



Changes for Managing Risk

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



CropRisk

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Flexible Cash Rents – WHAT?

- Flexible cash rents simply refer to land rental arrangements where the amount of cash rent paid (received) varies 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
 - Other...



Changes for managing risk ...

- Manage input / output price risk simultaneously
 - becoming more important?
- Improve financial reporting
 - will you have a choice?
- Technology adoption decisions
 - generally speaking, just do it!
- Flexible cash rents
 - what? why? how?



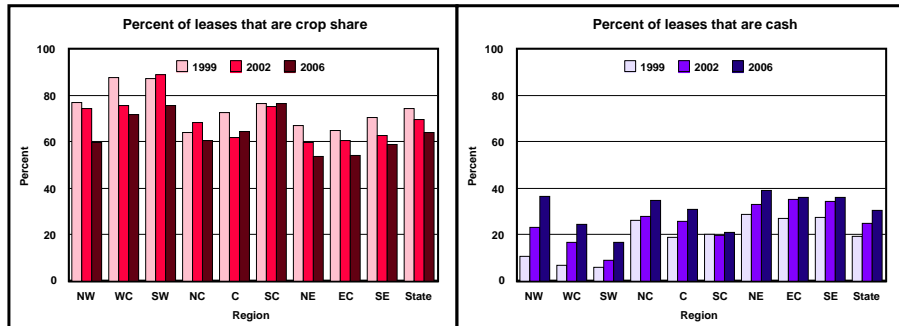
Distribution of leases by type of lease ...

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

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

Most landowners are familiar with crop share leases and thus variable income.

CR Trend towards more cash rent ...



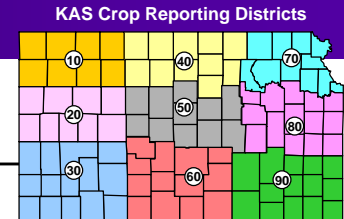
Source: KSU and KS Ag Stat – Non-Irrigated Farm Lease Arrangement Surveys

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, stabilize, or reverse in the future?

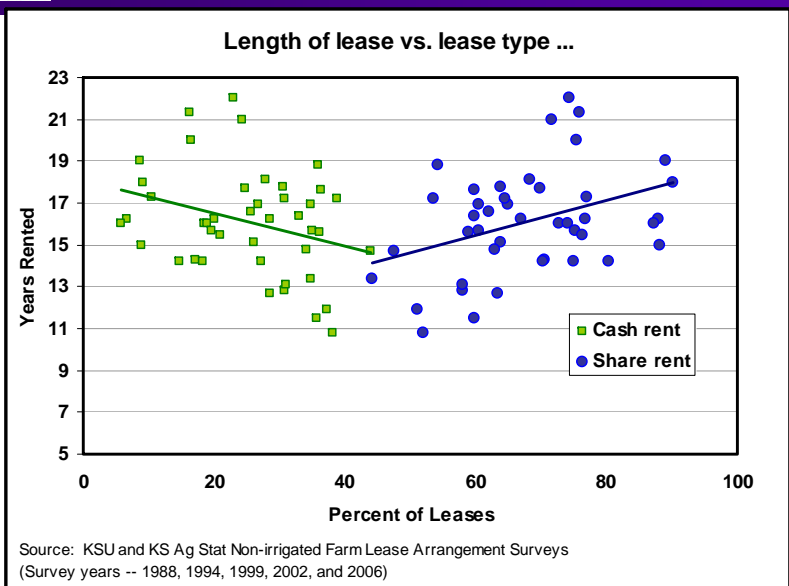
CR Length of cropland leases ...



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

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

CR Cash leased land tends to “turnover” quicker ...

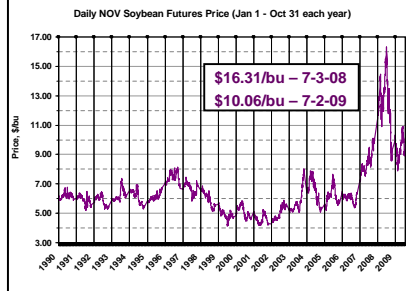
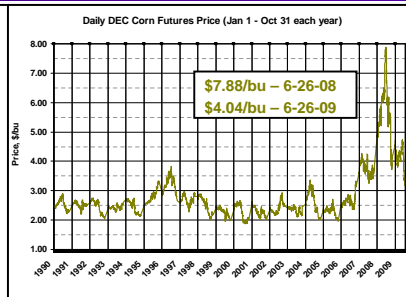
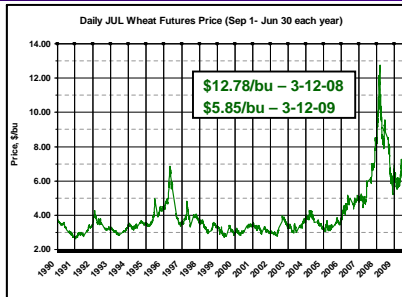


CR Flexible Cash Rents – WHY?

- Trend in Kansas has been moving away from crop share leases to more cash leases
- Volatility of last few years has significantly increased the risk of *fixed* cash rents
 - Most popular question received in the summer of 2008 was “How can I terminate my lease with my current tenant?” (in 2009 several questions about tenants walking away)



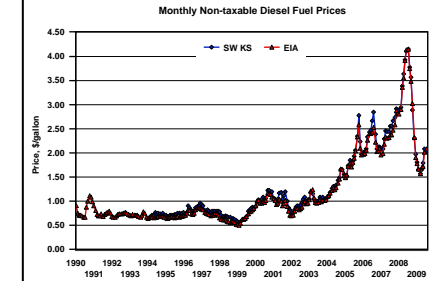
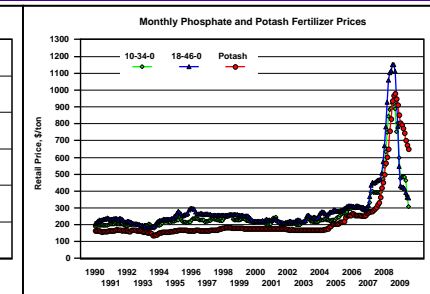
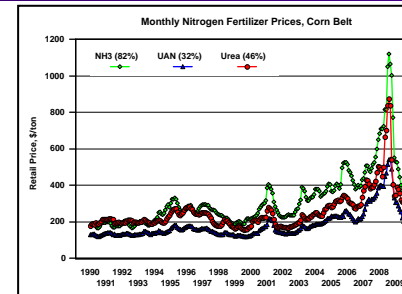
Grain markets have been a bit volatile recently ...



Extremely volatile crop prices make negotiating fixed cash rents very difficult and risky (good chance someone is not going to be happy). Crop share has a built in buffer to this risk.



Input markets have been a bit volatile recently ...



Extremely volatile input prices make negotiating fixed cash rents very difficult and risky. Most crop share arrangements have a built in buffer to much of this risk (i.e., those that share fertilizer expense).

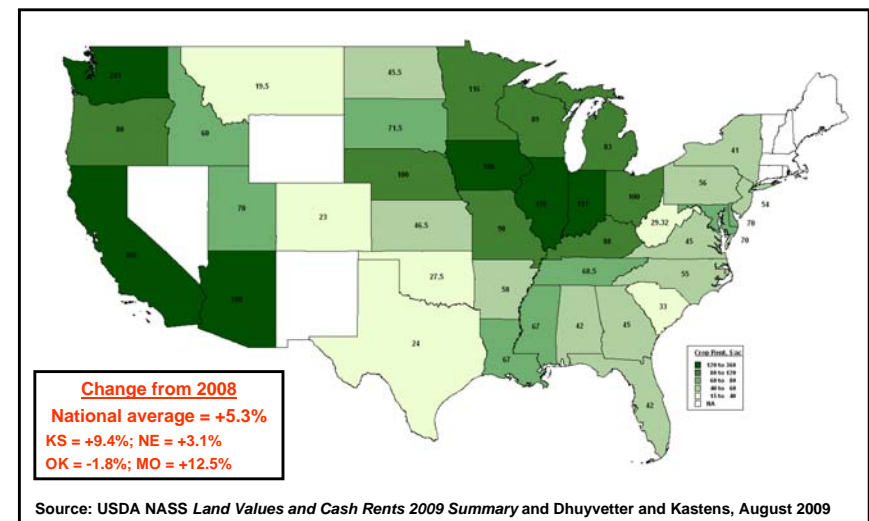


Flexible Cash Rents – WHY?

- Trend in Kansas has been moving away from crop share leases to more cash leases
- Volatility of last few years has significantly increased the risk of *fixed* cash rents
 - Most popular question received in the summer of 2008 was “How can I terminate my lease with my current tenant?” (in 2009 several questions about tenants walking away)
 - It appears that some producers feel that once a cash rent is negotiated this rate is appropriate into eternity... (by definition, this is true for landowners as well)
 - Tenants are concerned that if they increase their cash rent, they will never be able to lower it (is that true?)

