

2009 Kansas State University

**Agricultural
Lenders Conference**



FEATURING...

- Grain Market Outlook: 2009-2010
- Livestock Outlook: 2009-2010
- Economic Performance & Outlook for Kansas Farm Enterprises
- Divergence in Farm Performance
- The SURE Program and Crop Insurance

K-State SW Research Extension Center
Garden City, October 6, 2009

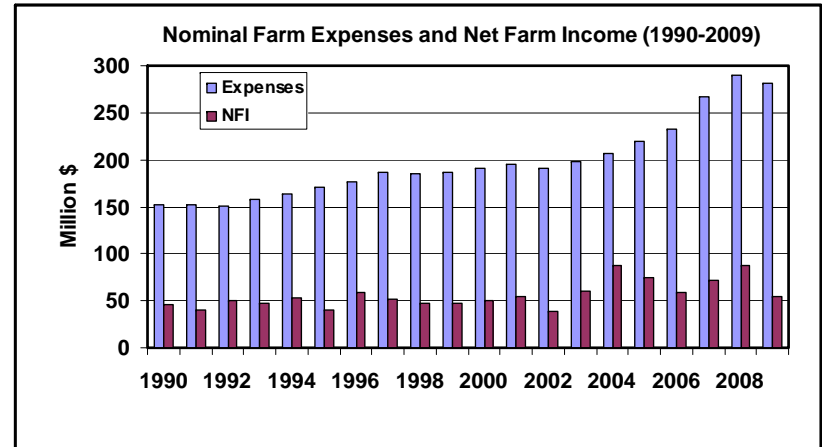
International Grain Program Conference Center
Manhattan, October 7, 2009

Economic Performance and Outlook for Kansas Farm Enterprises

Troy Dumler and Kevin Dhuyvetter
Extension Agricultural Economists
Kansas State University



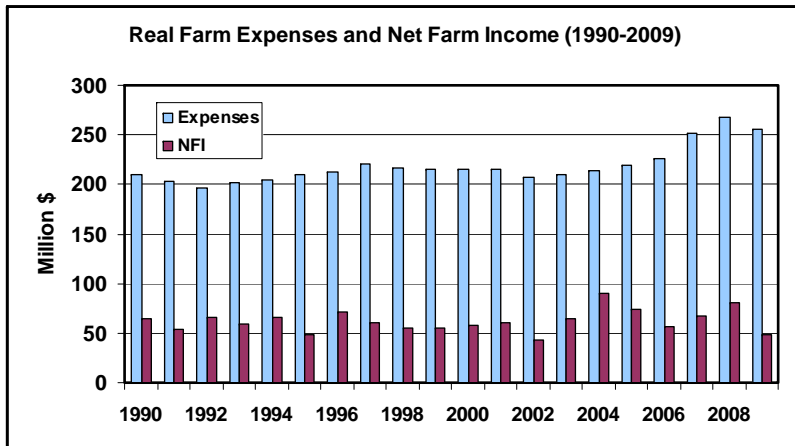
U.S. Net Farm Income



* 2009 expenses and income are latest USDA estimates (August 24).



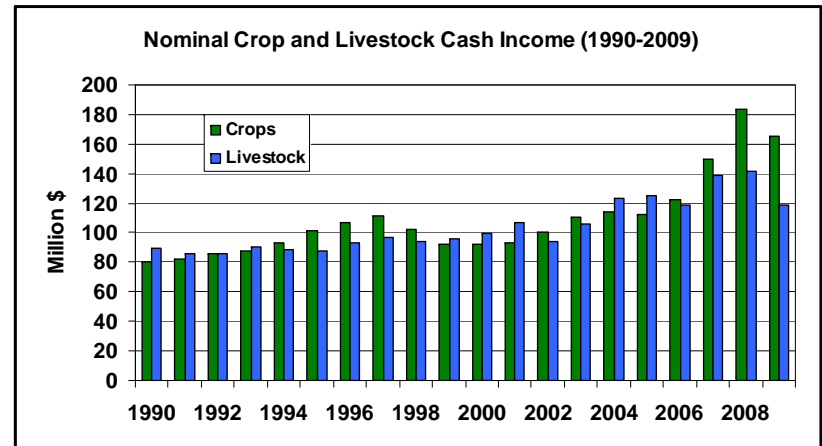
Real U.S. Net Farm Income



* 2009 expenses and income are latest USDA estimates (August 24).



