

Equitable Crop Share and Cash Leases: The Impact of High Input Costs

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Winter 2005/2006 meetings



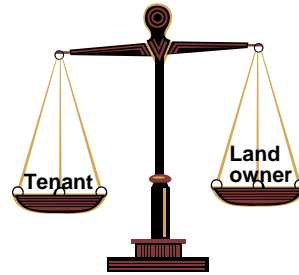
Purpose of land talks

- Develop an understanding of the underlying economic principles and management aspects of land ownership and leasing
- Trying to reduce decisions to numbers
- Two decision tools:
 - *KSU-Lease.xls*
 - *KSU-Landbuy.xls*

Related papers are found at
www.agmanager.info

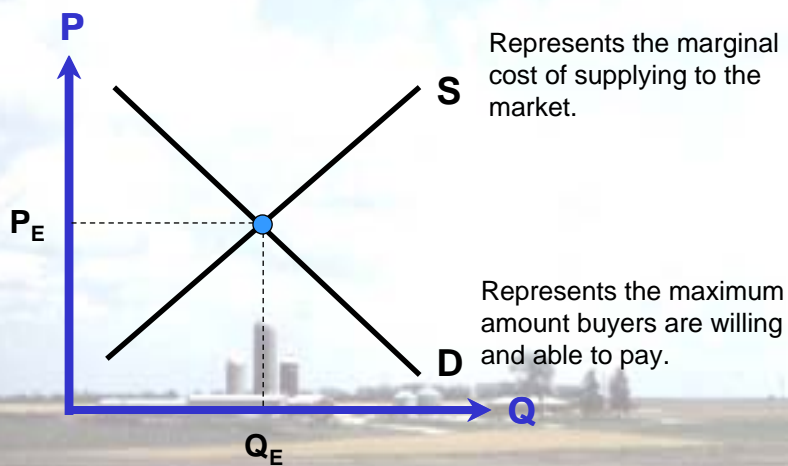
Determining the terms of a lease ...

How are cash lease rates or the terms of crop share leases established?



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Market established rental rates ...

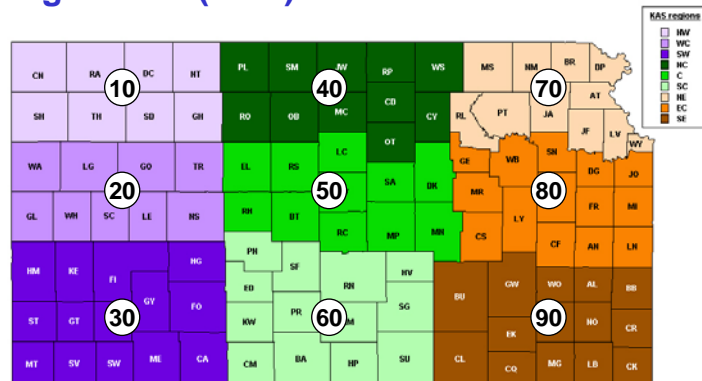


Market established rates...

- 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

Market going rate ...

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



KAS surveyed market rates ...

AGRICULTURAL LAND VALUES



Released: August 17, 2005

Kansas Farmland Values and Rents, 2005

Kansas' average value of all farmland and buildings for 2005 is estimated to be \$200 per acre. This compares with \$175 in 2004 and \$85 in 2003. Kansas' average value of all farmland and buildings increased by 11.9 percent from 2004 to 2005. The increase of \$85 per acre is the largest since a 17.2 percent increase from 1979 to 1980, when the average value increased by \$88 per acre. Irrigated cropland value rose 9 percent, non-irrigated was up 14 percent, and pasture land values increased 10 percent.

Rental rates for both types of cropland increased \$1.00 per acre, while pasture rents rose \$ 50 per acre.