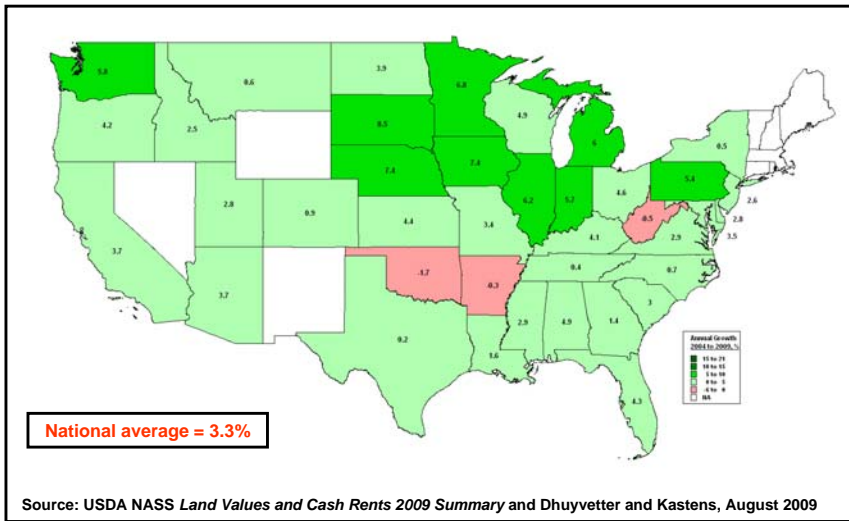


Crop Land Average Rent per Acre, 2009

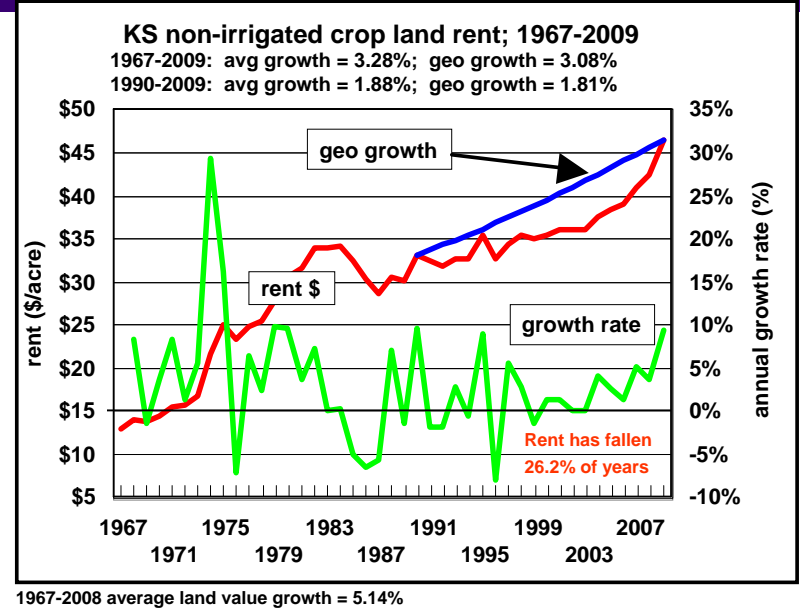


* Corresponding changes in pasture land rents were US=0.0%; KS=+6.5%; NE=0.0%; OK=0.0%; and MO=-3.8%.

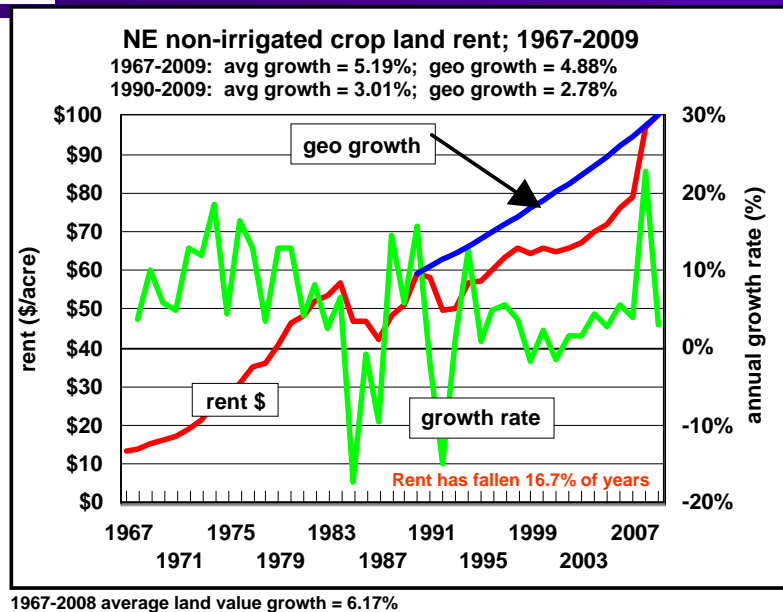
CR Crop Land Rent Average Annual Growth Rate
Jan 1, 2004 to Jan 1, 2009, percent (geo mean)