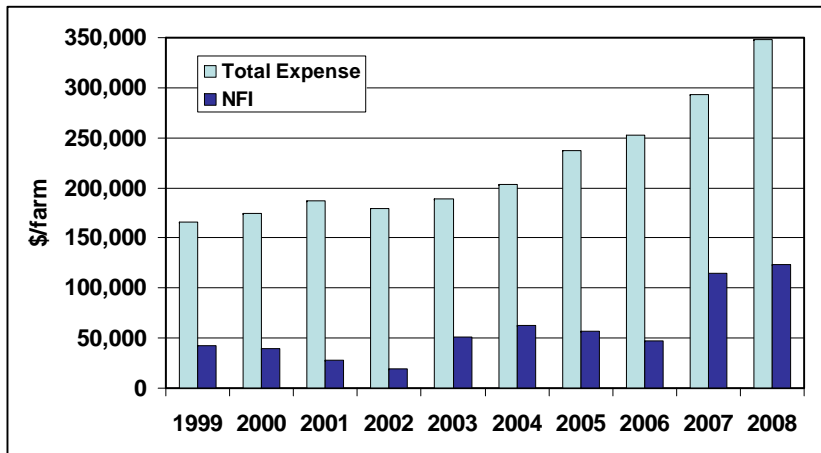
U.S. Crop and Livestock Cash Receipts



* 2009 cash receipts are latest USDA estimates (August 24).



KFMA Net Farm Income



KFMA Net Income by Farm Type

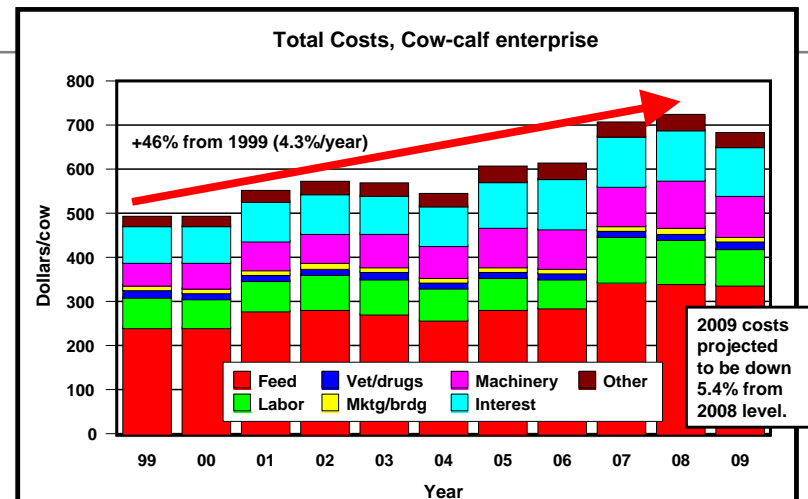
Farm Type	2004	2005	2006	2007	2008
All Farms	\$63,491	\$57,584	\$46,804	\$116,130	\$122,788
Crop-Dryland	57,087	49,422	49,366	120,594	142,603
Crop-Irrigated	62,729	64,955	92,335	280,585	230,850
Cowherd	32,088	24,914	13,344	34,948	32,674
Dairy	71,192	52,658	25,663	82,088	63,610
Backgrounding	82,252	63,279	-5,823	-941	-10,355



Livestock Enterprises



Costs have been rising for cow-calf producers...