Year	Cropland					Pasture and Rangeland		All Farmland and Buildings 1/	
	Value Per Acre		Rent Per Acre		Value Per Acre	Rent Per Acre	Value Per Acre	Total Value	
	Irrigated	Non-Irrigated	Irrigated	Non-Irrigated					
	Dollars								
1994	673	549	597	49.30	32.60	341	12.30	953	23,943
1995	920	595	623	51	35.50	343	11.70	935	25,466
1996	968	607	638	48.30	32.70	361	11.90	953	26,268
1997	990	615	649	49.00	34.50	365	11.60	965	26,838
1998	1,010	620	655	47.00	35.50	367	13.00	977	27,408
1999	1,020	625	660	46.00	35.00	370	13.50	980	28,505
2000	1,040	630	666	47.00	35.50	380	12.80	925	29,688
2001	1,060	635	673	47.00	36.00	390	12.80	645	30,505
2002	1,080	640	679	47.00	36.00	400	12.60	665	31,455
2003	1,080	645	684	48.00	36.00	410	12.80	685	32,332
2004	1,110	665	705	47.50	37.50	430	13.30	715	33,748
2005	1,200	760	800	47.00	38.50	500	13.40	800	37,760

1/ Values per acre are for land and buildings. Rental rates are for land only. 2/ Insufficient data to publish.

The Land Values Survey-Background

The Agricultural Land Values Survey was conducted during May/June 2005. Survey respondents were asked to provide information on the value of the land they operate and the rental rates for any land they rented. Additional land value and rent data were collected in the June Agricultural Survey.

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

KAS report

Farm Management Guide MF-1100

Kansas Land Prices and Cash Rental Rates

Department of Agricultural Economics



Kansas State University Agricultural Experiment Station and Cooperative Extension Service

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This Farm Management Guide reports Kansas land prices and cash rents for 1995-2004. These data are useful to farm managers in determining cash rental rates, to landlords in establishing prices for leasing land, and to investors who have expectations of future price increases for land. The average prices in this guide encompass parcels of land that vary widely in productivity. Thus, these data are more appropriate for analyzing results than for establishing market value or rental rates for specific tracts of land.

Kansas Agricultural Statistics
For reporting purposes, Kansas Agricultural Statistics services divide 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), Southeast (SE), East-Central (EC), and Southeast (SE). Since 1976, Kansas Agricultural Statistics has collected price information on three types of land:

nonirrigated cropland, irrigated cropland, and pasture. This information is combined in five additional land groupings: all-cropland and all-land in farms. While these two groupings do not represent a particular type of land (i.e., nonirrigated cropland), they provide a broader classification of interest. The land values 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, and changes in this value reporting method does not significantly affect the accuracy of land values reported.

Tables 1 through 5 show average prices of land and buildings in each district and the 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, nonirrigated cropland, irrigated cropland, and pasture. The annual data are based on April 1 for 1985 and February 1 for 1986-1999, and January 1 for 2000-2004.

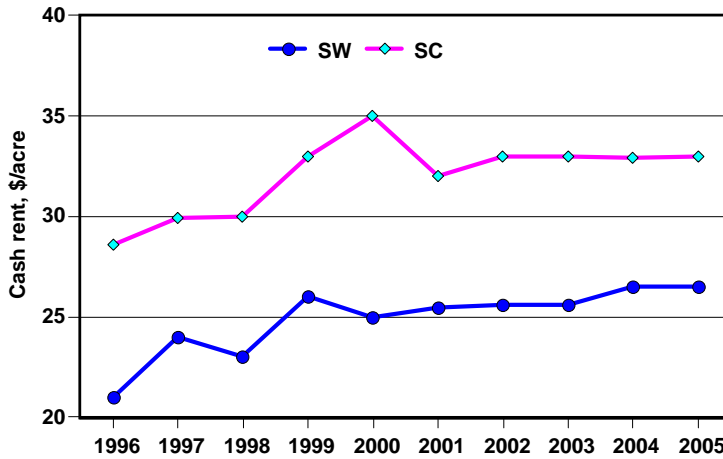
Year	NW	WC	SW	NC	C	SC	NE	EC	SE	State
1985	1837	3732	3487	3423	5533	6116	3642	3470	3421	3488
1986	137	312	416	370	473	523	327	410	311	415
1987	113	207	377	341	484	484	474	361	330	373
1988	138	328	421	390	446	513	455	396	373	418
1989	194	370	444	417	441	559	484	405	384	430
1990	195	361	440	408	486	576	527	425	400	430
1991	199	363	410	410	471	517	570	430	397	440
1992	178	366	411	445	462	499	514	442	394	460
1993	199	371	412	447	491	546	516	430	407	448
1994	435	386	451	511	488	561	628	487	449	503
1995	491	386	464	527	545	579	609	481	501	535
1996	488	399	469	526	523	554	611	431	541	533
1997	560	410	480	540	540	576	618	500	575	565
1998	499	410	490	550	560	598	630	500	590	577
1999	499	405	500	550	530	599	609	500	535	615
2000	539	413	525	645	610	640	620	500	650	625
2001	555	445	540	625	600	655	645	575	665	645
2002	550	460	550	640	600	685	690	620	690	645
2003	568	470	550	640	670	706	710	650	710	685
2004	589	490	590	690	690	725	745	655	750	715