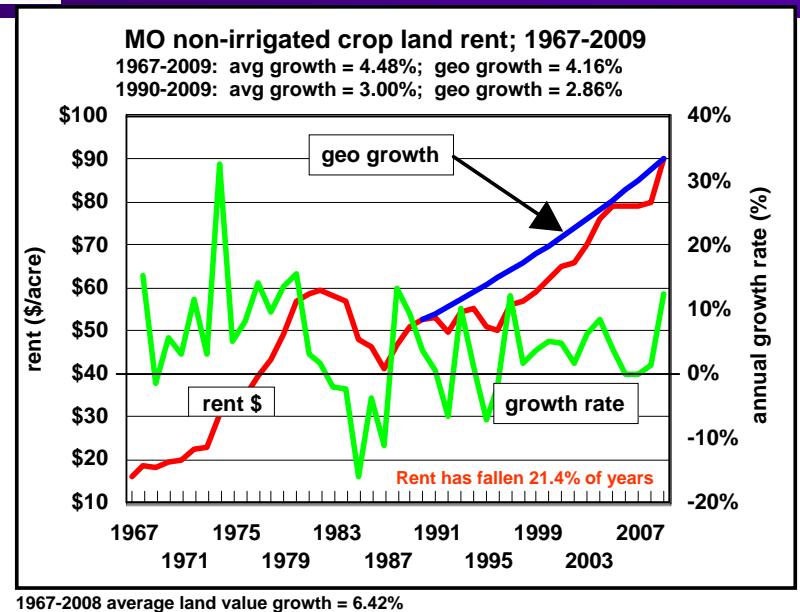
CR Cash rent historical perspective



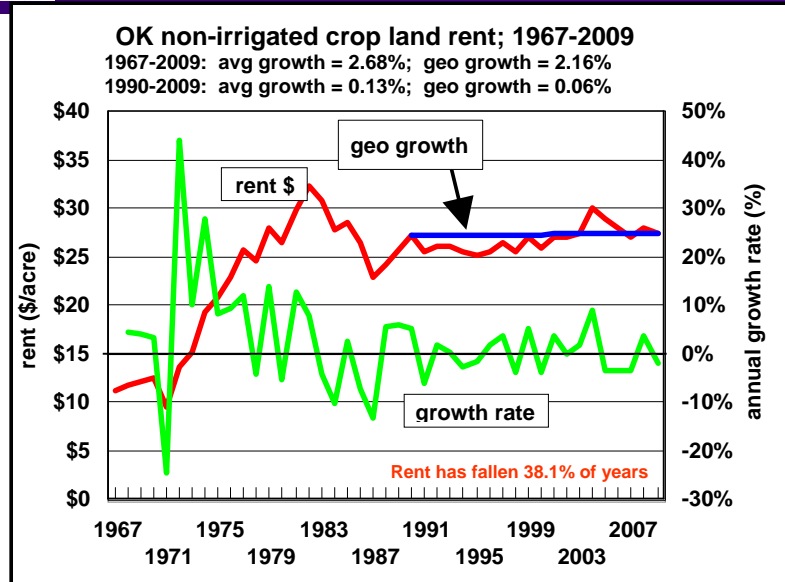
CR Cash rent historical perspective



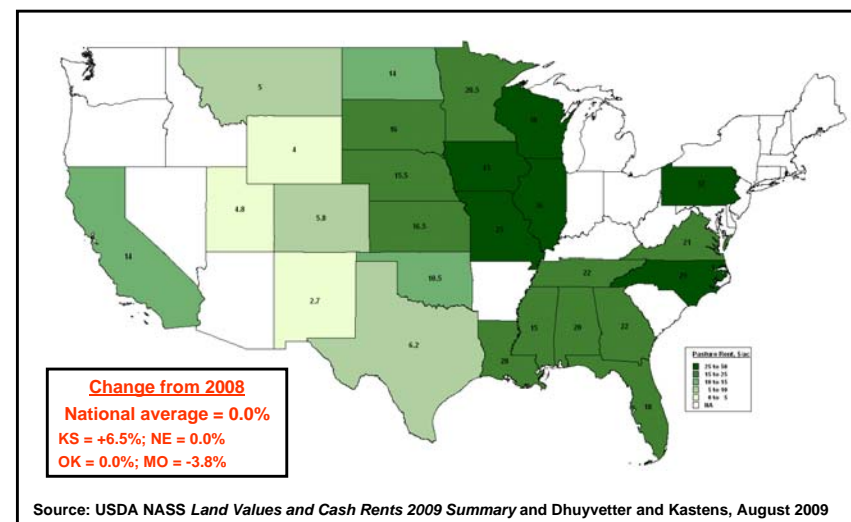
CR Cash rent historical perspective



CR Cash rent historical perspective

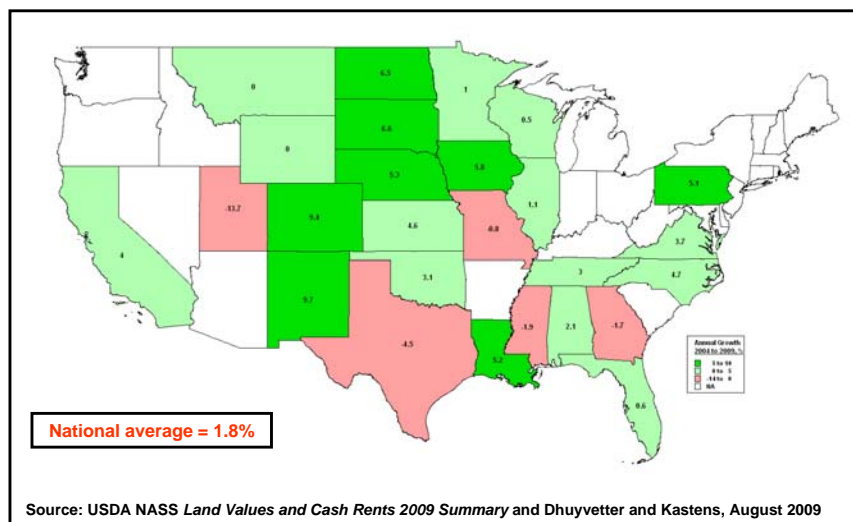


CR Pasture Land Average Rent per Acre, 2009

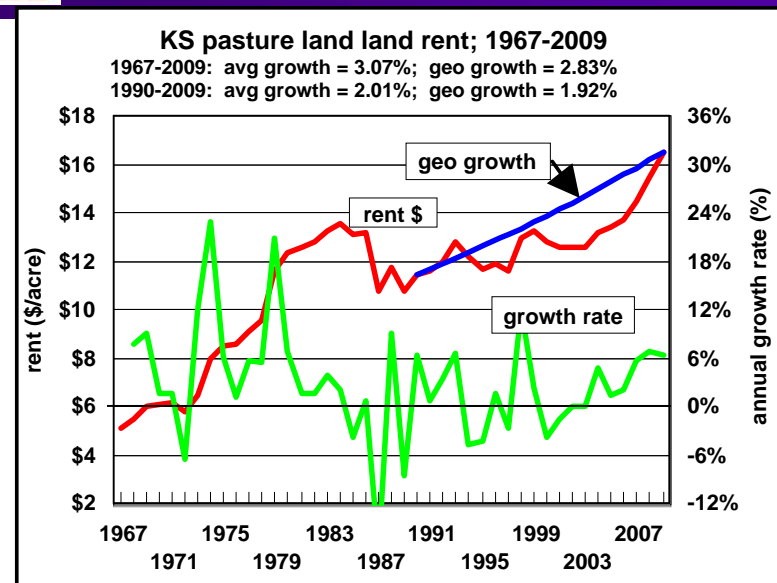


* Corresponding changes in crop land rents were US=+5.3%; KS=+9.4%; NE=+3.1%; OK=-1.8%; and MO=+12.5%.

CR Pasture Rent Average Annual Growth Rate
 Jan 1, 2004 to Jan 1, 2009, percent (geo mean)

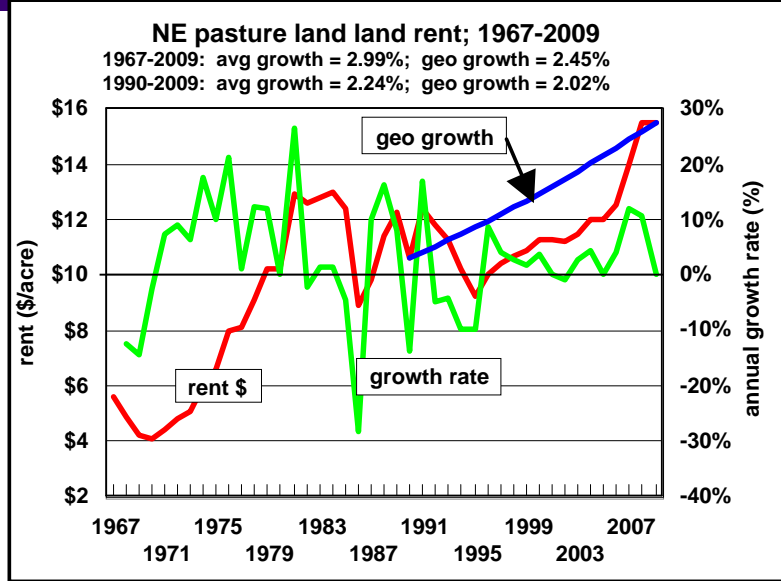


CR Cash rent historical perspective

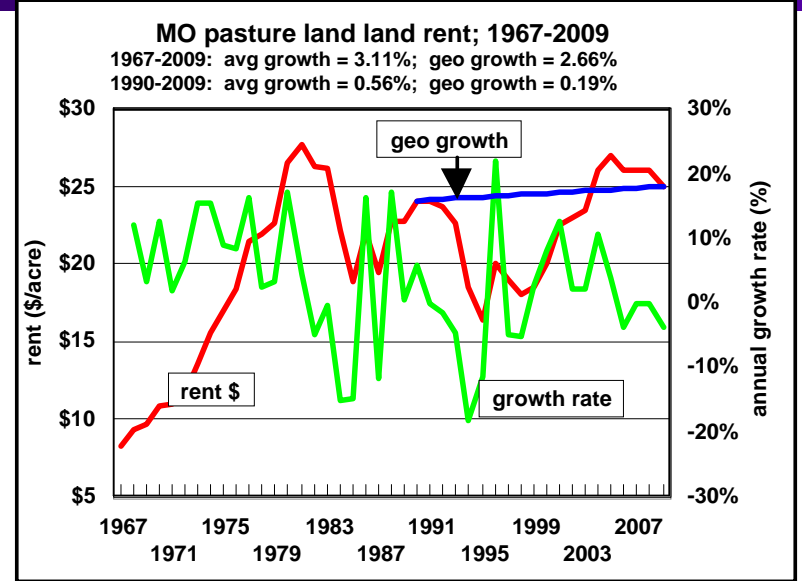




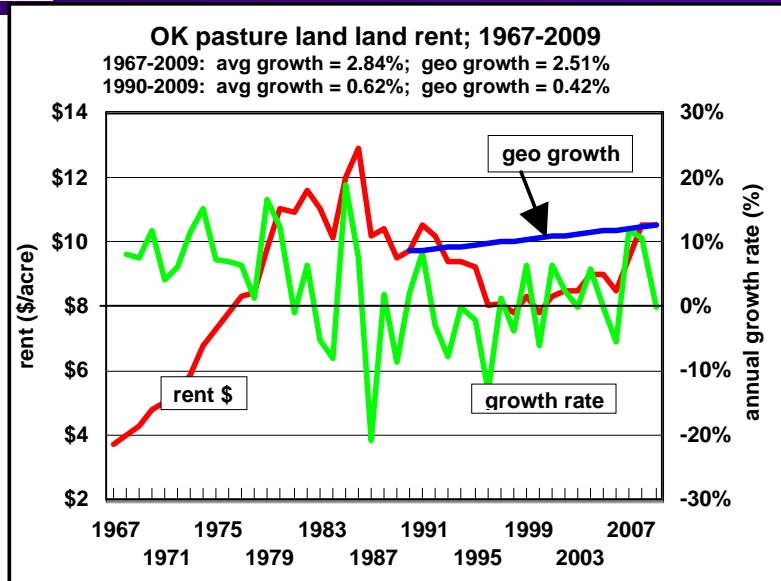
Cash rent historical perspective



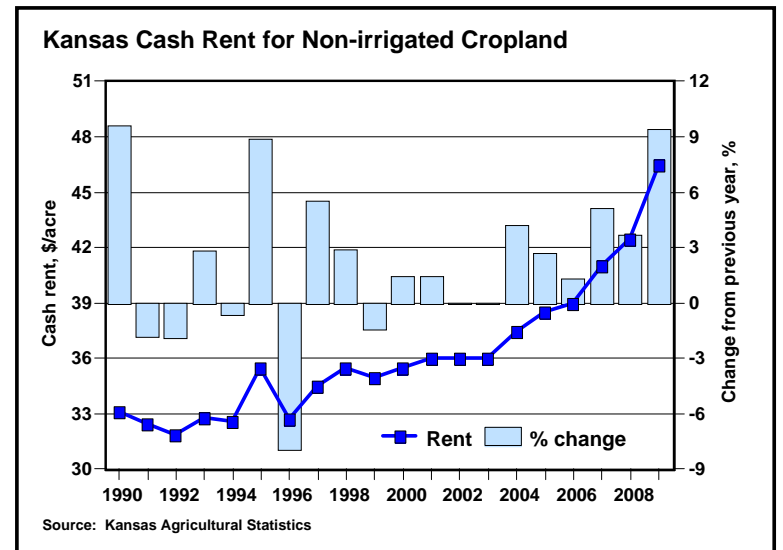
Cash rent historical perspective



Cash rent historical perspective



At the very least, vary cash rent from year to year (not perfect, but better than never changing rent)



Fixed cash rents can be indexed to statewide average to make year-to-year changes



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
- Very appealing for certain situations, but they are not appropriate in all cases (depends on why you are considering cash rent)



Flexible Cash Rents – HOW?