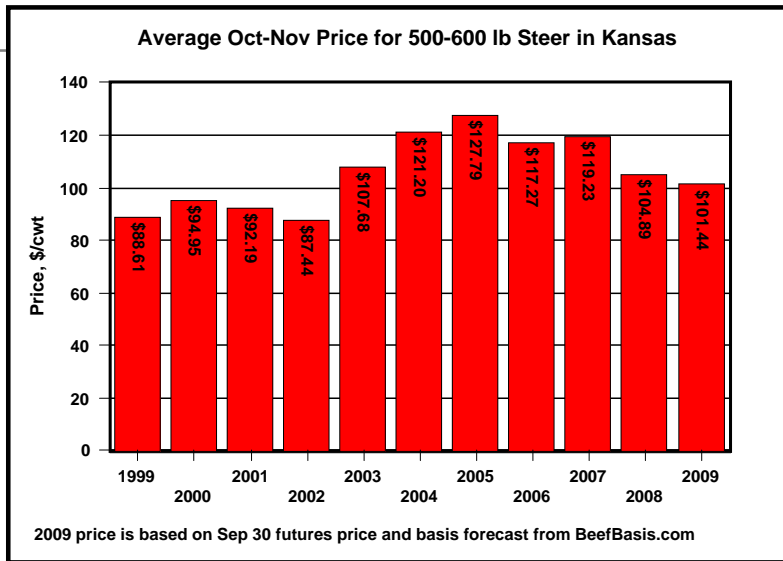


Source: Kansas Farm Management Enterprise Analysis Report

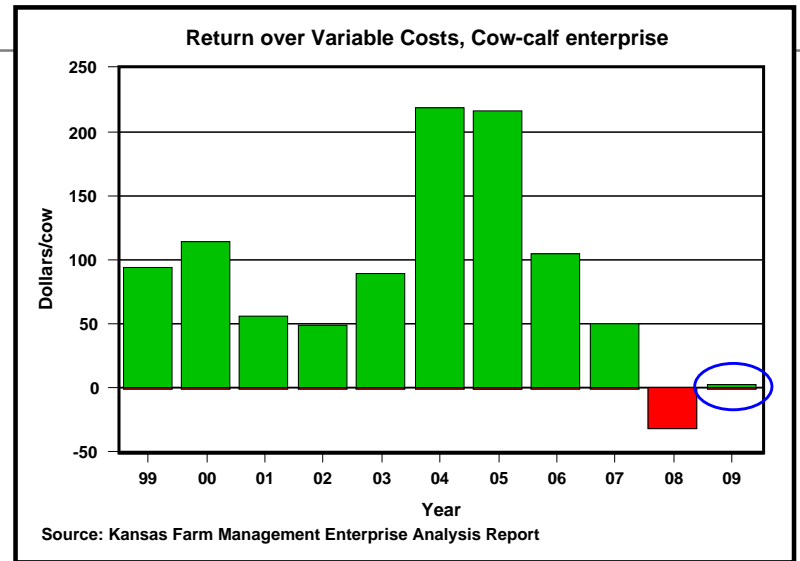




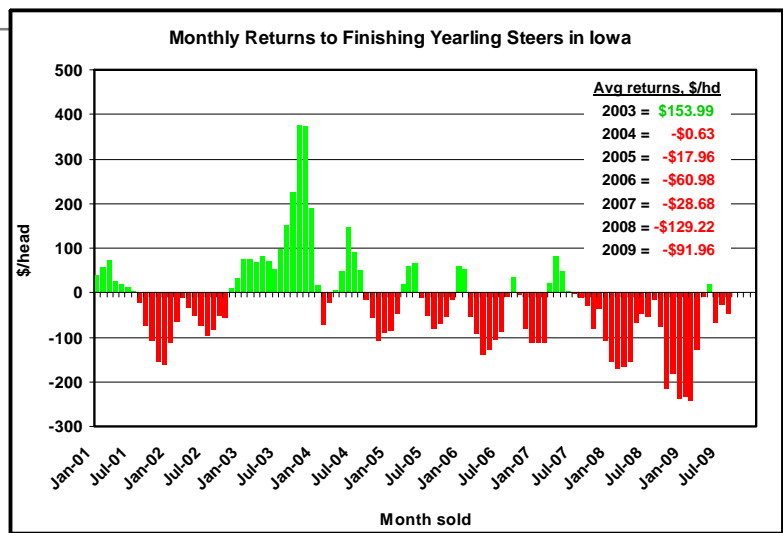
Prices down slightly from last fall...



