

2010-2011

K-State Leasing & Excel Workshops

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AGCO
Communications Center
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2010-2011
Lease Workshops

Kansas State University
Department of Agricultural Economics

Leasing & Excel Workshop

Kevin Dhuyvetter
Rich Llewelyn

Department Agricultural Economics
Kansas State University

www.agmanager.info



What we're going to do today...

- Introduction to Rental Arrangements

- Types of leases
- Principles of leases
- Available information

Objective is to get us all on the same page with regard to terminology and information that is publicly available.

- Ethics of leasing

Discuss issues/factors that lead to potential problems with lease arrangements (seem to be more common in current environment).

- Using Excel Spreadsheets (hands on)

Best way to learn is to actually get on the computer!

- Working with *KSU-Lease.xls* (hands on)

Learn how to tailor numbers to your own operations.

Feel free to ask questions, disagree, and/or make comments at any time...

Introduction to Rental Arrangements



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.

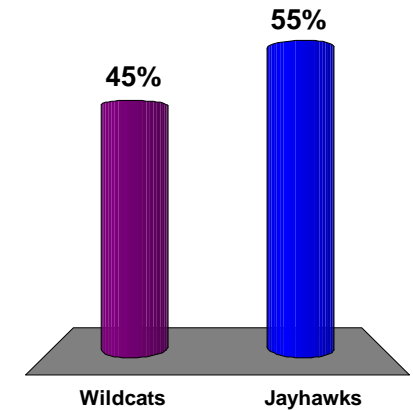
Renting cropland in Kansas...

- KFMA farms with > 100 crop acres (2007-2009 avg)
 - 88% of KFMA farms use rented crop land (range across six regions, 81%-94%)
 - 61% of crop acres farmed by KFMA members are rented (range across six regions, 51%-72%)
- In other words, almost everybody rents land, and the majority of the acres they are farming are rented.
- For owner-operators rent is the “profit” assigned to land after all other opportunity costs are considered

Test to make sure clickers are working...

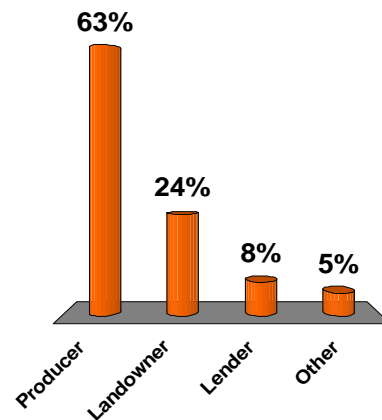
Who will finish higher in the Big XII this year?

1. K-State Wildcats 
2. KU Jayhawks 



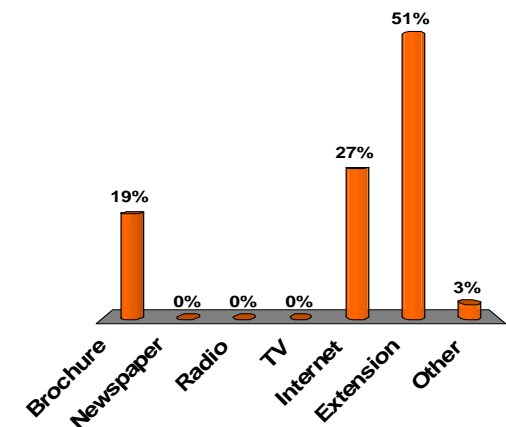
Which best describes you?

1. Producer
2. Landowner
3. Lender
4. Other



How did you hear about this meeting?

1. Brochure/mail
2. Newspaper
3. Radio
4. TV
5. Internet
6. Extension office
7. Other



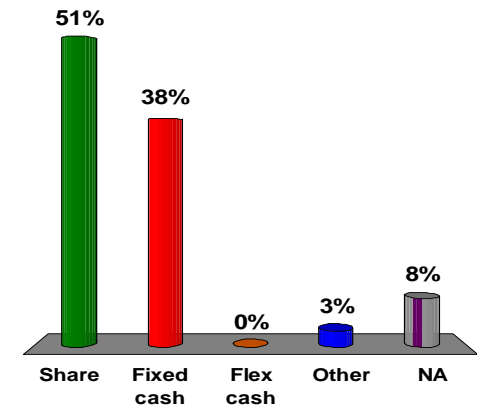
Types of leases on crop land

- **Crop-share**
 - Landowner shares in annual revenues (production and government payments) and typically shares certain production costs
- **Cash rent**
 - Landowner gets a fixed annual cash payment in exchange for use of land
- Numerous variants 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 ...

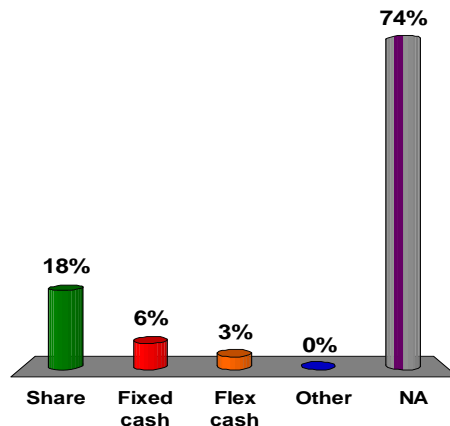
1. Crop share
2. Fixed cash
3. Flexible cash
4. Other
5. Does not apply



What type of leases do you use?

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

1. Crop share
2. Fixed cash
3. Flexible cash
4. Other
5. Does not apply



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

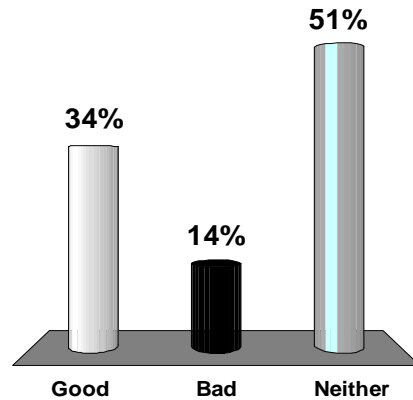
Region	Cash	Share	Other
Northwest	36.3%	59.8%	3.9%
West Central	24.3	71.7	4.0
Southwest	16.5	75.5	8.0
North Central	34.9	60.5	4.6
Central	30.9	64.6	4.5
South Central	21.0	76.4	2.6
Northeast	38.8	53.5	7.7
East Central	36.0	54.3	9.6
Southeast	36.2	58.9	4.9
State	30.5	63.9	5.6

Source: Schlegel and Tsoodle -- 2007 KAS/KSU survey

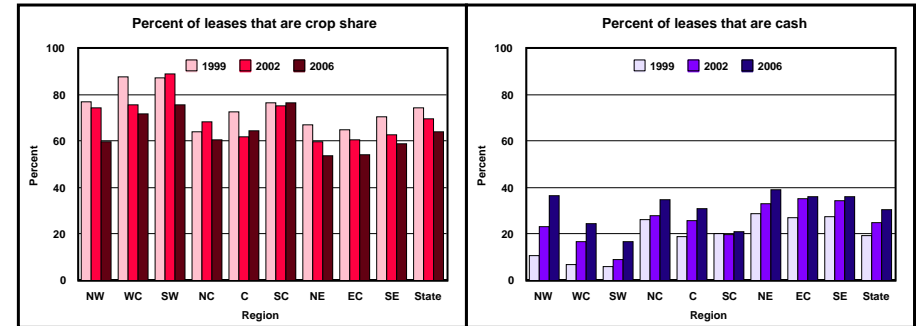
Crop share versus cash leases...

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

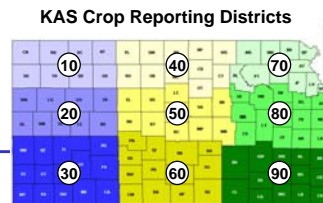
Crop share continues to be the most prevalent, but the trend has been a shift from crop share arrangements towards more cash rent leases.