- This is the tricky part...
- There is not a single “right” way to do this! (but there are lots 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



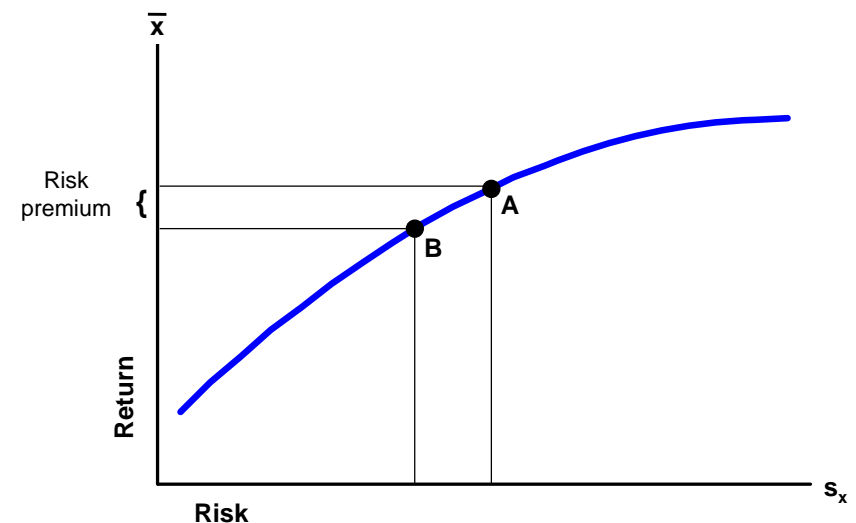
Risk

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

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

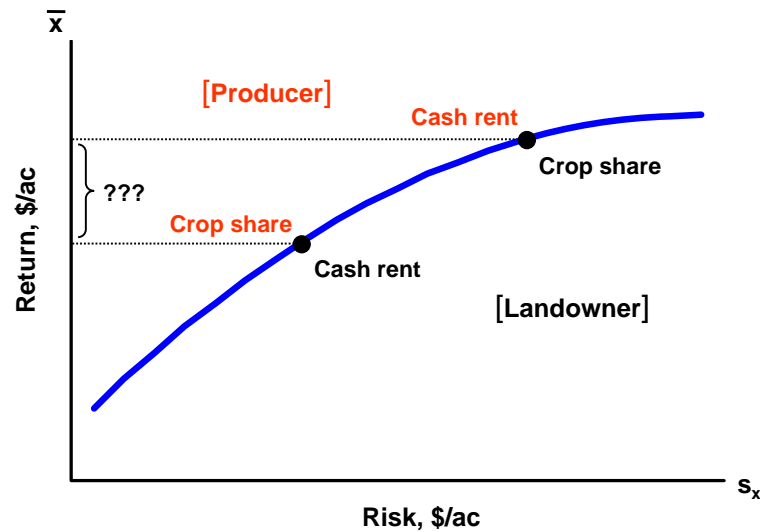


Risk-return tradeoff

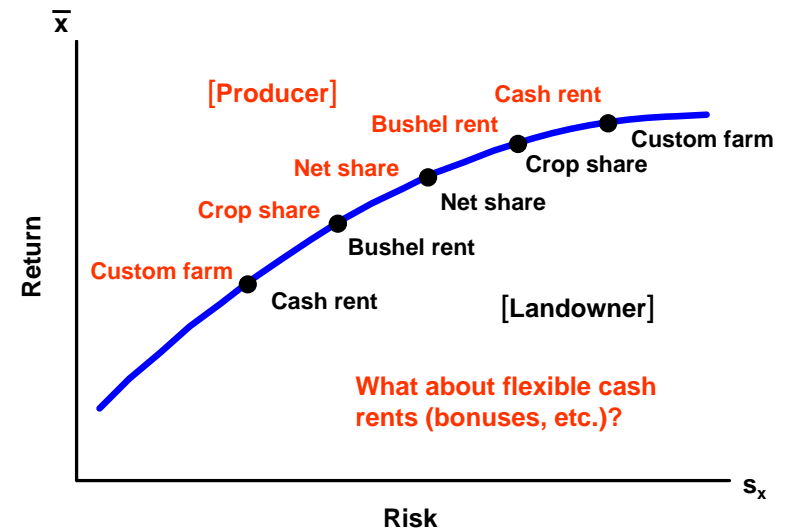




Landowner/producer risk-return tradeoff



Landowner/producer risk-return tradeoff



Distribution of crop share percentages ...

Percent of Leases by Crop Share Percentage

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

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

Wheat belt
Corn belt



Flexible Cash Rents – HOW?

Examples of flexible cash rents...

1. Crop share “after the fact”
2. Base rent plus bonus/discount based on actual farm yield and local price
3. Base rent (floor) plus bonus based on actual farm yield and local price
4. Base rent (floor) plus bonus based on county/region average yield and price versus historical average
5. Base rent plus (+/-) bonus based on region/state average cash rent change from previous year
6. ???



Flexible Cash Rents – HOW?

- This is the tricky part...
- There is no right way to do this!
- 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)



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)
 2. Determine how base rent will be “flexed” ...
 - Price deviation from base (fixed bushel rent)
 - Yield deviation from base
 - Price and yield (revenue) deviation from base
 - Cost deviation from base



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)
2. Is crop insurance included / accounted for?
3. What sources of data are used to determine base rent and flex provisions?
4. What will final rent be under alternative potential outcomes? (i.e., ask yourself lots of “what if” questions)



Flexible Cash Rents – EXAMPLES

- Three simple examples to show ...
 - types of information needed
 - types of terms that need to be agreed upon
 - how price impacts rent
- Example 1 – rent flexed on either yield, price, or revenue (yield x price)
- Example 2 – rent flexed based on how gross revenue compares to a base revenue
- Example 3 – rent flexed based on how gross revenue at regional level compares to 5-yr average



Projected crop budgets for NE KS ...

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS

Crop/System	Wht-R	Sorghum	Soybean	Corn	DC SB	Total	Per
Planted acres of each crop	14.6	5.0	43.7	36.7	0.0	100.0	Acres
Tillable acres per planted acre	1.00	1.00	1.00	1.00	0.00	100.0	Tillable
INCOME PER ACRE							
A. Yield per acre	50.0	76.0	33.0	110.0	20.0	---	---
B. Price per unit	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	---	---
C. Net government payments	\$13.60	\$13.60	\$13.60	\$13.60	\$0.00	\$1,360	\$13.60
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Returns/acre ((A x B) + C + D + E)	\$251.60	\$284.16	\$318.52	\$443.70	\$184.80	\$35,297	\$352.97
COSTS PER ACRE							
1. Seed	\$13.00	\$15.36	\$43.40	\$95.31	\$49.60	\$5,661	\$56.61
2. Herbicide	11.39	28.52	15.34	22.75	9.72	1,814	18.14
3. Insecticide / Fungicide	26.28	0.00	0.00	0.00	0.00	384	3.84
4. Fertilizer and Lime	39.80	35.21	17.62	51.55	8.70	3,419	34.19
5. Crop Consulting	0.00	0.00	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0.00	0.00	0	0.00
7. Drying	0.00	9.88	0.00	14.30	0.00	574	5.74
8. Miscellaneous	8.25	8.25	8.25	8.25	8.25	825	8.25
9. Machinery Expense	58.06	70.26	50.90	77.73	47.49	6,276	62.76
10. Non-machinery Labor	6.50	7.93	5.72	8.84	5.33	709	7.09
11. Irrigation	0.00	0.00	0.00	0.00	0.00	0	0.00
12. Land Charge / Rent	90.00	90.00	90.00	90.00	0.00	9,000	90.00
G. SUB TOTAL	\$253.28	\$265.41	\$231.22	\$368.73	\$129.09	\$28,662	\$286.62
13. Interest on 1/2 Nonland Costs	5.33	5.25	4.60	8.85	4.19	630	6.30
H. TOTAL COSTS	\$258.60	\$270.65	\$235.82	\$377.58	\$133.28	\$29,291	\$292.91
I. RETURNS OVER COSTS (F - H)	(\$7.00)	\$13.51	\$82.70	\$66.12	\$51.52	\$6,006	\$60.06
J. TOTAL COSTS/UNIT (H/A)	\$5.17	\$3.56	\$7.15	\$3.43	\$6.66	---	---
K. RETURN TO TOTAL COST ((I+13)/G)	-0.66%	7.07%	37.76%	20.33%	43.16%	20.50%	20.50%