Land Economics 1 - Revised October 2004

KSU report

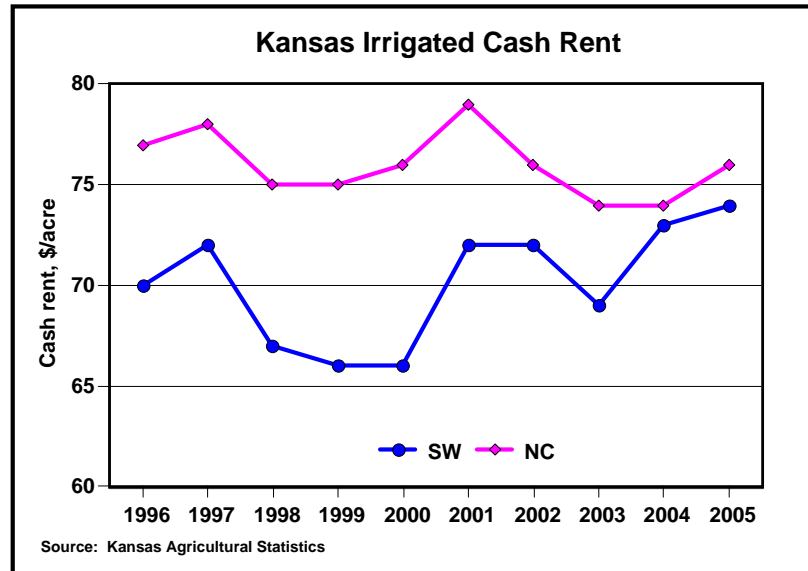
Market going rate ...

Kansas Non-irrigated Cash Rent



Source: Kansas Agricultural Statistics

Market going rate ...



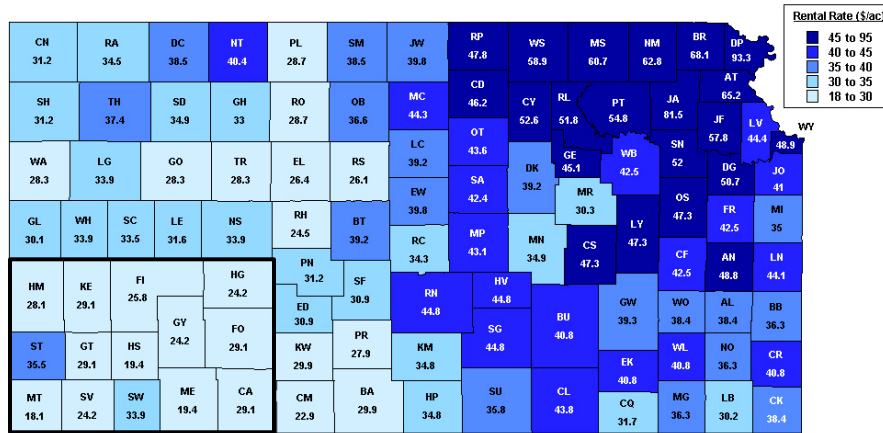
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County-level cash rents ...