Questions to ask:

- 1) What factors have been behind this trend?
- 2) Do we expect this to continue or to reverse in current environment?

Length of cropland leases...

Region	Years rented
Northwest (10)	17.6
West Central (20)	21.0
Southwest (30)	20.0
North Central (40)	16.9
Central (50)	17.2
South Central (60)	15.5
Northeast (70)	17.2
East Central (80)	18.8
Southeast (90)	15.6
State	17.8



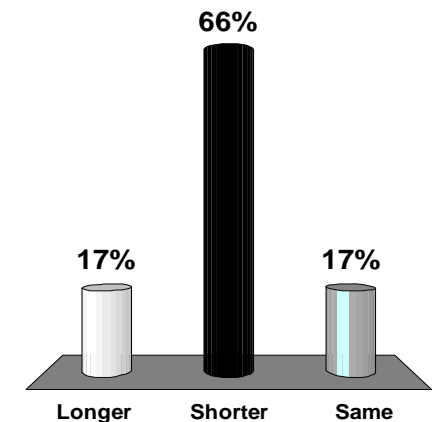
Producers tend to lease land from the same landowner for a long time.

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

Crop share versus cash leases...

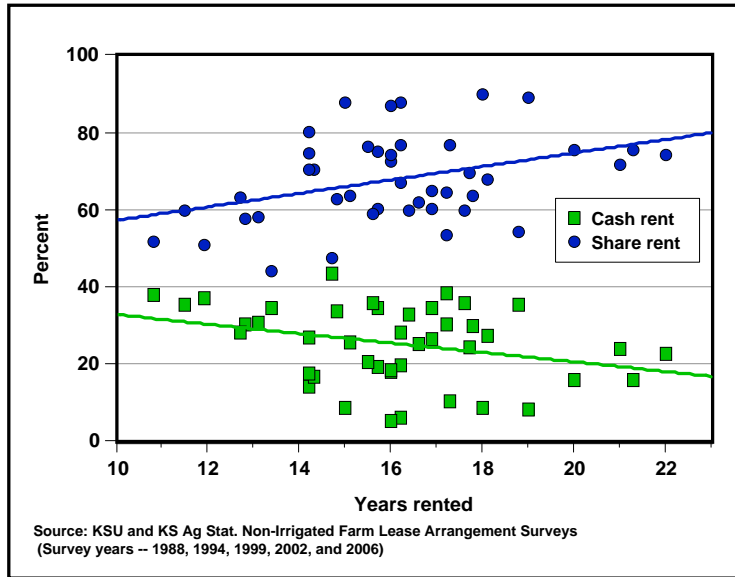
Relative to crop share leases, the length of leases (number of years) for fixed cash rent tend to be...

1. Longer
2. Shorter
3. Basically the same



Source: Schlegel and Tsoodle -- 2007 KAS/KSU survey

Length of lease vs. lease type ...



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.



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

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 (155 Leases)	127	18	3	7
% of Total Leases in Lease Arrangement	82.0%	11.6%	1.9%	4.5%
% of Leases Sharing Fertilizer Costs	97.6%	100.0%	100.0%	85.7%
% of Leases Sharing Herbicide Costs	70.1%	94.4%	100.0%	85.7%
% of Leases Sharing Insecticide Costs	41.7%	55.6%	100.0%	28.6%
Sorghum (36 Leases)	34	1	1	No Responses
% of Total Leases in Lease Arrangement	94.4%	2.8%	2.8%	No Responses
% of Leases Sharing Fertilizer Costs	97.1%	100.0%	100.0%	No Responses
% of Leases Sharing Herbicide Costs	64.7%	0.0%	100.0%	No Responses
% of Leases Sharing Insecticide Costs	38.2%	100.0%	100.0%	No Responses
Multiple Crops (40 Leases)	39	1	No Responses	No Responses
% of Total Leases in Lease Arrangement	97.5%	2.5%	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	97.4%	100.0%	No Responses	No Responses
% of Leases Sharing Herbicide Costs	77.5%	100.0%	No Responses	No Responses
% of Leases Sharing Insecticide Costs	56.4%	100.0%	No Responses	No Responses
Soybeans (11 Leases)	10	1	No Responses	No Responses
% of Total Leases in Lease Arrangement	90.9%	9.1%	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No Responses	No Responses
% of Leases Sharing Herbicide Costs	100.0%	100.0%	No Responses	No Responses
% of Leases Sharing Insecticide Costs	50.0%	100.0%	No Responses	No Responses
Alfalfa (9 Leases)	7	No Responses	2	No Responses
% of Total Leases in Lease Arrangement	77.8%	No Responses	22.2%	No Responses
% of Leases Sharing Fertilizer Costs	100.0%	No Responses	100.0%	No Responses
% of Leases Sharing Herbicide Costs	42.9%	No Responses	100.0%	No Responses
% of Leases Sharing Insecticide Costs	71.4%	No Responses	100.0%	No Responses

* 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, 97.6% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Source: Schlegel and Tsoodle -- 2007 KAS/KSU survey (available at www.agmanager.info)

Example of market established crop shares...

Table 10. South Central-60 Nonirrigated Crop-Share Arrangements				
Crop	Landlord's Percent of Crop Received (or of Costs Paid)*			
	33% Share	40% Share	50% Share	Other % Share
Wheat (167 Leases)	163	3	1	
% of Total Leases in Lease Arrangement	97.6%	1.8%	0.6%	No Responses
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	0.0%	
% of Leases Sharing Herbicide Costs	71.2%	33.3%	0.0%	
% of Leases Sharing Insecticide Costs	53.4%	33.3%	0.0%	
Sorghum (9 Leases)	9			
% of Total Leases in Lease Arrangement	100.0%	No Responses	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	100.0%			
% of Leases Sharing Herbicide Costs	88.9%			
% of Leases Sharing Insecticide Costs	22.2%			
Multiple Crops (21 Leases)	16	5		
% of Total Leases in Lease Arrangement	76.2%	23.8%	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	100.0%	80.0%		
% of Leases Sharing Herbicide Costs	68.8%	0.0%		
% of Leases Sharing Insecticide Costs	43.8%	80.0%		
Soybeans (6 Leases)	6			
% of Total Leases in Lease Arrangement	100.0%	No Responses	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	100.0%			
% of Leases Sharing Herbicide Costs	33.3%			
% of Leases Sharing Insecticide Costs	33.3%			
Alfalfa (9 Leases)	8		1	
% of Total Leases in Lease Arrangement	88.9%	No Responses	11.1%	No Responses
% of Leases Sharing Fertilizer Costs	100.0%		100.0%	
% of Leases Sharing Herbicide Costs	100.0%		0.0%	
% of Leases Sharing Insecticide Costs	87.5%		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, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Source: Schlegel and Tsoodle -- 2007 KAS/KSU survey (available at www.agmanager.info)

Example of market established crop shares...