Equitable crop share = 59.9/40.1 (share fertilizer and chemicals, operator pays application)

ALTERNATIVE METHODS OF ESTIMATING CASH RENT

12/28/09

Crop/System	Wht-R	Sorghum	Soybean	Corn	DC SB	Total	Per
Total tillable acre	14.6	5.0	43.7	36.7	0.0	100.0	Acres
Planted acres of each crop	14.6	5.0	43.7	36.7	0.0	100.0	Acres
A. Landowner's COST							
Land	\$90.00	\$90.00	\$90.00	\$90.00	\$0.00	\$9,000	\$90.00
Irrigation equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00
Total	\$90.00	\$90.00	\$90.00	\$90.00	\$0.00	\$9,000	\$90.00
B. Landowner's EQUITABLE SHARE RENT ----- risk adj factor 0.0%							
Total income	\$251.60	\$284.16	\$318.52	\$443.70	\$184.80	\$35,297	\$352.97
Landowner's share	40.1%	40.1%	40.1%	40.1%	40.1%	40.1%	40.1%
Landowner's income	\$100.81	\$113.85	\$127.62	\$177.77	\$74.04	\$14,142	\$141.42
Landowner operating expense	33.91	32.16	15.41	38.32	9.37	2,736	27.36
Income less operating expense	\$66.89	\$81.69	\$112.21	\$139.45	\$64.67	\$11,406	\$114.06
Less risk adjustment	0.00	0.00	0.00	0.00	0.00	0	0.00
Cash rent equivalent	\$66.89	\$81.69	\$112.21	\$139.45	\$64.67	\$11,406	\$114.06
C. Amount tenant CAN AFFORD TO PAY							
Total income	\$251.60	\$284.16	\$318.52	\$443.70	\$184.80	\$35,297	\$352.97
Total operating expense	\$168.60	\$180.65	\$145.82	\$287.58	\$133.28	\$20,291	\$202.91
Return to land and irr equip	\$83.00	\$103.51	\$172.70	\$156.12	\$51.52	\$15,006	\$150.06
Comparison of alternative cash rent methods							
Low	\$66.89	\$81.69	\$90.00	\$90.00	\$0.00	\$9,000	\$90.00
Average	\$79.96	\$91.73	\$124.97	\$128.52	\$38.73	\$11,804	\$118.04
High	\$90.00	\$103.51	\$172.70	\$156.12	\$64.67	\$15,006	\$150.06
Returns above all costs (profit)	(\$7.00)	\$13.51	\$82.70	\$66.12	\$51.52	\$6,006	\$60.06



Flexible Cash Rents – Example 1 (KSU-Lease.xls)

Example of Cash Rent Flexing on Yield, Price, or Revenue*

A. Market cash rent, \$/acre		\$90.00				
B. Adjustment to market rent, \$/acre		-\$4.50				
C. Base cash rent, \$/acre (A+B)		\$85.50				
D. Flex direction (Both (up and down) vs Up)		Up				
E. Percent of change to factor into flexible rent		100%				
F. Adjustments based on Base acres or Actual acres		Actual				
G. Crop						
H. Include crop (Y=1, N=0)	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
I. Base acres	14.6	5.0	43.7	36.7	0.0	100.0
J. Base yield	50	76	33	110	20	
K. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
L. Expected revenue	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937

Issues to resolve:

- 1) Where does base cash rent come from?
- 2) Where do base acres, yields, and prices come from? (consistent with base rent?)
- 3) What crops should all be included?
- 4) Does rent flex on yield, price, or combination (revenue)?
- 5) Does rent flex both directions or only up?
- 6) What percent change from base should be used?



Flexible Cash Rents – Example 2 (KSU-Lease.xls)

Example of Cash Rent Flexing on Gross Income (accounting for crop insurance)*

A. Base cash rent, \$/acre		\$90.00				
B. Adjustment to market rent, \$/acre		-\$4.50				
C. Base cash rent, \$/acre (A+B)		\$85.50				
D. Flex direction (Both (up and down) vs Up)		Up				
E. Crop						
F. Include crop (Y=1, N=0)	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
G. Acres	14.6	5.0	43.7	36.7	0.0	100.0
H. Base yield	50	76	33	110	20	
I. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
J. Crop insurance premium	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
K. Expected revenue + prem	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937
L. Non-land costs	\$168.60	\$180.65	\$145.82	\$287.58	\$133.28	\$20,291
M. Bonus above gross, %	40.0%	40.0%	40.0%	40.0%	40.0%	

Issues to resolve:

Same as before plus...

- 1) Do you include crop insurance as part of gross revenue?
- 2) What bonus above base gross income should be used?

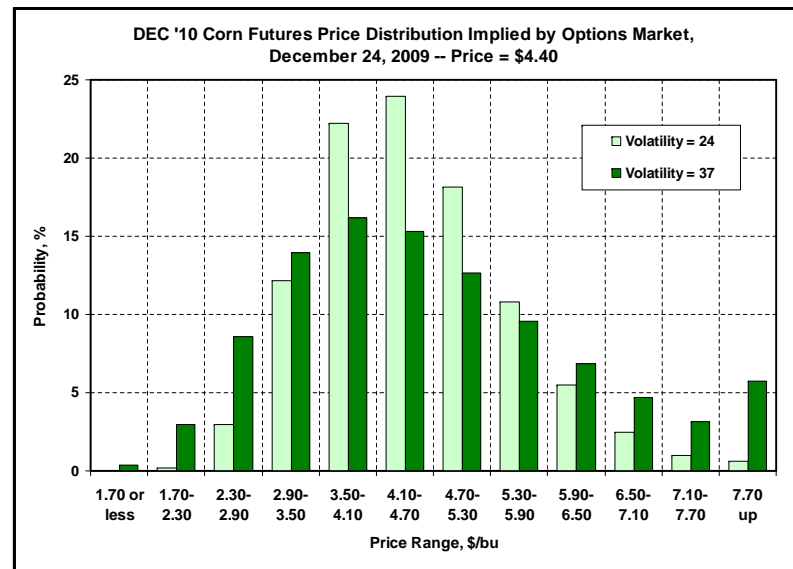


Flexible Cash Rents – Price risk to consider...

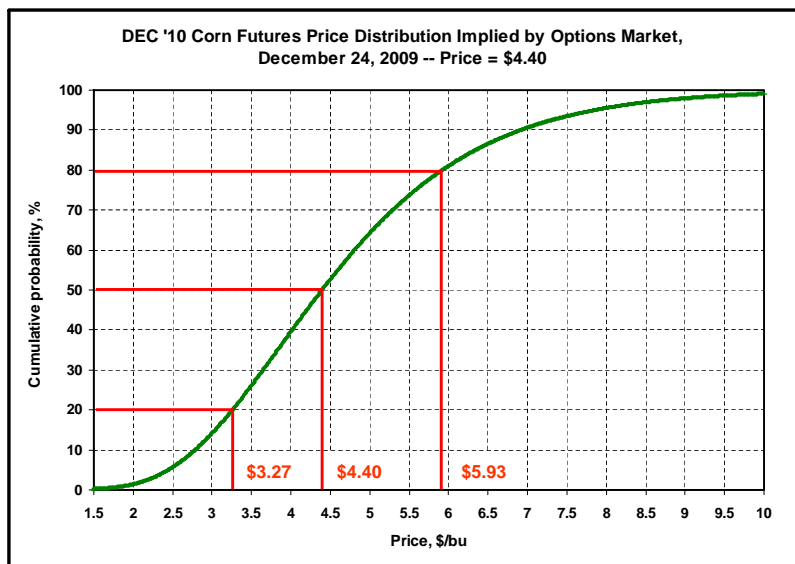
- The options market can be used to estimate a distribution of potential price outcomes
- Price distribution gives a range of prices with associated probabilities that is consistent with what the “market believes” could happen
- Price distribution given current volatility can be compared with what is more “normal”
- Price distribution can help determine range of prices to consider in “what if” analysis



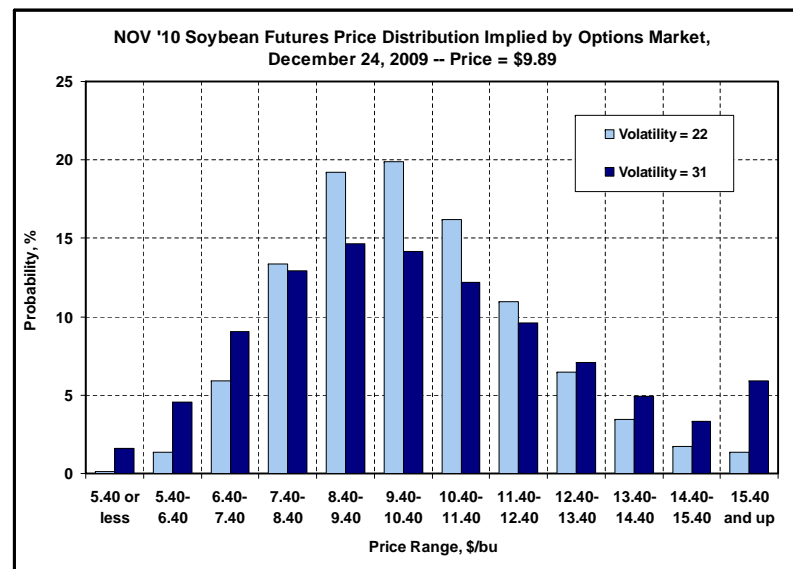
Less confidence in accuracy of current price forecast (compared to “normal”) given high volatility ...



