819	819	819
2011	839	823	819	819	819	819	819	819	819	819

KSU report - basically a repackaging of KAS data (show more history and estimate "missing values")

Kansas Nonirrigated Cash Rents, 2011*




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

Averages can be misleading because...

- 1) Not all land is equal
- 2) Not all relationships are equal


Methods of establishing cash rent values ...

- **Crop share equivalent (adjusted for risk)**
 - Converts equitable crop share rent to an expected dollar amount per acre
- **Landowner's cost**
 - Based on the premise of landowner's continuing to receive comparable returns to what has been received in the past
- **Amount tenant can afford to pay**
 - Residual approach - after tenant pays all expenses, whatever income is left represents cash rent



Department of Agricultural Economics

Flexible Cash Rents



www.agmanager.info

Flexible Cash Rents – WHAT?

- Flexible cash rents simply refer to land rental arrangements where the amount of cash rent paid (received) can vary based upon some pre-determined formula (i.e., formalizes bonus rents)
- Methods of “flexing” rental rates, i.e., formulas are based on:
 - Yield (actual for producer, county average, etc.)
 - Price (harvest, season average, actual)
 - Revenue (yield x price, crop insurance, residue)
 - Costs (e.g., fertilizer price)
 - Other...

Flexible Cash Rents – WHY?

- Method of allowing rents to vary from year-to-year without having to renegotiate rents annually (avoid mental anguish associated with rental rate negotiation)
- Way of sharing/managing risks associated with volatile markets (without hassles of crop share lease)
- More transparent than ad hoc “bonuses”
- A good way (requirement?) of working with the “new breed” of landowners?
- Somewhat “force” a higher level of communication relative to fixed cash rent (poor/lack of communication is often an issue with problem lease arrangements)

Flexible Cash Rents – WHY NOT?

- Complex!
- Theory and intuition guide conceptual design, but little help with specific details
- Not needed if cash rents are renegotiated frequently (every year?)
- Hard to think of everything, which means we might need to be “tweaking” arrangement over time
- If designed wrong, might increase risk
- Appealing for certain situations, but not appropriate in all cases (depends on why you are considering cash rent)



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: rwl@ksu.edu -- 785.532.1504).