Table 13. Southeast-90 Nonirrigated Crop-Share Arrangements				
Crop	Landlord's Percent of Crop Received (or of Costs Paid)*			
	33% Share	40% Share	50% Share	Other % Share
Wheat (43 Leases)	43			
% of Total Leases in Lease Arrangement	100.0%	No Responses	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	79.1%			
% of Leases Sharing Herbicide Costs	46.5%			
% of Leases Sharing Insecticide Costs	34.9%			
Corn (36 Leases)	32	2	1	1
% of Total Leases in Lease Arrangement	88.8%	5.6%	2.8%	2.8%
% of Leases Sharing Fertilizer Costs	87.5%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	25.0%	50.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	21.9%	100.0%	100.0%	100.0%
Sorghum (14 Leases)	14			
% of Total Leases in Lease Arrangement	100.0%	No Responses	No Responses	No Responses
% of Leases Sharing Fertilizer Costs	85.7%			
% of Leases Sharing Herbicide Costs	42.9%			
% of Leases Sharing Insecticide Costs	35.7%			
Multiple Crops (23 Leases)	21	1	1	
% of Total Leases in Lease Arrangement	91.4%	4.3%	4.3%	No Responses
% of Leases Sharing Fertilizer Costs	85.7%	100.0%	100.0%	
% of Leases Sharing Herbicide Costs	81.0%	100.0%	100.0%	
% of Leases Sharing Insecticide Costs	57.1%	100.0%	100.0%	
Soybeans (26 Leases)	23	1	1	1
% of Total Leases in Lease Arrangement	88.6%	3.8%	3.8%	3.8%
% of Leases Sharing Fertilizer Costs	91.3%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	69.6%	0.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	65.2%	100.0%	0.0%	100.0%

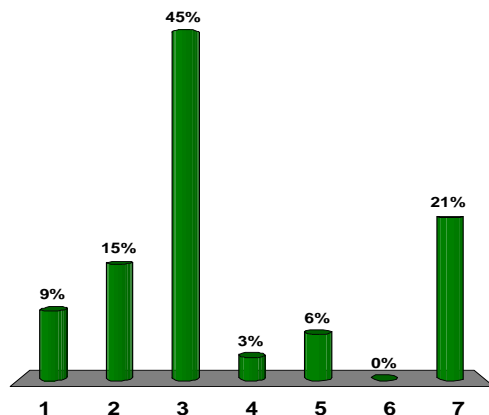
* The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 79.1% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Source: Schlegel and Tsoodle -- 2007 KAS/KSU survey (available at www.agmanager.info)

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 irrigated crop shares...

Table 10. Central-50 Irrigated Crop-Share Arrangements					
Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Corn (34 Leases)					
% of Total Leases in Lease Arrangement	No Responses	23.5%	26.5%	41.2%	8.8%
% of Leases Sharing Fertilizer Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	100.0%	100.0%
Sorghum (5 Leases)					
% of Total Leases in Lease Arrangement	No Responses	40.0%	60.0%	No Responses	No Responses
% of Leases Sharing Fertilizer Costs		100.0%	100.0%		
% of Leases Sharing Herbicide Costs		100.0%	100.0%		
% of Leases Sharing Insecticide Costs		100.0%	100.0%		
% of Leases Sharing Energy Costs		100.0%	100.0%		
Soybeans (18 Leases)					
% of Total Leases in Lease Arrangement	No Responses	44.4%	38.9%	5.6%	11.1%
% of Leases Sharing Fertilizer Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	100.0%	100.0%
Alfalfa (3 Leases)					
% of Total Leases in Lease Arrangement	No Responses	100.0%	No Responses	No Responses	No Responses
% of Leases Sharing Fertilizer Costs		100.0%			
% of Leases Sharing Herbicide Costs		100.0%			
% of Leases Sharing Insecticide Costs		100.0%			
% of Leases Sharing Energy Costs		100.0%			

*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, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Source: Schlegel and Tsoodle -- 2008 KAS/KSU survey (available at www.agmanager.info)

Example of market established irrigated crop shares...

Table 11. South Central-60 Irrigated Crop-Share Arrangements					
Crop	Landlord's Percent of Crop Received (or of Costs Paid)*				
	25%	33%	40%	50%	Other
Wheat (6 Leases)					
% of Total Leases in Lease Arrangement	16.7%	66.6%		16.7%	
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	No Responses	100.0%	No Responses
% of Leases Sharing Herbicide Costs	100.0%	100.0%		100.0%	
% of Leases Sharing Insecticide Costs	100.0%	100.0%		No Response	
% of Leases Sharing Energy Costs	No Response	100.0%		No Response	
Corn (88 Leases)					
% of Total Leases in Lease Arrangement	1.1%	52.3%	11.4%	23.8%	11.4%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	No Response	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	No Response	100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	No Response	100.0%	100.0%	100.0%	100.0%
Sorghum (16 Leases)					
% of Total Leases in Lease Arrangement	No Responses	81.3%	6.2%	12.5%	No Responses
% of Leases Sharing Fertilizer Costs		100.0%	100.0%	100.0%	
% of Leases Sharing Herbicide Costs		100.0%	100.0%	100.0%	
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	
% of Leases Sharing Energy Costs		100.0%	No Response	100.0%	
Soybeans (31 Leases)					
% of Total Leases in Lease Arrangement	No Responses	45.2%	16.1%	29.0%	9.7%
% of Leases Sharing Fertilizer Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs		100.0%	100.0%	100.0%	100.0%
% of Leases Sharing Energy Costs		100.0%	100.0%	80.0%	No Response

*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, 100% of landlords receiving 33% of the wheat crop paid 33% of fertilizer expenses.

Source: Schlegel and Tsoodle -- 2008 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)

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

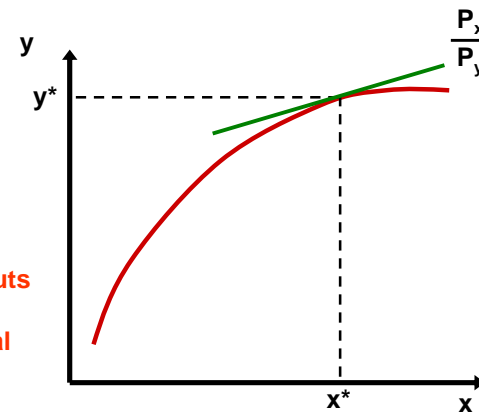
Principle #1:

Yield increasing inputs should be shared

Examples of yield increasing inputs

- Fertilizer
- Irrigation water
- Herbicides ???
- Seed ???

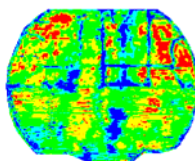
Sharing yield increasing inputs in the same % as income provides the economic signal to both parties to apply the optimal amount of the input.



**Principle #2:
Technology may affect share arrangements**

Examples of technological change

- Reduced-/no-till
- New crops/rotations (e.g., double crop)
- Center pivot irrigation
- Hybrid seed
- Bio-technology
- Precision agriculture (GPS)



Impact of new technologies ...

- Why do people adopt new technologies?
- What happens as “new” technologies become common practice?
- How does this impact relative contributions?

Impact of increasing cropping intensity to increase returns ...

- ... “profit” associated with new technology is bid out of the market over time.
- ... as profit is bid out of the market (typically through higher land costs), relative contributions change.
- ... equitable lease is “dynamic” as market adjusts to new technologies.

Adoption of new technologies ...

- ... tends to cause problems because traditional arrangements or rules-of-thumb are often not appropriate.
- ... should not be a problem if we follow basic principles of a good lease.
- ... if problems persist as to what is equitable, can lead to alternative leasing arrangements (e.g., cash lease).

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

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

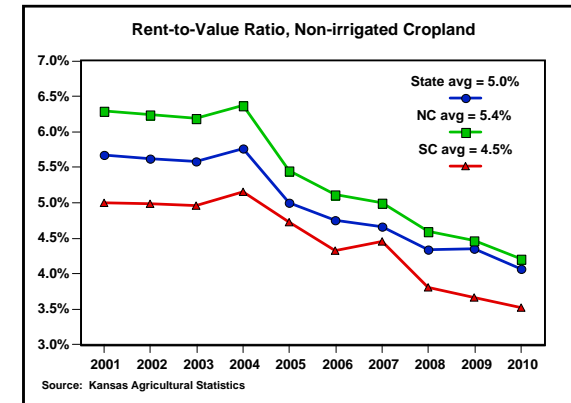
Base input values on expectations consistent with the time-frame of the lease (if expectations end up being significantly off, be willing to make adjustments).