Flexible Cash Rents – Price risk to consider...

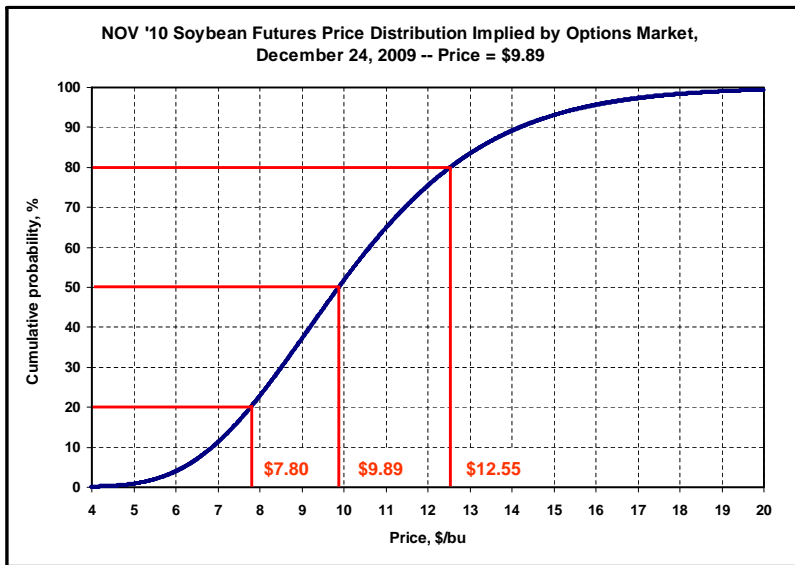


Less confidence in accuracy of current price forecast (compared to “normal”) given high volatility ...

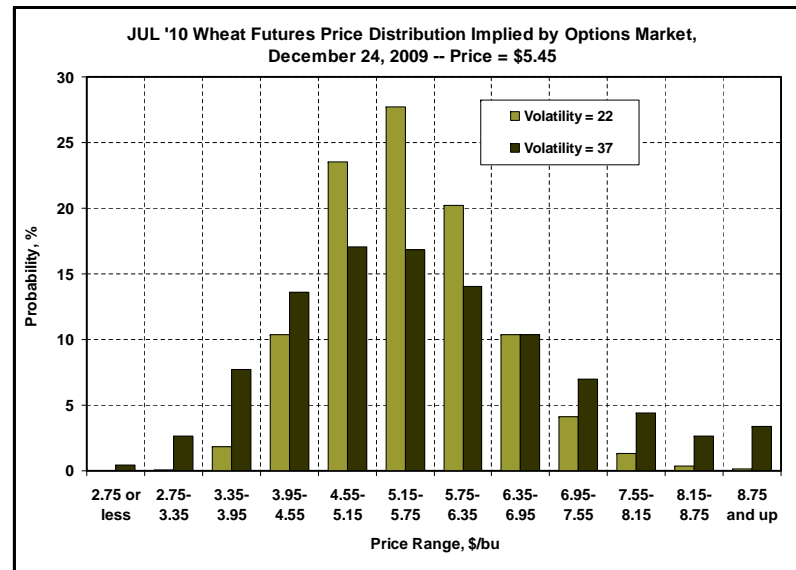




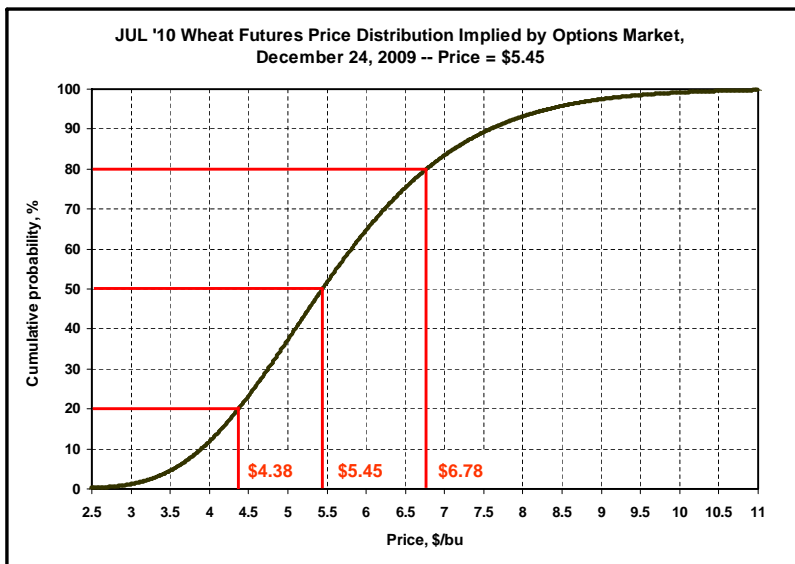
Flexible Cash Rents – Price risk to consider...



Less confidence in accuracy of current price forecast (compared to "normal") given high volatility ...



Flexible Cash Rents – Price risk to consider...



Flexible Cash Rents – Price scenarios

Price scenarios to consider

	Wht-R	Sorghum	Soybean	Corn
Used in analysis above	\$4.50	\$3.40	\$9.00	\$3.75
Base prices	\$4.76	\$3.56	\$9.24	\$3.91
High price scenario	\$6.18	\$5.03	\$12.05	\$5.53
Low price scenario	\$3.78	\$2.61	\$7.30	\$2.87
Prices increase slightly	\$4.85	\$3.60	\$9.40	\$4.00
Prices decrease slightly	\$4.50	\$3.40	\$9.00	\$3.75

Base prices are based on current forward contracts.

High and low price scenarios are based on 80 and 20 percent cumulative probabilities, respectively, and assuming basis remains constant.



Flexible Cash Rents – Example 1 (KSU-Lease.xls)

Example of Cash Rent Flexing on Yield, Price, or Revenue*

A. Market cash rent, \$/acre	\$90.00
B. Adjustment to market rent, \$/acre	-\$4.50
C. Base cash rent, \$/acre (A+B)	\$85.50
D. Flex direction (Both (up and down) vs Up)	Up
E. Percent of change to factor into flexible rent	100%
F. Adjustments based on Base acres or Actual acres	Actual

G. Crop	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
H. Include crop (Y=1, N=0)	1	1	1	1	0	
I. Base acres	14.6	5.0	43.7	36.7	0.0	100.0
J. Base yield	50	76	33	110	20	
K. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
L. Expected revenue	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937

M. Actual acres	15	0	45	40	0	100
N. Actual yield	44	0	38	120	0	\$37,710
O. Actual price (rows 63-67)	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	\$34,495
P. Actual revenue	\$209.44	\$0.00	\$351.12	\$469.20	\$0.00	\$37,710

	% chg from base	Rent, \$/ac
Q. Cash rent flexing on yield only	11.1%	\$95.51
R. Cash rent flexing on price only	1.6%	\$86.98
S. Cash rent flexing on revenue (yield x price)	11.1%	\$95.51

* Blue values are inputs and all other values are calculated



Flexible Cash Rents – Example 1 (KSU-Lease.xls)

Example of Cash Rent Flexing on Yield, Price, or Revenue*

A. Market cash rent, \$/acre	\$90.00
B. Adjustment to market rent, \$/acre	-\$4.50
C. Base cash rent, \$/acre (A+B)	\$85.50
D. Flex direction (Both (up and down) vs Up)	Up
E. Percent of change to factor into flexible rent	100%
F. Adjustments based on Base acres or Actual acres	Actual

G. Crop	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
H. Include crop (Y=1, N=0)	1	1	1	1	0	
I. Base acres	14.6	5.0	43.7	36.7	0.0	100.0
J. Base yield	50	76	33	110	20	
K. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
L. Expected revenue	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937

M. Actual acres	15	0	45	40	0	100
N. Actual yield	44	0	38	120	0	\$37,710
O. Actual price (rows 63-67)	\$6.18	\$5.03	\$12.05	\$5.53	\$12.05	\$46,861
P. Actual revenue	\$271.92	\$0.00	\$457.90	\$663.60	\$0.00	\$51,228