- County-level cash rents were estimated for non-irrigated crop and pasture land based upon the KAS reported CRD values
- CRD values prorated to individual counties based on 3-year average of county-level rents from FSA and 2002 census acreage data
- Weighted average county-level cash rents are exactly equal to the KAS reported district value
- Similar procedure was done on land values

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



Based on KAS reported values for January 1, 2005

Acreage-weighted average of counties equals \$26.50 (KAS)

Problem:

The market equilibrium prices we observe (when they are available) often do not reflect individual situations.

That is, they reflect averages, but nobody is average...

... so what can we do to arrive at a price that reflects an equilibrium?



Way to find acceptable lease rates (crop shares and cash rents) ...

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.

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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)

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

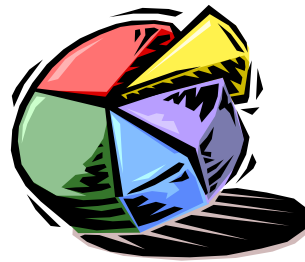
1. Yield increasing inputs should be shared
 2. Share arrangements should be adjusted as technology changes
 3. Total returns divided in same proportion as resources contributed
-
4. Compensation for unused long-term investments at termination
 5. Good landlord/tenant communications

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

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

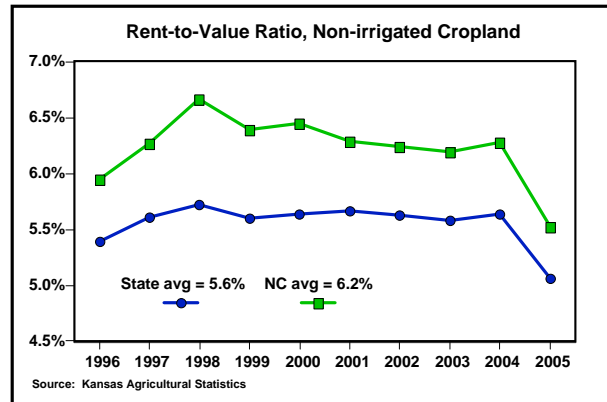
Valuing inputs can depend on whether the lease being developed is a one-year lease versus multiple-year lease.



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Land contribution ...

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



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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.



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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.

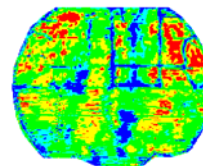
What is “typical” today? While current prices might not be what we expect long-term, can we afford to ignore them with regard to leases?

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Principle #2: Technology may affect share arrangements

Examples of technological change

- Reduced-/no-till
- New crops and/or rotations
- Center pivot irrigation
- Hybrid seed
- Bio-technology
- Precision agriculture (GPS)



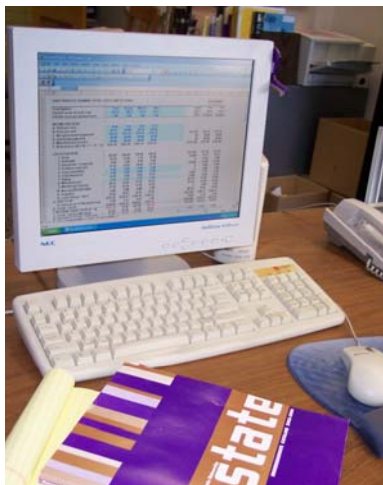
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Impact of new technologies ...

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

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Using “*KSU-Lease.xls*” to determine equitable crop share and cash leases ...



Information/data required:

1. Crop rotation/mix
2. Income information
3. Production inputs
4. Machinery costs
5. Land value
6. Irrigation equipment
-
7. Contributor of input
8. Risk adjustment

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**Technology adoption example:
Impact increasing cropping
intensity has on equitable lease
arrangements**

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Lease examples of WF vs WCF in western KS

-- based on Farm Management Guides and *KSU-Lease.xls*

The image displays three overlapping covers of Farm Management Guides from Kansas State University, set against a background of a cornfield. Each cover includes the title, guide number, department name, and the K-State logo.