Land contribution ...

The land contribution has typically been based on an “average market value” for the land along with an historical average return to land.

As cash leases become more common, the land contribution can be set equal to the cash rent. However we still often struggle with what the “right” number is.



Machinery contributions ...

Machinery contribution should be based on average costs. Two methods for estimating the machinery contribution:

1. Machinery investment approach - annual contribution is based on depreciation, interest, repairs, fuel and oil, and labor.
2. Custom rates approach - annual contribution is based on reported custom rates and the typical operations.

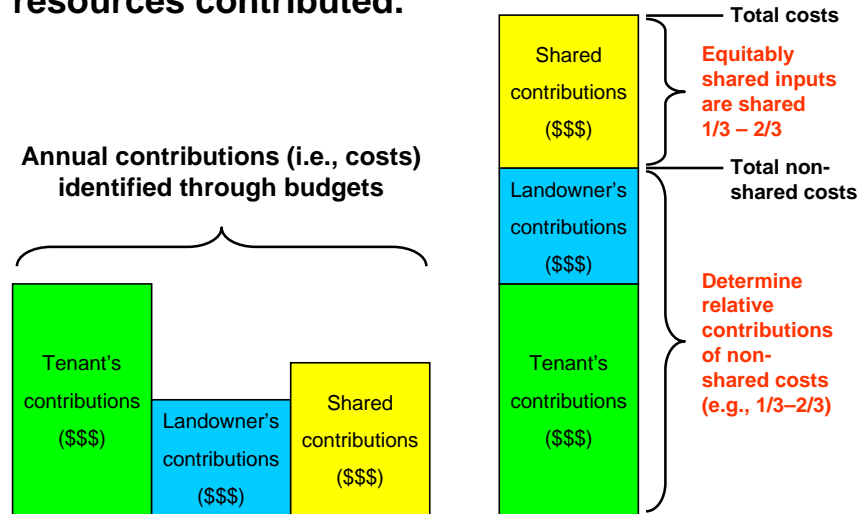


Crop production input contributions ...

The value of contributions for input expenses such as seed, herbicides, insecticides, fertilizer, etc. are generally valued at current market prices and represent “typical” production practices.

How do we deal with input prices if they deviate significantly from historical averages (e.g., fertilizer, fuel)?

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

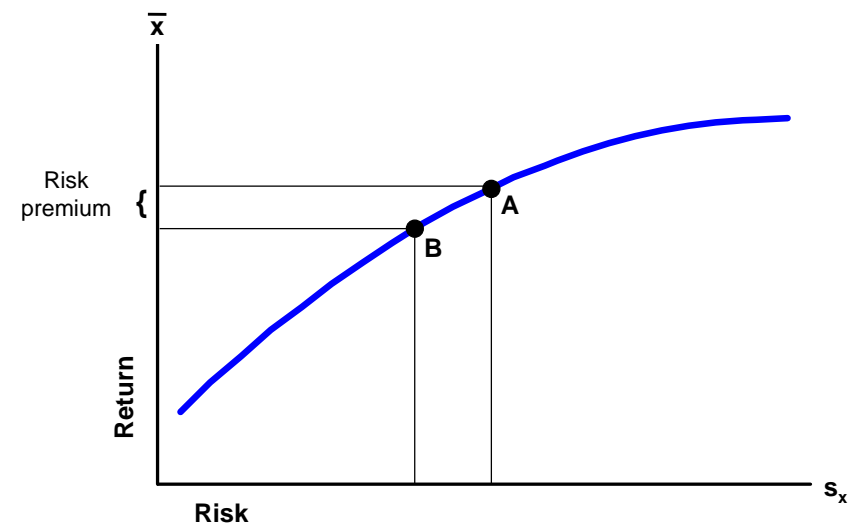
Because there is currently much interest in these types of leases, there must be good reasons to use them ...

Cash rents ...

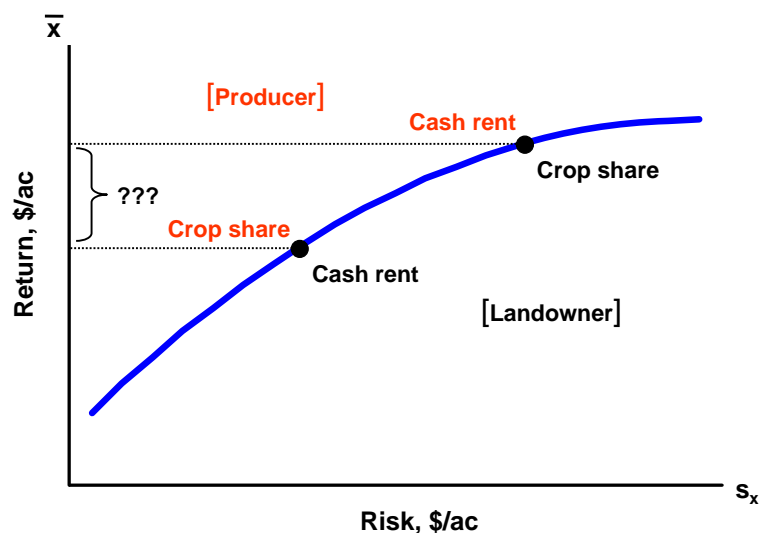
Numerous good reasons to go to cash rent, but landowners and producers need to recognize several things when doing so ...

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

Risk-return tradeoff



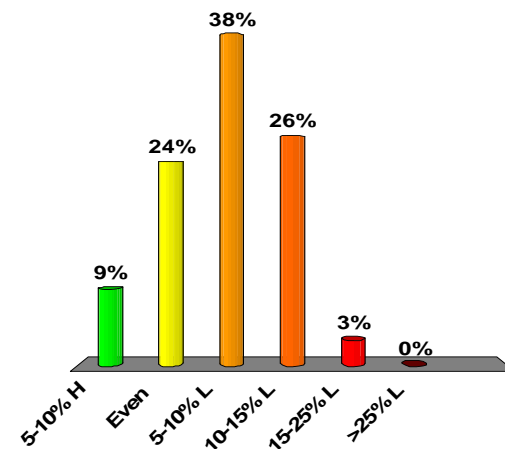
Landowner/producer risk-return tradeoff



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. 15-25% less
6. >25% less



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

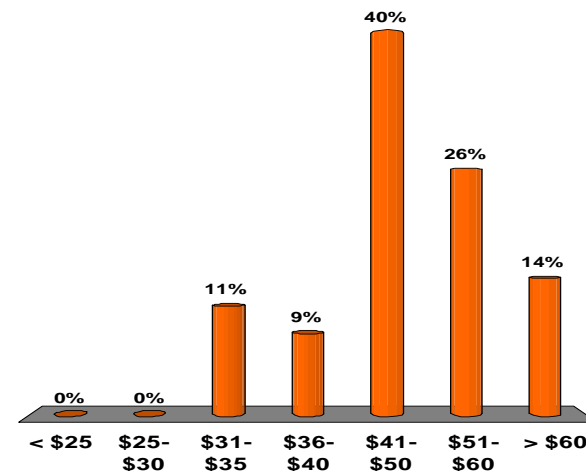


The last three require yield, price, and government payment projections (as well as cost information used for crop share).

Market rate for average cash rent...

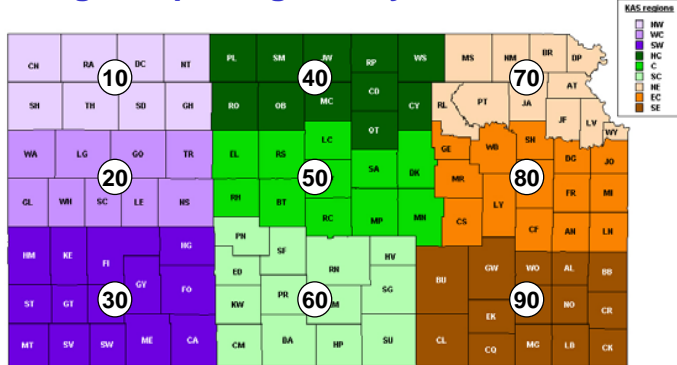
Average cash rent per tillable acre for non-irrigated crop land in my area is...