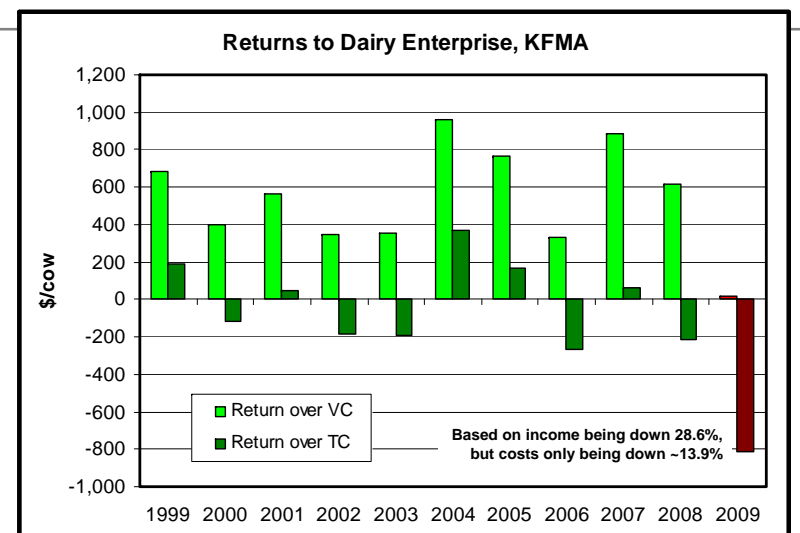
Returns over variable cost projected to be positive (barely), but still very low by historical standards...