- Top Cover:** Farm Management Guide MF-903, **Wheat Cost-Return Budget in Western Kansas**, Department of Agricultural Economics, Kansas State University Agricultural Experiment Station and Cooperative Extension Service.
- Middle Cover:** Farm Management Guide MF-904, **Grain Sorghum Cost-Return Budget in Western Kansas**, Department of Agricultural Economics, Kansas State University Agricultural Experiment Station and Cooperative Extension Service.
- Bottom Cover:** Farm Management Guide MF-2150, **Corn Cost-Return Budget in Western Kansas**, Department of Agricultural Economics, Kansas State University Agricultural Experiment Station and Cooperative Extension Service.

Lease Examples of WF and WCF

(based on 2005 Farm Management Guides)

Equitable Crop Shares with Wheat-Fallow vs. Wheat-Corn-Fallow Rotations

Contributor --- (L=Landlord, T=Tenant, and S=Shared (equitably))

Alternative Arrangements for Sharing Various Inputs

<u>Crop Rotation</u>	<u>Wheat-Fallow</u>			<u>Wheat-Corn-Fallow</u>			
Land	L	L	L	L	L	L	L
Machinery	T	T	T	T	T	T	T
Fertilizer ¹	S	S	T	S	S	S	T
Herbicide (wheat) ¹	T	S	T	T	T	S	T
Herbicide (corn) ¹	---	---	---	T	S	S	T
Other	T	T	T	T	T	T	T
Contributions (L/T)	35.1/64.9	37.5/62.5	30.1/69.9	27.1/72.9	30.5/69.5	31.7/68.3	21.7/78.3
Net return, \$/ac	-\$25.14	-\$25.14	-\$25.14	-\$15.11	-\$15.11	-\$15.11	-\$15.11

¹ Application costs not included (accounted for in "Other").

Lease Examples of WF and WSF

(based on 2005 Farm Management Guides)

Equitable Crop Shares with Wheat-Fallow vs. Wheat-Sorghum-Fallow Rotations

Contributor --- (L=Landlord, T=Tenant, and S=Shared (equitably))

Alternative Arrangements for Sharing Various Inputs

<u>Crop Rotation</u>	<u>Wheat-Fallow</u>			<u>Wheat-Sorghum-Fallow</u>			
Land	L	L	L	L	L	L	L
Machinery	T	T	T	T	T	T	T
Fertilizer ¹	S	S	T	S	S	S	T
Herbicide (wheat) ¹	T	S	T	T	T	S	T
Herbicide (sorgh) ¹	---	---	---	T	S	S	T
Other	T	T	T	T	T	T	T
Contributions (L/T)	35.1/64.9	37.5/62.5	30.1/69.9	29.2/70.8	33.1/66.9	34.5/65.5	23.3/76.7
Net return, \$/ac	-\$25.14	-\$25.14	-\$25.14	-\$17.42	-\$17.42	-\$17.42	-\$17.42

¹ Application costs not included (accounted for in "Other").

Impact of specific technologies on equitable crop share and cash leases ...

- **Roundup Ready**
- **bT, Gaucho**
- **Precision ag / irrigation system**
- **CSP / EQIP**
- **Hunting leases**

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Adoption of new technologies ...

- ... tends to cause problems because traditional arrangements or rules-of-thumb are often not appropriate.
- ... think about what the technology (i.e., the “new input”) substitutes for and how that relates to what was previously being done.
- ... 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).

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Impact of high costs on leases ...

KSU-Lease.xls is a tool that can be used to analyze the impact of current costs have on equitable crop share leases as well as their cash-rent equivalents

The impact high costs have on leases will depend on each specific situation due to how producers change (or not change) production practices in response to these high prices

→ producers should “run their own numbers”

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Budgets based on 2000-04 costs for energy-related inputs