1. < \$25
2. \$25-\$30
3. \$31-\$35
4. \$36-\$40
5. \$41-\$50
6. \$51-\$60
7. > \$60



Market going rate...

- Historically Kansas Agricultural Statistics (KAS) reported average cash rent values for non-irrigated, irrigated, and pasture land at the crop reporting district (CRD) level – beginning in 2009 began reporting county-level data.



KAS surveyed market rates ...

USDA United States Department of Agriculture
National Agricultural Statistics Service, Kansas Field Office
AGRICULTURAL LAND VALUES & CASH RENTS
Kansas Agricultural Statistics

Released: September 10, 2010

2010 Land Value Highlights

The average value of all farmland and buildings for 2010 in Kansas is estimated to be \$1,000 per acre. This compares with \$1,020 in 2009 and \$1,020 in 2008. Kansas' average value of all farmland and buildings increased 2.3 percent from 2009 to 2010. Irrigated cropland values rose 3.3 percent from 2009 while non-irrigated cropland increased 7.5 percent in value from last year. The value of Kansas pasture land increased 2.7 percent from 2009 at \$775.

2010 Cash Rents

The 2010 average cash rent terms for non-irrigated cropland in Kansas was \$43.02 per acre, unchanged from 2009. The cash rental rates for non-irrigated cropland ranged from a low in Seward County of \$23 per acre to the high in Compton County of \$111 per acre. Compton County was followed by Brown County at \$103, Nemaha at \$82 and Adair at \$78. Seward was followed by Lane and Tripp at \$26 and Geary at \$26.50. The District with the highest rent was the Northeast District at \$94 per acre.

The 2010 cash rental was for irrigated cropland in Kansas averaged \$95 per acre, up from \$89 per acre in 2009. The Northeast District had the highest rate with \$121 per acre, followed by the Northwest at \$120 and the North Central at \$116. The Southeast District had the lowest irrigated rent with \$60 per acre.

The pasture cash rent averaged \$15.50 per acre in 2010, unchanged from the rate in 2009. The rent for pasture in Kansas ranged from \$6.50 per acre in Morton County for a low to \$32 per acre in Doniphan County for the high. Doniphan was followed by Marshall at \$29 and Brown at \$27.50. Morton was followed by Seward and Stevens at \$7 and Kearney and Hamilton at \$7.50. The Northeast District had the highest district-level rent per acre in the State at \$22 per acre.

Year	Irrigated Cropland		Non-Irrigated Cropland		Pasture and Rangeland		All Farmland and Buildings		
	Value	Rent	Value	Rent	Value	Rent	Total Value	Total Rent	
2009	1,040	630	666	47.00	36.00	12.80	629	29,488	1,000
2010	1,060	638	673	72.00	38.00	12.80	645	30,838	1,000
2009	1,060	640	678	70.00	38.00	12.80	660	31,458	1,000
2009	1,060	645	684	68.00	38.00	12.80	665	32,332	1,000
2009	1,060	690	688	72.00	37.00	12.80	700	32,790	1,000
2009	1,100	770	806	73.00	38.00	13.40	810	38,200	1,200
2009	1,200	820	854	74.00	38.00	13.70	870	41,292	1,300
2007	1,200	840	914	82.00	41.00	14.00	980	48,274	1,400
2008	1,400	860	890	80.00	43.00	14.00	900	47,124	1,400
2009	1,600	1,000	980	88.00	43.00	14.00	1,000	47,888	1,500
2010	1,600	1,020	1,020	85.00	43.00	14.00	1,050	48,000	1,500

¹Rent rates are for land only. ²888 is published in August 2011.

KAS report (switched to county-level in 2009, will drop CRD-level land values after 2010)

Farm Management Guide MP-1100

Kansas Land Prices and Cash Rental Rates

Department of Agricultural Economics - www.agsystems.org

Kansas State University Agricultural Experiment Station and Cooperative Extension Service
Terry C. Oberthur
Agricultural Economics
Professor Emeritus

The Farm Management Guide reports Kansas land prices and cash rents for 1991-2009. These data are useful to farm managers in determining cash rental rates, in landbank appraisals for calculating yields for making time adjustments to land prices, and to businessmen and investors who have experience on historical price and rental levels for farmland. The average prices for the major crop-reporting districts 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.

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., non-irrigated cropland), they provide a broader classification of interest.

The land value for all land in farms reported also includes 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 Agricultural Statistics
For reporting purposes, Kansas Agricultural Statistics Service has divided the state into nine agricultural statistical districts. The districts are: Northwest (NW), West Central (WC), Southwest (SW), North Central (NC), Central (C), South Central (SC), Northeast (NE), East Central (EC), and Southeast (SE) (Figure 1). Since 1976, Kansas Agricultural Statistics has collected price information on the types of land—irrigated cropland, non-irrigated cropland, and pasture. This information is combined in two tables.

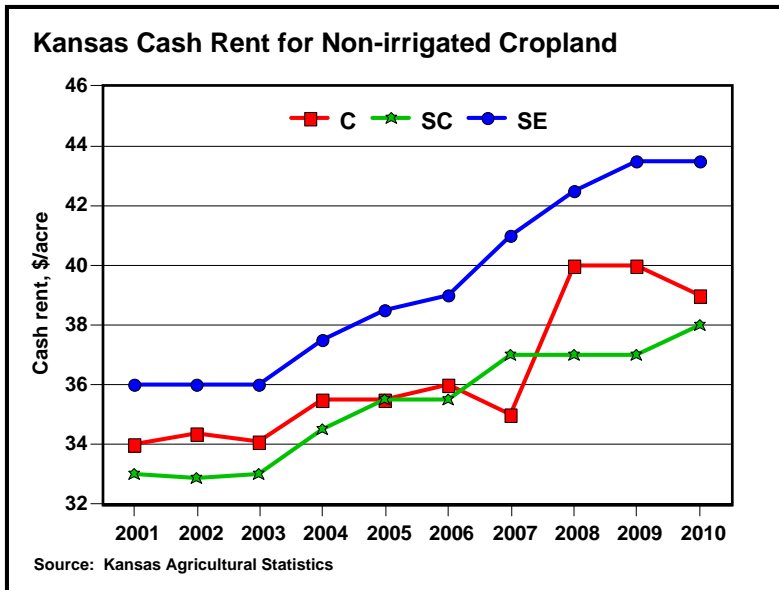
Table 1 through 5 show average prices of land and buildings. Table 1 shows district and an average for the state for the most recent 20 years reported. Data are shown for each of the land groupings: all land, all cropland, non-irrigated cropland, irrigated cropland, and pasture. The annual data are based on a survey conducted by Kansas Agricultural Statistics in late of each year asking for estimates of the January 1 land values and the percentage change in land values from the previous year as of June 1.