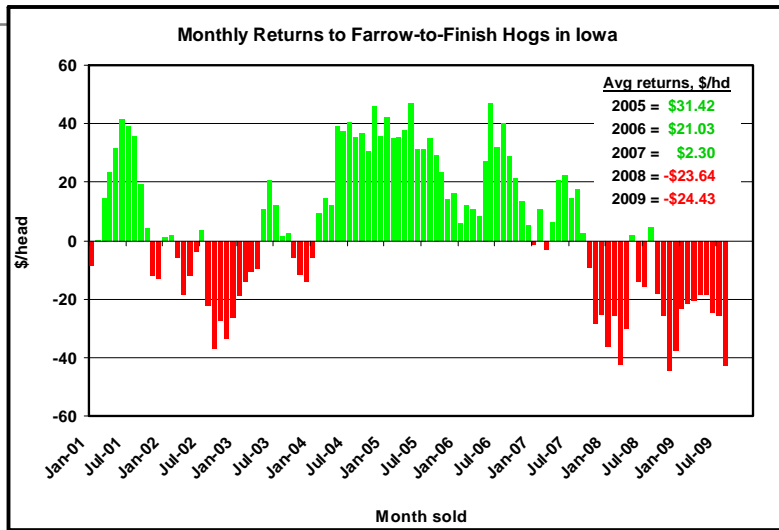
ISU Estimated Livestock Returns



KFMA Dairy Enterprise Returns



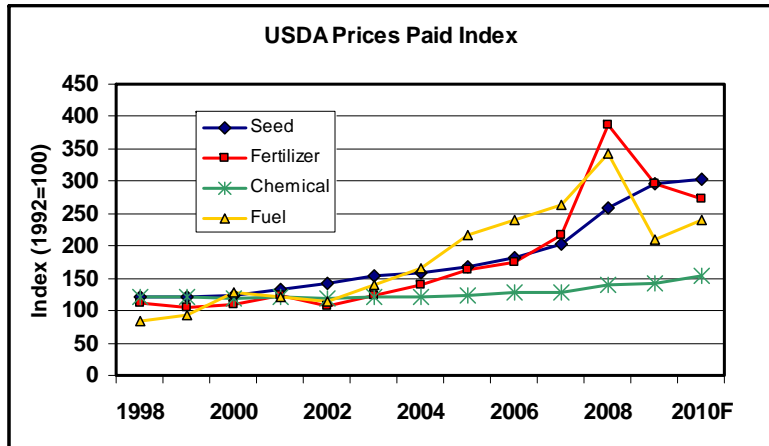
ISU Estimated Livestock Returns



Crop Enterprises



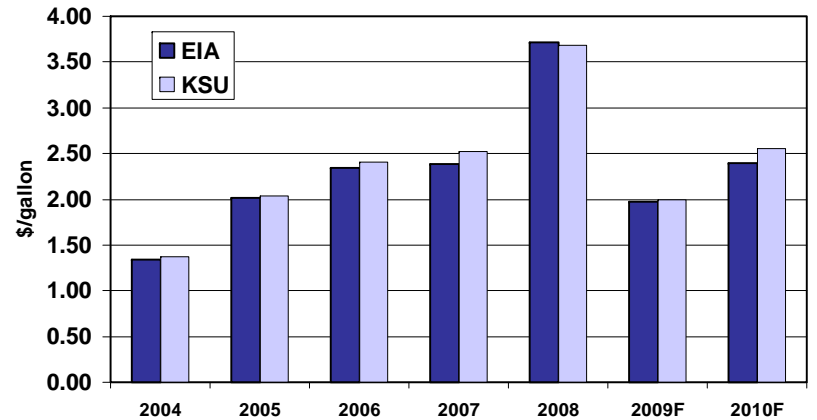
Crop Production Expenses



Source: USDA



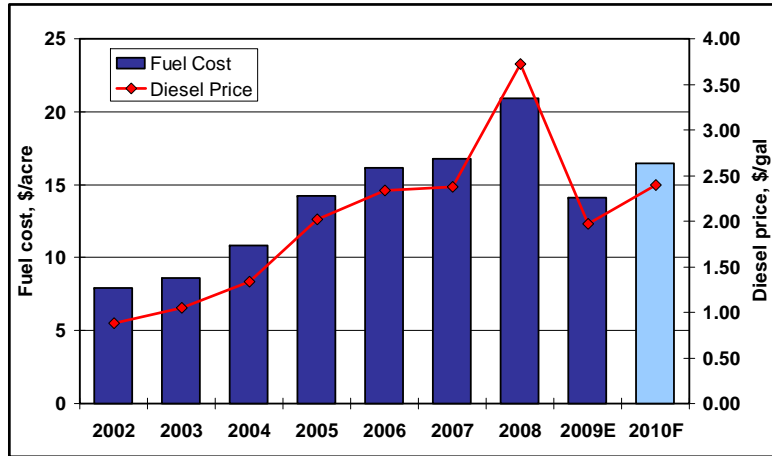
March – October Farm Diesel Prices



Source: Energy Information Administration and KSU



KFMA fuel costs per acre versus diesel prices...