	Corn	Soybeans	Wheat	Milo	Total	Per Acre Planted	Per Acre Tillable
CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS							
Crop/System	Corn	Soybeans	Wheat	Milo	Total	Per Acre Planted	Per Acre Tillable
Planted acres of each crop	250.0	125.0	350.0	250.0	975.0		
Tillable acres per planted acre	1.00	1.00	1.25	1.25	1,125.0		
INCOME PER ACRE							
A. Yield per acre	190.0	55.0	40.0	70.0	---	---	---
B. Price per unit	\$2.40	\$5.50	\$3.25	\$2.25	---	---	---
C. Net government payments	\$35.00	\$35.00	\$12.50	\$12.50	\$20,625	\$21.15	\$18.33
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
F. Returns/acre (A x B) + C + D + E	\$491.00	\$337.50	\$142.50	\$170.00	\$257,313	\$263.91	\$228.72
COSTS PER ACRE							
1. Seed	\$49.60	\$27.00	\$5.20	\$7.56	\$19,485	\$19.98	\$17.32
2. Herbicide	29.38	13.00	10.50	27.00	19,395	19.89	17.24
3. Insecticide / Fungicide	39.36	0.00	0.00	0.00	9,840	10.09	8.75
4. Fertilizer and Lime	65.23	9.60	17.90	30.30	31,348	32.15	27.86
5. Crop Consulting	6.50	6.25	0.00	0.00	2,406	2.47	2.14
6. Crop Insurance	0.00	0.00	0.00	0.00	0	0.00	0.00
7. Drying	0.00	0.00	0.00	0.00	0	0.00	0.00
8. Miscellaneous	10.00	10.00	5.50	5.50	7,050	7.23	6.27
9. Machinery Expense	94.87	64.54	54.62	54.52	64,533	66.19	57.36
10. Non-machinery Labor	12.50	9.00	7.50	8.04	8,885	9.11	7.90
11. Irrigation	160.75	145.57	0.00	0.00	58,383	59.88	51.90
12. Land Charge / Rent	40.25	40.25	39.53	39.53	38,813	39.81	34.50
G. SUB TOTAL	\$508.44	\$325.20	\$140.76	\$172.45	\$260,137	\$266.81	\$231.23
13. Interest on 1/2 Nonland Costs	13.65	6.98	3.21	4.48	6,528	6.69	5.80
H. TOTAL COSTS	\$522.09	\$332.18	\$143.97	\$176.93	\$266,665	\$273.50	\$237.04
I. RETURNS OVER COSTS (F - H)	(\$31.09)	\$5.32	(\$1.47)	(\$6.93)	(\$9,352)	(\$9.59)	(\$8.31)
J. TOTAL COSTS/UNIT (H/A)	\$2.75	\$6.04	\$3.60	\$2.53	---	---	---
K. RETURN TO TOTAL COST (I/H)	-5.95%	1.60%	-1.02%	-3.92%	3.51%	3.51%	3.51%

Dryland example assumptions ...

- 75% of land cropped annually (58.3% wheat and 41.7% milo) with other 25% fallow
- Equitably share all fertilizer on both crops (tenant pays application costs)
- Equitably share herbicide and application costs on milo
- Initial analysis is based on fuel and fertilizer costs at 2000-04 averages
- Examined impact on equitable crop share and cash rent equivalent with increased costs (all else held constant)

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Microsoft Excel - KSU-Lease (Hays2005).xls

Budgets based on 2000-04 costs

	Wheat	Milo	Total	Per Planted Acre	Per Tillable Acre
ALTERNATIVE METHODS OF ESTIMATING CASH RENT					
Total tillable acre	350.0	250.0	600.0		
Planted acres of each crop	350.0	250.0	600.0		
A. Landowner's COST					
Land	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63
Irrigation equipment	\$0.00	\$0.00	\$0	\$0.00	\$0.00
Total	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor					
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17
Landowner's share	33.8%	33.8%	33.8%	33.8%	33.8%
Landowner's income	\$48.11	\$57.40	\$31,190	\$51.98	\$41.59
Landowner operating expense	6.29	24.12	8,229	13.72	10.97
Income less operating expense	\$41.83	\$33.28	\$22,961	\$38.27	\$30.61
Less risk adjustment	1.25	1.00	689	1.15	0.92
Cash rent equivalent	\$40.57	\$32.28	\$22,272	\$37.12	\$29.70
C. Amount tenant CAN AFFORD TO PAY					
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17
Total operating expense	\$104.43	\$137.40	\$70,902	\$118.17	\$94.54
Return to land and irr equip	\$38.07	\$32.60	\$21,473	\$35.79	\$28.63
Comparison of alternative cash rent methods					
Low	\$38.07	\$32.28	\$21,473	\$35.79	\$28.63
Average	\$39.39	\$34.81	\$22,488	\$37.48	\$29.98
High	\$40.57	\$39.53	\$23,719	\$39.53	\$31.63
Returns above all costs (profit)	(\$1.47)	(\$6.93)	(\$2,245)	(\$3.74)	(\$2.99)