Year	NW	WC	SW	NC	C	SC	NE	EC	SE	All
1991	\$300	\$450	\$410	\$410	\$410	\$410	\$410	\$410	\$410	\$410
1992	310	460	420	420	420	420	420	420	420	420
1993	320	470	430	430	430	430	430	430	430	430
1994	330	480	440	440	440	440	440	440	440	440
1995	340	490	450	450	450	450	450	450	450	450
1996	350	500	460	460	460	460	460	460	460	460
1997	360	510	470	470	470	470	470	470	470	470
1998	370	520	480	480	480	480	480	480	480	480
1999	380	530	490	490	490	490	490	490	490	490
2000	390	540	500	500	500	500	500	500	500	500
2001	400	550	510	510	510	510	510	510	510	510
2002	410	560	520	520	520	520	520	520	520	520
2003	420	570	530	530	530	530	530	530	530	530
2004	430	580	540	540	540	540	540	540	540	540
2005	440	590	550	550	550	550	550	550	550	550
2006	450	600	560	560	560	560	560	560	560	560
2007	460	610	570	570	570	570	570	570	570	570
2008	470	620	580	580	580	580	580	580	580	580
2009	480	630	590	590	590	590	590	590	590	590
2010	490	640	600	600	600	600	600	600	600	600

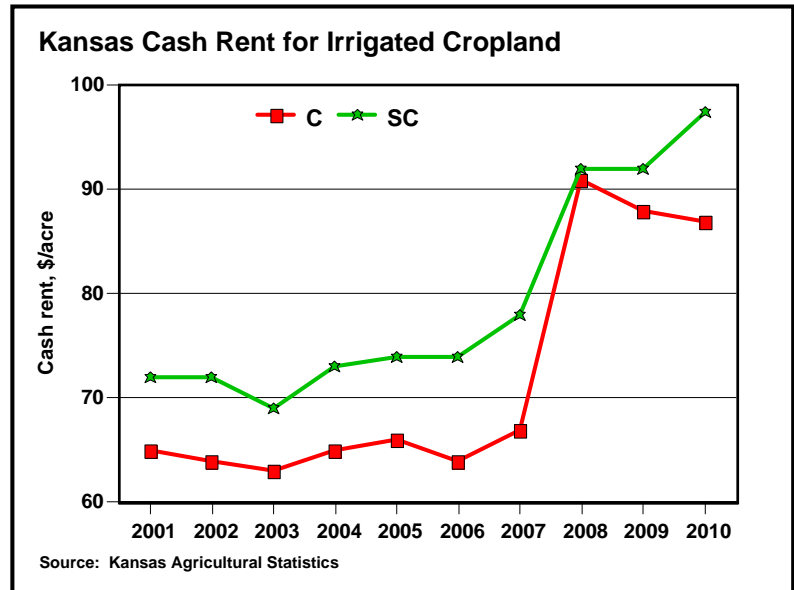
¹Source: Kansas Agricultural Statistics, Kansas Agricultural Experiment Station, Manhattan, Kansas.

KSU report – basically a repackaging of KAS data (show more history)

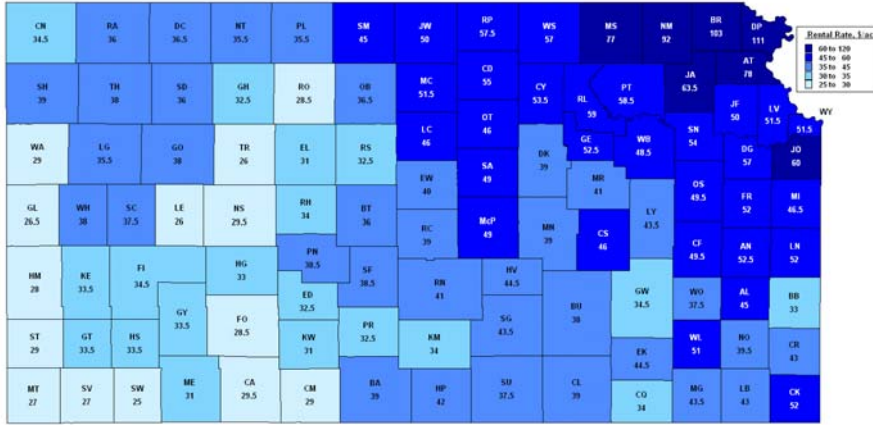
Market going rate?



Market going rate?

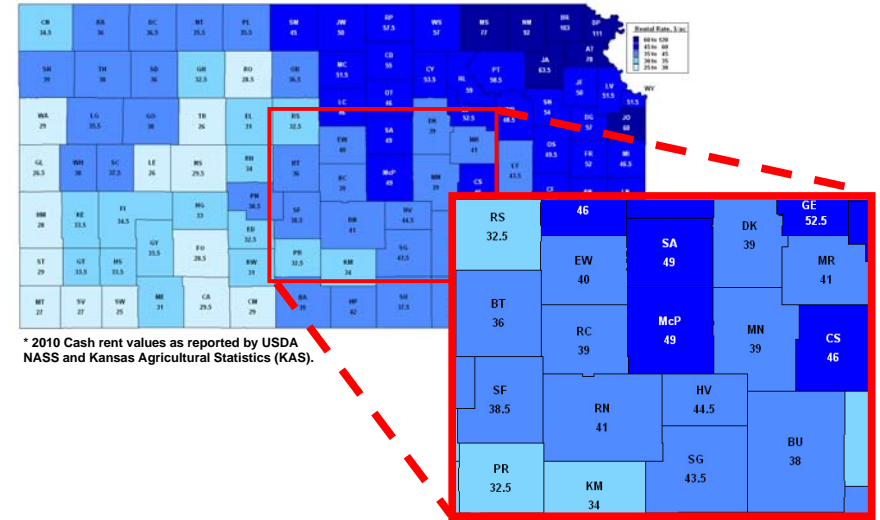


Kansas county-level non-irrigated crop cash rents...



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

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



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

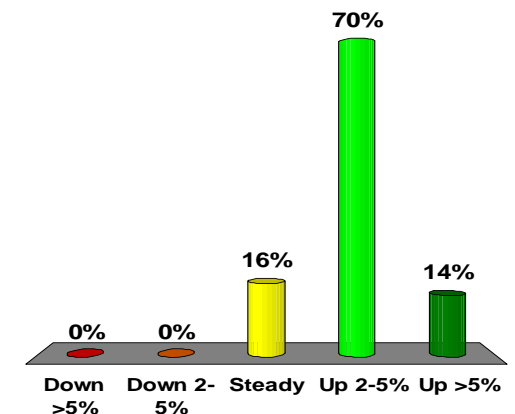
Methods of establishing cash rent values ...

- **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

Crop land cash rents for 2011...

My estimate as to what cash rents for crop land in 2011 will be, relative to 2010, is...

1. Down >5%
2. Down 2-5%
3. Steady
4. Up 2-5%
5. Up >5%



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?

- Many good reasons to go to cash rent, but there are risks associated with multi-year fixed rents
- 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)
- FSA has changed rules allowing flexible leases
- Somewhat “force” a higher level of communication relative to fixed cash rent (poor/lack of communication is often an issue with problem lease arrangements)

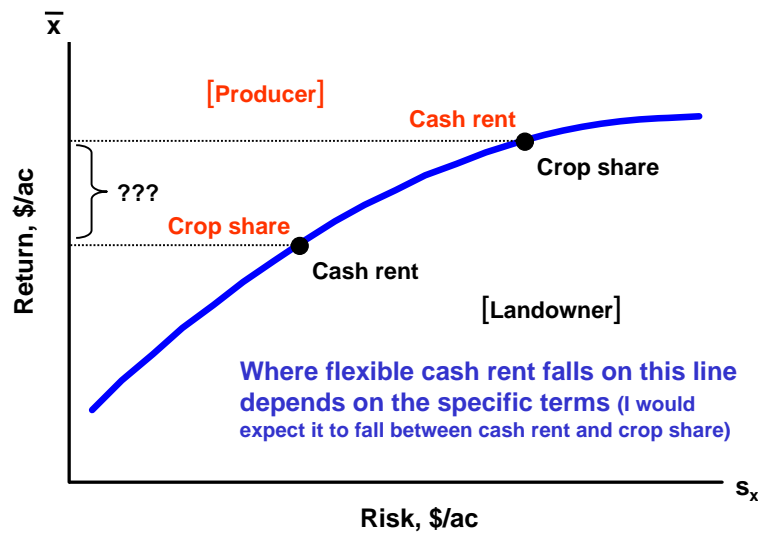
Flexible Cash Rents – WHY NOT?