	% chg from base	Rent, \$/ac
Q. Cash rent flexing on yield only	11.1%	\$95.51
R. Cash rent flexing on price only	38.1%	\$119.77
S. Cash rent flexing on revenue (yield x price)	51.0%	\$131.36

* Blue values are inputs and all other values are calculated



Flexible Cash Rents – Example 2 (KSU-Lease.xls)

Example of Cash Rent Flexing on Gross Income (accounting for crop insurance)*

A. Base cash rent, \$/acre	\$90.00
B. Adjustment to market rent, \$/acre	-\$4.50
C. Base cash rent, \$/acre (A+B)	\$85.50
D. Flex direction (Both (up and down) vs Up)	Up

E. Crop	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
F. Include crop (Y=1, N=0)	1.0	1.0	1.0	1.0	0.0	
G. Acres	14.6	5.0	43.7	36.7	0.0	100.0
H. Base yield	50	76	33	110	20	
I. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
J. Crop insurance premium	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
K. Expected revenue + prem	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937
L. Non-land costs	\$168.60	\$180.65	\$145.82	\$287.58	\$133.28	\$20,291
M. Bonus above gross, %	40.0%	40.0%	40.0%	40.0%	40.0%	

N. Actual yield	44	0	38	120	0	
O. Actual price (rows 63-67)	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
P. Crop ins indemnity	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Q. Actual revenue	\$209.44	\$0.00	\$351.12	\$469.20	\$0.00	\$35,621
R. Bonus due, \$/acre	\$0.00	\$0.00	\$18.48	\$15.64	\$0.00	\$13.82
S. Cash rent due, \$/acre	\$85.50	\$85.50	\$103.98	\$101.14	\$0.00	\$99.32

* Blue values are inputs and all other values are calculated



Flexible Cash Rents – Example 2 (KSU-Lease.xls)

Example of Cash Rent Flexing on Gross Income (accounting for crop insurance)*

A. Base cash rent, \$/acre	\$90.00
B. Adjustment to market rent, \$/acre	-\$4.50
C. Base cash rent, \$/acre (A+B)	\$85.50
D. Flex direction (Both (up and down) vs Up)	Up

E. Crop	Wht-R	Sorghum	Soybean	Corn	DC SB	Total
F. Include crop (Y=1, N=0)	1.0	1.0	1.0	1.0	0.0	
G. Acres	14.6	5.0	43.7	36.7	0.0	100.0
H. Base yield	50	76	33	110	20	
I. Base price	\$4.76	\$3.56	\$9.24	\$3.91	\$9.24	
J. Crop insurance premium	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
K. Expected revenue + prem	\$238.00	\$270.56	\$304.92	\$430.10	\$184.80	\$33,937
L. Non-land costs	\$168.60	\$180.65	\$145.82	\$287.58	\$133.28	\$20,291
M. Bonus above gross, %	40.0%	40.0%	40.0%	40.0%	40.0%	

N. Actual yield	44	0	38	120	0	
O. Actual price (rows 63-67)	\$6.18	\$5.03	\$12.05	\$5.53	\$12.05	
P. Crop ins indemnity	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Q. Actual revenue	\$271.92	\$0.00	\$457.90	\$663.60	\$0.00	\$48,334
R. Bonus due, \$/acre	\$13.57	\$0.00	\$61.19	\$93.40	\$0.00	\$63.00
S. Cash rent due, \$/acre	\$99.07	\$85.50	\$146.69	\$178.90	\$0.00	\$148.50

* Blue values are inputs and all other values are calculated



Flexible Cash Rents – Example 3

Average Crop Yields and Prices for Northeast Kansas
Source: Kansas Agricultural Statistics

Year	historical data				"typical" rotation				weights	
	Yield, bu/planted acre				Price, \$/bu				Revenue \$/acre, weighted by % of crop	
	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	40.0%	0.0%
1985	98.0	78.5	33.1	38.8	\$2.22	\$1.76	\$4.69	\$3.00	\$87.06	\$0.00
1986	110.6	86.6	37.2	16.2	\$1.32	\$1.23	\$4.45	\$2.23	\$58.41	\$0.00
1987	90.2	71.1	31.7	35.9	\$1.58	\$1.34	\$4.86	\$2.42	\$56.99	\$0.00
1988	61.4	65.1	20.6	40.7	\$2.66	\$2.27	\$7.63	\$3.53	\$65.33	\$0.00
1989	53.8	48.1	22.5	19.5	\$2.25	\$2.02	\$5.33	\$3.92	\$48.41	\$0.00
1990	82.2	80.4	29.1	37.1	\$2.18	\$2.03	\$5.75	\$2.90	\$71.70	\$0.00
1991	62.7	58.2	22.9	30.4	\$2.38	\$2.25	\$5.45	\$2.72	\$59.65	\$0.00
1992	126.3	93.7	41.0	29.1	\$2.11	\$1.80	\$5.21	\$3.23	\$106.59	\$0.00
1993	59.5	46.4	27.2	18.8	\$2.40	\$2.18	\$6.05	\$2.84	\$57.08	\$0.00
1994	108.1	91.9	37.4	43.1	\$2.17	\$1.89	\$5.27	\$3.21	\$93.85	\$0.00
1995	80.8	63.0	29.7	23.3	\$2.85	\$2.91	\$6.36	\$4.50	\$92.06	\$0.00
1996	127.0	84.6	41.0	30.0	\$3.01	\$2.41	\$6.94	\$5.17	\$152.93	\$0.00
1997	98.9	83.0	35.5	48.1	\$2.59	\$2.29	\$6.39	\$3.33	\$102.51	\$0.00
1998	122.3	94.7	35.7	46.0	\$1.72	\$1.60	\$5.13	\$2.64	\$84.17	\$0.00
1999	92.9	80.5	31.0	43.5	\$1.80	\$1.37	\$4.45	\$2.25	\$66.87	\$0.00
2000	117.5	82.6	21.6	41.3	\$1.72	\$1.58	\$4.39	\$2.44	\$80.82	\$0.00
2001	109.2	85.2	37.7	39.0	\$1.82	\$1.77	\$3.97	\$2.71	\$79.48	\$0.00
2002	53.0	51.2	20.7	47.8	\$2.42	\$2.54	\$5.18	\$3.36	\$51.29	\$0.00
2003	63.3	41.6	21.6	62.6	\$2.27	\$2.31	\$7.03	\$2.96	\$57.48	\$0.00
2004	149.9	107.5	45.5	52.7	\$2.00	\$1.62	\$5.03	\$3.35	\$119.95	\$0.00
2005	125.1	97.2	44.7	40.7	\$1.88	\$1.56	\$5.48	\$3.24	\$94.07	\$0.00
2006	104.0	81.5	40.8	46.3	\$2.63	\$3.03	\$5.55	\$4.75	\$109.37	\$0.00
2007	119.5	89.1	43.0	25.4	\$3.36	\$3.34	\$8.55	\$5.25	\$160.64	\$0.00
2008	139.0	99.7	38.4	32.6	\$4.89	\$3.57	\$9.95	\$7.55	\$271.94	\$0.00
2009	143.8	95.0	58.0	44.0	\$3.46	\$2.86	\$9.11	\$5.24	\$199.07	\$0.00
2010	120.0	0.0	38.0	44.0	\$3.91	\$3.56	\$9.24	\$4.76	\$187.68	n/a

Revenue given typical rotation



Flexible Cash Rents – Example 3 (baseline prices)

Average Crop Yields and Prices for Northeast Kansas
Source: Kansas Agricultural Statistics

Average => \$16.16 \$8.57
 % of years bonus is earned => 60.0% 36.0%
 % of 5-year average as target => 100.0% 125.0%
 % of average to landowner => 40.0% 40.0%