Cash-rent equivalent of roughly \$30/acre (profit = -\$2.99)

Budgets based on 2005-06 fertilizer costs

ALTERNATIVE METHODS OF ESTIMATING CASH RENT		Print cash rent info 1:58 PM 12/03/05				
Crop/System	Wheat	Milo	Total	Per Planted Acre	Per Tillable Acre	
Total tillable acre	----->					
Planted acres of each crop	350.0	250.0	600.0			
A. Landowner's COST						
Land	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
Irrigation equipment	\$0.00	\$0.00	\$0	\$0.00	\$0.00	
Total	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor 3.0%						
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17	
Landowner's share	33.8%	33.8%	33.8%	33.8%	33.8%	
Landowner's income	\$48.11	\$57.40	\$31,190	\$51.98	\$41.59	
Landowner operating expense	9.78	29.73	10,855	18.09	14.47	
Income less operating expense	\$38.34	\$27.67	\$20,335	\$33.89	\$27.11	
Less risk adjustment	1.15	0.83	610	1.02	0.81	
Cash rent equivalent	\$37.19	\$26.84	\$19,725	\$32.88	\$26.30	
C. Amount tenant CAN AFFORD TO PAY						
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17	
Total operating expense	\$114.78	\$154.02	\$78,678	\$131.13	\$104.90	
Return to land and irr equip	\$27.72	\$15.98	\$13,697	\$22.83	\$18.26	
Comparison of alternative cash rent methods						
Low	\$27.72	\$15.98	\$13,697	\$22.83	\$18.26	
Average	\$34.81	\$27.45	\$19,047	\$31.75	\$25.40	
High	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
Returns above all costs (profit)						
	(\$11.81)	(\$23.59)	(\$10,021)	(\$16.70)	(\$13.36)	

Cash-rent equivalent of roughly \$25.5/acre (profit = -\$13.36)

Budgets based on 2006 fuel prices

ALTERNATIVE METHODS OF ESTIMATING CASH RENT		Print cash rent info 2:02 PM 12/03/05				
Crop/System	Wheat	Milo	Total	Per Planted Acre	Per Tillable Acre	
Total tillable acre	----->					
Planted acres of each crop	350.0	250.0	600.0			
A. Landowner's COST						
Land	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
Irrigation equipment	\$0.00	\$0.00	\$0	\$0.00	\$0.00	
Total	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor 3.0%						
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17	
Landowner's share	32.4%	32.4%	32.4%	32.4%	32.4%	
Landowner's income	\$46.11	\$55.00	\$29,888	\$49.81	\$39.85	
Landowner operating expense	6.02	23.49	7,981	13.30	10.64	
Income less operating expense	\$40.08	\$31.51	\$21,907	\$36.51	\$29.21	
Less risk adjustment	1.20	0.95	657	1.10	0.88	
Cash rent equivalent	\$38.88	\$30.57	\$21,249	\$35.42	\$28.33	
C. Amount tenant CAN AFFORD TO PAY						
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17	
Total operating expense	\$110.03	\$142.99	\$74,257	\$123.76	\$99.01	
Return to land and irr equip	\$32.47	\$27.01	\$18,118	\$30.20	\$24.16	
Comparison of alternative cash rent methods						
Low	\$32.47	\$27.01	\$18,118	\$30.20	\$24.16	
Average	\$36.96	\$32.37	\$21,029	\$35.05	\$28.04	
High	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63	
Returns above all costs (profit)						
	(\$7.06)	(\$12.52)	(\$5,601)	(\$9.34)	(\$7.47)	

Cash-rent equivalent of roughly \$28/acre (profit = -\$7.47)