- 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 regularly
- If designed wrong, might increase risk
- Appealing for certain situations, but not appropriate in all cases (depends on why you are considering cash rent)

Flexible cash rents – HOW?

- There is not a single right way to do this! (but there are plenty of wrong ways)
- A couple things to keep in mind
 - Risk-return trade-off suggests that higher risk is associated with higher expected returns and vice versa
 - Absolutely critical that all parties involved understand the flexible arrangement and how it can play out under different scenarios (i.e., have a written lease and include example calculations)
 - Important to remain “flexible” with flexible cash rents (somewhat of a learning process)

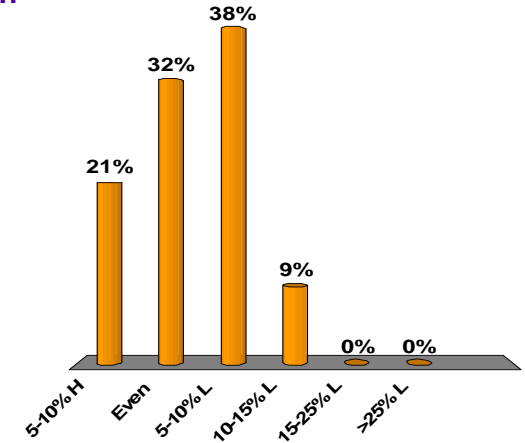
Landowner/producer risk-return tradeoff



Risk premium...

How should flexible cash rent (flexes up only) 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. 15-25% less
6. >25% less



Flexible Cash Rents – HOW?

Steps to determining a flexible cash lease

1. Establish a base cash rent
 - (often tied to local market and/or costs of production)
 - Identify what risk adjustment should be (if any)
2. Determine what base rent will be “flexed” on
 - Price deviation from base (fixed bushel rent)
 - Yield deviation from base
 - Price and yield (revenue) deviation from base
 - Gross revenue deviation from base
 - Cost deviation from base

Flexible Cash Rents – HOW?

1. Establish a base cash rent
 - A. USDA NASS survey value
 - Advantages – third party reported, county-level data now available, easy/transparent (requires no assumptions)
 - Disadvantages – county average may not fit specific situation, year lag in availability, subject to revisions
 - B. Budget-derived value (*KSU-Lease.x/s*)
 - Advantages – tailored to specific situation (rotation, yields, etc.), equitable crop share can be calibrated to local area
 - Disadvantages – requires development of crop budgets and associated assumptions

Flexible Cash Rents – HOW?

Questions to ask

1. Does cash rent flex up and down or only up?
(this should impact base price as it relates to market rate)

If cash rent only flexes up (i.e., base rent is a floor), should base rent be adjusted to reflect risk situation?

Examining the options market might help guide thinking on this issue...

At-the-money call options premiums as % of futures*

Crop (contract)	----- Scenario -----		
	A	B	C
Wheat (Jul 2011)	10.2%	9.5%	5.9%
Corn (Dec 2011)	13.5%	9.7%	6.2%
Soybean (Nov 2011)	10.8%	8.2%	6.0%

A. Current volatility (35.5, 36.6, 30.1) and current days to expiration (208-362)

B. Current volatility and 180 days to expiration (6 months)

C. Historical volatility (22.3, 23.5, 22.3) and 180 days to expiration

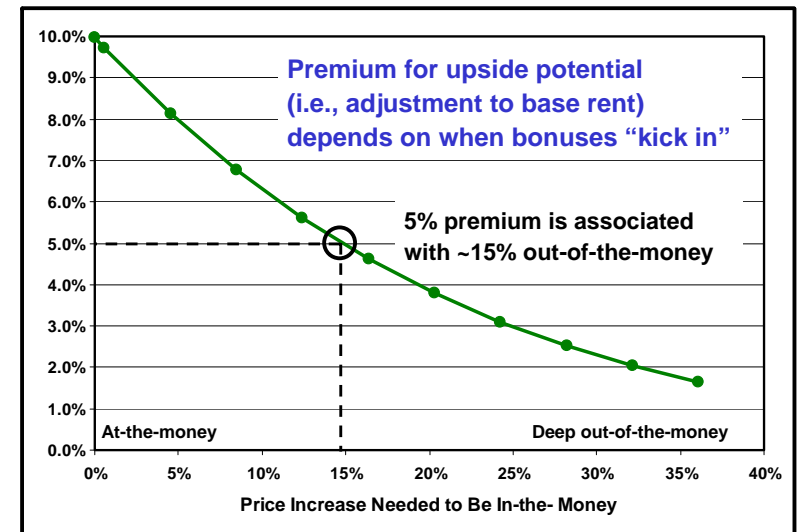
* Based on futures market closing prices on 11/26/2010 and Black-Scholes options model

Flexible Cash Rents – HOW?

Questions to ask

1. If cash rent only flexes up (i.e., base rent is a floor), should base rent be adjusted to reflect risk situation? -- YES
2. But, how does this relate to price triggers (i.e., when bonus payments start kicking in?)

Call options premiums as percent of current price*



* Based on 11/26/2010 DEC 2011 corn futures volatility, but assuming 180 days to expiration

Flexible Cash Rents – HOW?

Getting complicated enough yet?

(start to see why not many people are using flexible rents)

Flexible Cash Rents – HOW?

Questions to ask

2. What yields and prices are used to determine actual gross revenue?
 - a. Yields and prices used for determining adjustments to base rent need to be consistent with those used in determining base rent and should be spelled out in lease.
 - b. Suggestions – use actual crop yields as turned in for insurance records and a multi-week or monthly average cash price for a relevant market (if post-harvest prices are used, prices should be net of storage costs). I would not use actual prices received for crop. What about insurance prices?

Flexible Cash Rents – HOW?

Questions to ask

3. What crops should all be included in calculations?
 - a. Goal is to pay bonuses when income is high and thus it is important that bonuses are tied reasonably close to what is actually done. However, the benefits of additional complexity need to outweigh the associated costs.
 - b. Suggestion – include crops that account for the majority of the production and income and those which data will be readily available. Nothing wrong with applying percentage changes from 80-90% of acres to 100% of acres rented. Remember KISS principle...

Flexible Cash Rents – HOW?

Questions to ask

4. Are crop insurance and government payments (e.g., ACRE, SURE) included / accounted for?
 - a. Typically crop insurance indemnity payments are received when income is low and thus they would not be expected to trigger bonuses. However, if working with gross income for farm they could be included (need to account for premium cost).
 - b. Suggestion – do not factor in crop insurance or government payments to bonuses (i.e., these are handled strictly by tenant), but share information in case things need to be changed in the future.

Flexible Cash Rents – HOW?

Questions to ask

5. What about flexing cash rent based on costs of crop inputs?
 - a. Probably only makes sense for major inputs that have considerable price risk (e.g., fertilizer, irrigation fuel). Establish a \$/acre for each crop (and total for farm) based on quantity and price and then flex on price deviation from base (do not use actual price paid).
 - b. Suggestion – if this is a major concern, consider going back to crop share lease. Focus on yield and price first to keep things slightly less complex.

Flexible Cash Rents – HOW?

Questions to ask

6. What will final rent be under alternative potential outcomes?
 - a. Ask yourself lots of “what if” questions to make sure you know how things “turn out” under various price/yield scenarios.
 - b. Suggestion – take time to create example outcomes as this will help with identifying the terms that need to be included in written lease (include examples showing relevant calculations in written lease).