Year	40.0%				0.0%				45.0%				15.0%				100%		
	Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				5yr avg	5yr avg	
	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	all crops	5yr avg	5yr avg
1985	\$87.06	\$0.00	\$69.86	\$17.46	\$174.39	\$62.61	\$0.00	\$68.89	\$17.64	\$149.14	116.9%	\$10.10	\$0.00	\$0.00	\$0.00	\$0.00	\$62.61	\$0.00	\$68.89
1986	\$58.41	\$0.00	\$74.55	\$5.43	\$138.40	\$71.63	\$0.00	\$65.24	\$16.86	\$153.74	90.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$71.63	\$0.00	\$65.24
1987	\$56.99	\$0.00	\$69.27	\$13.05	\$139.31	\$65.65	\$0.00	\$61.68	\$13.86	\$141.19	98.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$65.65	\$0.00	\$61.68
1988	\$65.33	\$0.00	\$70.77	\$21.55	\$157.65	\$62.36	\$0.00	\$63.56	\$13.88	\$139.80	112.8%	\$7.14	\$0.00	\$0.00	\$0.00	\$0.00	\$62.36	\$0.00	\$63.56
1989	\$48.41	\$0.00	\$53.88	\$11.45	\$113.75	\$67.36	\$0.00	\$65.63	\$14.68	\$147.67	77.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$67.36	\$0.00	\$65.63
1990	\$71.70	\$0.00	\$75.20	\$16.12	\$163.02	\$63.24	\$0.00	\$67.67	\$13.79	\$144.70	112.7%	\$7.33	\$0.00	\$0.00	\$0.00	\$0.00	\$63.24	\$0.00	\$67.67
1991	\$59.65	\$0.00	\$56.22	\$12.39	\$128.27	\$60.17	\$0.00	\$68.74	\$13.52	\$142.43	90.1%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$59.65	\$0.00	\$56.22
1992	\$106.59	\$0.00	\$96.20	\$14.12	\$216.91	\$60.42	\$0.00	\$65.07	\$14.91	\$140.40	154.5%	\$30.60	\$16.56	\$0.00	\$0.00	\$0.00	\$60.42	\$0.00	\$65.07
1993	\$57.08	\$0.00	\$73.97	\$8.00	\$139.05	\$70.34	\$0.00	\$70.45	\$15.13	\$155.92	89.2%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$70.34	\$0.00	\$70.45
1994	\$93.85	\$0.00	\$88.72	\$20.77	\$203.34	\$68.69	\$0.00	\$71.10	\$12.42	\$152.20	133.6%	\$20.45	\$5.23	\$0.00	\$0.00	\$0.00	\$93.85	\$0.00	\$88.72
1995	\$92.06	\$0.00	\$84.91	\$15.71	\$192.68	\$77.77	\$0.00	\$78.06	\$14.28	\$170.12	113.3%	\$9.03	\$0.00	\$0.00	\$0.00	\$0.00	\$92.06	\$0.00	\$84.91
1996	\$152.93	\$0.00	\$128.07	\$23.27	\$304.27	\$81.85	\$0.00	\$80.00	\$14.20	\$176.05	108.3%	\$51.29	\$33.68	\$0.00	\$0.00	\$0.00	\$152.93	\$0.00	\$128.07
1997	\$102.51	\$0.00	\$102.21	\$24.03	\$228.75	\$100.50	\$0.00	\$94.37	\$16.37	\$211.25	108.3%	\$7.00	\$0.00	\$0.00	\$0.00	\$0.00	\$102.51	\$0.00	\$102.21
1998	\$84.17	\$0.00	\$82.41	\$18.20	\$184.78	\$99.68	\$0.00	\$95.58	\$18.35	\$213.62	86.5%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$84.17	\$0.00	\$82.41
1999	\$66.87	\$0.00	\$62.04	\$14.67	\$143.58	\$105.10	\$0.00	\$97.26	\$20.40	\$222.76	64.5%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$66.87	\$0.00	\$62.04
2000	\$80.82	\$0.00	\$42.76	\$15.12	\$138.71	\$99.71	\$0.00	\$91.93	\$19.18	\$210.81	65.8%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$80.82	\$0.00	\$42.76
2001	\$79.48	\$0.00	\$67.44	\$15.84	\$162.76	\$97.46	\$0.00	\$83.50	\$19.06	\$200.02	81.4%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$79.48	\$0.00	\$67.44
2002	\$51.29	\$0.00	\$48.18	\$24.07	\$123.55	\$82.77	\$0.00	\$71.37	\$17.57	\$171.72	72.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.29	\$0.00	\$48.18
2003	\$57.48	\$0.00	\$68.28	\$27.79	\$153.55	\$72.53	\$0.00	\$60.57	\$17.58	\$150.68	101.9%	\$1.15	\$0.00	\$0.00	\$0.00	\$0.00	\$57.48	\$0.00	\$68.28
2004	\$119.95	\$0.00	\$102.98	\$26.48	\$249.40	\$67.19	\$0.00	\$57.74	\$19.50	\$144.43	172.7%	\$41.99	\$27.55	\$0.00	\$0.00	\$0.00	\$119.95	\$0.00	\$102.98
2005	\$94.07	\$0.00	\$110.11	\$19.79	\$223.97	\$77.81	\$0.00	\$65.93	\$22.79	\$165.59	135.3%	\$23.35	\$6.79	\$0.00	\$0.00	\$0.00	\$94.07	\$0.00	\$110.11
2006	\$109.37	\$0.00	\$101.83	\$32.97	\$244.17	\$80.45	\$0.00	\$79.40	\$22.89	\$182.65	133.7%	\$24.61	\$6.34	\$0.00	\$0.00	\$0.00	\$109.37	\$0.00	\$101.83
2007	\$160.64	\$0.00	\$165.40	\$20.02	\$346.06	\$86.43	\$0.00	\$86.28	\$26.22	\$198.93	174.0%	\$58.85	\$38.96	\$0.00	\$0.00	\$0.00	\$160.64	\$0.00	\$165.40
2008	\$271.94	\$0.00	\$171.83	\$36.87	\$480.64	\$108.30	\$0.00	\$109.72	\$25.41	\$243.43	197.4%	\$94.89	\$70.54	\$0.00	\$0.00	\$0.00	\$271.94	\$0.00	\$171.83
2009	\$199.07	\$0.00	\$208.08	\$34.58	\$441.73	\$159.01	\$0.00	\$137.29	\$27.41	\$323.71	136.5%	\$47.21	\$14.84	\$0.00	\$0.00	\$0.00	\$199.07	\$0.00	\$208.08
2010	\$265.44	\$0.00	\$206.06	\$40.79	\$512.28	\$185.25	\$0.00	\$161.78	\$31.11	\$378.15	99.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$265.44	\$0.00	\$206.06



Flexible Cash Rents – Example 3 (high prices)

Average Crop Yields and Prices for Northeast Kansas
Source: Kansas Agricultural Statistics

Year	40.0%				0.0%				45.0%				15.0%				100%		
	Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				Revenue \$/acre, weighted by % of crop				5yr avg	5yr avg	
	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	Corn	Sorghum	Soybeans	Wheat	all crops	5yr avg	5yr avg
1985	\$87.06	\$0.00	\$69.86	\$17.46	\$174.39	\$62.61	\$0.00	\$68.89	\$17.64	\$149.14	116.9%	\$10.10	\$0.00	\$0.00	\$0.00	\$0.00	\$62.61	\$0.00	\$68.89
1986	\$58.41	\$0.00	\$74.55	\$5.43	\$138.40	\$71.63	\$0.00	\$65.24	\$16.86	\$153.74	90.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$71.63	\$0.00	\$65.24
1987	\$56.99	\$0.00	\$69.27	\$13.05	\$139.31	\$65.65	\$0.00	\$61.68	\$13.86	\$141.19	98.7%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$65.65	\$0.00	\$61.68
1988	\$65.33	\$0.00	\$70.77	\$21.55	\$157.65	\$62.36	\$0.00	\$63.56	\$13.88	\$139.80	112.8%	\$7.14	\$0.00	\$0.00	\$0.00	\$0.00	\$62.36	\$0.00	\$63.56
1989	\$48.41	\$0.00	\$53.88	\$11.45	\$113.75	\$67.36	\$0.00	\$65.63	\$14.68	\$147.67	77.0%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$67.36	\$0.00	\$65.63
1990	\$71.70	\$0.00	\$75.20	\$16.12	\$163.02	\$63.24	\$0.00	\$67.67	\$13.79	\$144.70	112.7%	\$7.33	\$0.00	\$0.00	\$0.00	\$0.00	\$63.24	\$0.00	\$67.67
1991	\$59.65	\$0.00	\$56.22	\$12.39	\$128.27	\$60.17	\$0.00	\$68.74	\$13.52	\$142.43	90.1%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$59.65	\$0.00	\$56.22
1992	\$106.59	\$0.00	\$96.20	\$14.12	\$216.91	\$60.42	\$0.00	\$65.07	\$14.91	\$140.40	154.5%	\$30.60	\$16.56	\$0.00	\$0.00	\$0.00	\$60.42	\$0.00	\$65.07
1993	\$57.08	\$0.00	\$73.97	\$8.00	\$139.05	\$70.34	\$0.00	\$70.45	\$15.13	\$155.92	89.2%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$70.34		



Flexible Cash Rents – SUMMARY

- Flexible cash leases are simply a way of sharing risks of unpredictable markets (and yields?) without the hassles of crop ownership
- Why not simply give landowner ad hoc “bonuses” when times are good?
- There are many types of flex leases – no one method is right or best in all cases
- Important to think about risk-return tradeoff when establishing the base and trigger point where bonuses are earned (e.g., does lease flex both ways?)



Flexible Cash Rents – SUMMARY

- Prices used should be a market average (publicly reported) as opposed to actual price received (typically recommend using a harvest time price – identify dates and locations in advance)
- Yields can be either county or farm averages, but need to be spelled out how/source for determining
- It is important that both parties know and understand what they are agreeing to!
- Likely will become more common in the future and thus producers will need to be willing to use them or risk losing land

Questions?



Kevin Dhuyvetter
785-532-3527
kcd@ksu.edu
www.agmanager.info