Budgets based on increased fertilizer and fuel prices

ALTERNATIVE METHODS OF ESTIMATING CASH RENT							Print cash rent info		2:04 PM 12/03/05		
Crop/System	Wheat	Milo	Total	Per Planted Acre	Per Tillable Acre						
Total tillable acre	----->					750.0					
Planted acres of each crop	350.0	250.0	600.0								
A. Landowner's COST											
Land	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63						
Irrigation equipment	\$0.00	\$0.00	\$0	\$0.00	\$0.00						
Total	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63						
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor											
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17						
Landowner's share	32.4%	32.4%	32.4%	32.4%	32.4%						
Landowner's income	\$46.11	\$55.00	\$29,888	\$49.81	\$39.85						
Landowner operating expense	9.37	28.87	10,497	17.50	14.00						
Income less operating expense	\$36.74	\$26.13	\$19,391	\$32.32	\$25.85						
Less risk adjustment	1.10	0.78	582	0.97	0.78						
Cash rent equivalent	\$35.63	\$25.35	\$18,809	\$31.35	\$25.08						
C. Amount tenant CAN AFFORD TO PAY											
Total income	\$142.50	\$170.00	\$92,375	\$153.96	\$123.17						
Total operating expense	\$120.37	\$159.61	\$82,033	\$136.72	\$109.38						
Return to land and irr equip	\$22.13	\$10.39	\$10,342	\$17.24	\$13.79						
Comparison of alternative cash rent methods											
Low	\$22.13	\$10.39	\$10,342	\$17.24	\$13.79						
Average	\$32.43	\$25.09	\$17,623	\$29.37	\$23.50						
High	\$39.53	\$39.53	\$23,719	\$39.53	\$31.63						
Returns above all costs (profit)			(\$17.41)	(\$29.14)	(\$13.37)	(\$22.29)	(\$17.84)				
Cash-rent equivalent of roughly \$23.5/acre (profit = -\$17.84)											

Dryland example summary ...

	Equitable share	Cash rent	Profit
Base scenario	66.2 / 33.8	\$29.98	-\$2.99
Increased fertilizer costs	66.2 / 33.8	\$25.40	-\$13.36
Increased fuel costs	67.6 / 32.4	\$28.04	-\$7.47
Increased fuel and fert costs	67.6 / 32.4	\$23.50	-\$17.84

Irrigated example assumptions ...

- Rotation -- 67% corn and 33% soybeans
- Equitably share fertilizer, herbicides, insecticides, and irrigation energy (tenant pays application costs on fertilizer, shared on others)
- Tenant owns center pivot and motor, landowner owns well, pump and gearhead (tenant pays 75% of irrigation repairs, landowner 25%)
- Initial analysis is based on fuel and fertilizer costs at 2000-04 averages
- Examined impact on equitable crop share and cash rent equivalent with increased costs (all else held constant)

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Irrigated example summary ...

	Equitable share	Cash rent	Profit
Base scenario	74.9 / 25.1	\$62.41	-\$18.95
Increased fertilizer costs	74.9 / 25.1	\$51.64	-\$44.94
Increased pumping costs	74.9 / 25.1	\$37.16	-\$79.89
Increased fuel costs	75.6 / 24.4	\$58.87	-\$27.64
Increased costs (ALL)	75.6 / 24.4	\$23.03	-\$114.56

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Summary ...

High input prices will have significant impact on crop returns in 2006

High diesel fuel prices will impact returns, but they have relatively minor impact on equitable crop share percentages

Crop share tenants will not be impacted nearly as much as those cash renting (assuming fertilizer and irrigation pumping expenses are being shared)

Producers cash renting need to negotiate with landowners to see if they will help “share the pain” (likewise for crop share tenants not sharing fertilizer or irrigation pumping costs)

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Summary ...

Producers need to “do their homework” to make sure they understand the numbers before talking to their landowner(s)

Tenants need to think long-term when negotiating with landowners

- Impact of losing or giving up land?**
- Have “good times” been shared?**

Good landlord/tenant communications will be critical as we go through these tough economic times

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