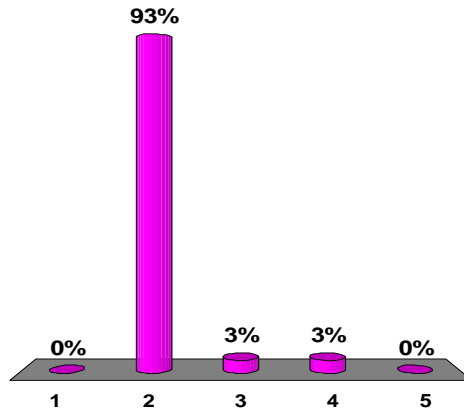
Questions
Comments
Discussion

Ethics of Leasing
(thoughts from Kevin and Terry)

View of other party to the lease...

How do you view the other party in a lease?

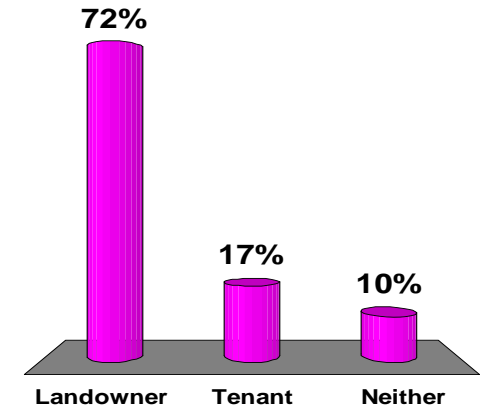
1. Competitor
2. Partner
3. Neither C nor P
4. Necessary evil
5. Does not apply



View of other party to the lease...

Who has more “power” in negotiating the terms of a lease?

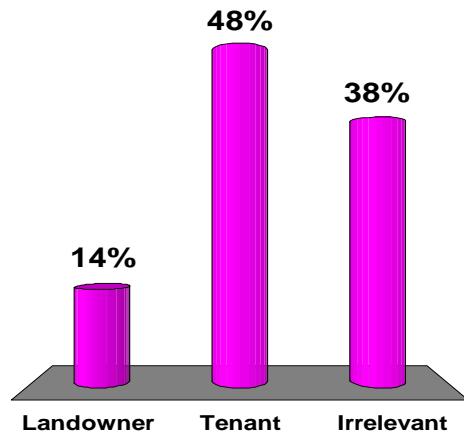
1. Landowner
2. Tenant
3. Neither (roughly equal)



View of other party to the lease...

Who “typically” needs the income from the land the most?

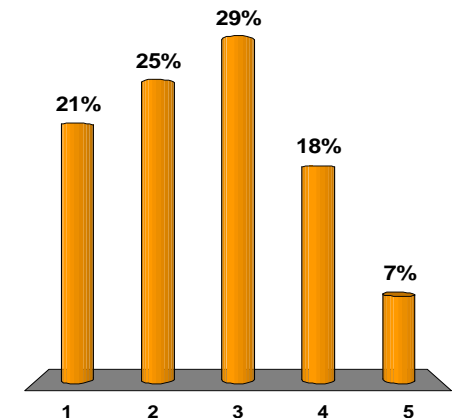
1. Landowner
2. Tenant
3. Does not matter



Fixed cash leases...

Of land that I rent (manage) on a fixed cash rent, on average, the rental rate is renegotiated...

1. Every year
2. Every 2-3 years
3. Every 3-5 years
4. 6 years or more
5. Does not apply



Lease terms over time...

Given that crop share terms (e.g., 1/3 – 2/3) have changed very little over time, cash rents should also remain relatively fixed over time.

1. True 16%

2. False 84%

Rental Ethics -- Our perceptions...

- Tenants have the information (power)
- Cash rents tend to rise over time
- Manna-from-heaven payments often should be shared
- Foot-in-door high rents often inappropriate
- Landowners need money just like tenants
- Landowners are sometimes unethical too
- Family situations often are the worst
- Ethical behavior more profitable in long run

Tenants have the power!

- Landowners often:
 - Are generations and geographically removed
 - Are technologically removed
 - Are old and easily taken advantage of
 - View the arrangement with a tenant as a long-term commitment handed down from their parents
 - Think that farming is a low-income business and so want to “do their part” in aiding it
 - Believe there are few potential tenants and so are beholden to the existing tenant
- Tenants take advantage of the situation
 - Unintentionally (may be poor managers)
 - Intentionally (“she never asked me to raise rent”)
- Only occasionally do we see a landowner shafting a tenant

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Many of these points are the result of the fact that a number of landowners are landowners “by inheritance” as opposed to investing in land intentionally. Thus, returns are often viewed as “money I never had before” as opposed to “what I expect from my investment.”

Cash rents rise over time

- Although cash rents do fall about 30% of the years, on average they rise 2-3% annually
 - Unusual to see a 3-year contract rate that shouldn't be higher than the previous contract
- Landowners & tenants who see stable crop-share terms for years think that translates to stable cash rent
 - We see cash rental rates that haven't changed for years and decades
 - Landlord: "We didn't know."
 - Tenant: "She never asked for a higher rent."

Manna-from-heaven payments

- Unexpected payments, typically from the government, should be shared according to parties' costs
 - Examples: CRP, CSP, EQIP
- If tenant does nothing to earn payment it should go to the land, i.e., the landowner
- Such payments should be discussed between landowner & tenant (especially the relative associated costs)

Foot-in-door high rental payments

- High rent payments on new contracts often are followed by stagnant rates for many years, which could be:
 - A) Tenant overbids to get land, then realizes he's not profitable so rationalizes stagnant rents
 - B) Tenant uses this as a strategy to acquire land and pay lower-than-market rents over time
 - This is the least ethical outcome of the two
- Some tenants who do this actually beg for lower rents in near future, realizing that landlords are reluctant to change tenants
 - This is really unethical!

Landowners need money too

- Tenants often make the argument that "she doesn't need the money"
 - This is completely irrelevant!
- Admittedly, landowners sometimes foster this perception
 - . . . which tends to change when investment-minded heirs acquire land being rented

Landowner ethics

- Landowners may use their land for non-ag purposes and yet expect the same rent
 - Utility poles, oil leases
 - Lease hunting
- Landowners think if they paid too much for land it should bring a higher rent
 - This is completely irrelevant!
- Landowners might demand certain farming practices yet expect market rent
 - e.g., no fertilizer; conventional tillage
- Landowners make demands on current tenants to “fix” problems of past tenants

Family situations often are the worst

- “Sweat-equity” parent-child relationships lead to unrealistic expectations across generations
- Family members have trouble believing their own parents, children, or siblings would cheat them
 - Backlash then goes overboard
- Family members often are “always around” and so the pain always resurfaces
 - Hard to “forget and move on”

Ethics is good long run economics

- Poor ethics results in high tenant turnover:
 - Increases cost of relationship establishment and monitoring
 - Reduces profit to the land (tenant makes short run decisions)
- Bad business leads to unethical behavior
 - Poor management causes “I deserve more”
 - Bad behavior is rationalized
- Good ethics should emerge because it is the “right thing to do,” not for the purpose of long-run profit-maximization

Miscellaneous

- Landowners rarely will evict tenants!
 - Often will sell land rather than evict tenants
 - Will put up with atrocious behavior of tenants (especially relatives)
- Attorneys/educators have some blame
 - Promote perceptions of “poor returns to farming,” “sweat equity,” etc.
 - Believe, like many, that farming is “special”
- Attorneys/educators should
 - Tell landowners it’s okay to evict tenants
 - Help clients understand that FARMING IS A BUSINESS!

The way we would like to see things...

“We have decided that we do not need to include [REDACTED] as a farm manager with your lease. We have complete confidence in your operation and always appreciate your open communication and response to any questions and or concerns.”

Information sent from landowner to tenant
(sent prior to signing of second lease contract).