Correlation from 2002 – 2008 = 0.98



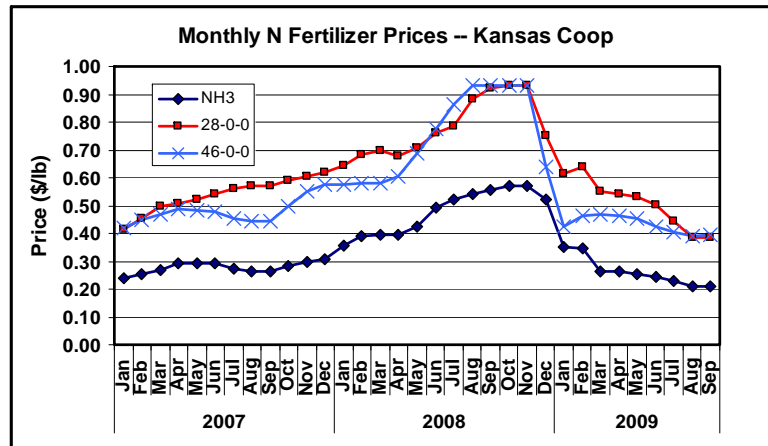
Actual and Projected Custom Rate Values

Operation	2007	2008	2009F	2010F
	----- \$/acre -----			
Wheat Harvest (base charge)	16.85	21.65	18.92	19.49
Fertilizer Application (dry)	4.20	4.96	4.46	4.57
Herbicide Application (ground)	4.50	5.01	4.51	4.62
Wheat Planting (min/no-till)	12.10	13.73	12.35	12.65
Corn Planting (min/no-till)	12.09	13.57	12.21	12.50
Baling (round w/ net), \$/bale	9.88	11.10	9.70	9.99

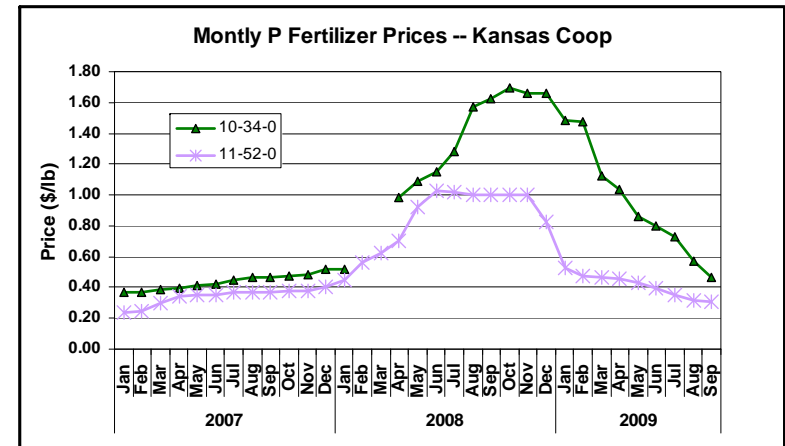
2009 rates are expected to decrease 10 to 15% from 2008 and 2010 rates are projected to increase 2 to 4% over 2009.



Fertilizer Prices



Fertilizer Prices



Fertilizer Calculator

Fertilizer Type and Price (\$/ton)

Anhydrous (NH₃) \$500
 Urea \$385
 UAN, 28-0-0 \$270
 UAN, 32-0-0 \$300
 Super phosphate \$550
 Muriate of potash \$795
 10-34-0 \$650
 18-46-0 \$440
 11-52-0 \$455

Cost of Nutrient (\$/lb)

N \$0.305
 N \$0.428
 N \$0.482
 N \$0.469
 P \$0.611
 K \$0.663
 N \$0.612
 N \$0.263
 N \$0.267
 P \$0.776
 P \$0.375
 P \$0.381

Average cost of N (\$/lb.) from anhydrous, N \$0.421

Contact Information
 Developed by: Kevin Dhuyvetter (kod@ksu.edu)
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Print

Current Fertilizer Prices (\$/ton)

Fertilizer Product	Average	Minimum	Maximum
NH ₃ (82-0-0)	401	340	624
Urea (46-0-0)	387	355	421
UAN (32-0-0)	225	200	292
UAN (28-0-0)	211	175	321
P (10-34-0)	437	350	755
P (11-52-0)	433	370	634
K (0-0-60)	705	585	848

- Significant variability remains between dealers on fertilizers.
- Variability is less than 2008, but more than 2007.

Source: KSU Farm Management Guide Crop Input Survey



Current Fertilizer Prices (\$/lb)

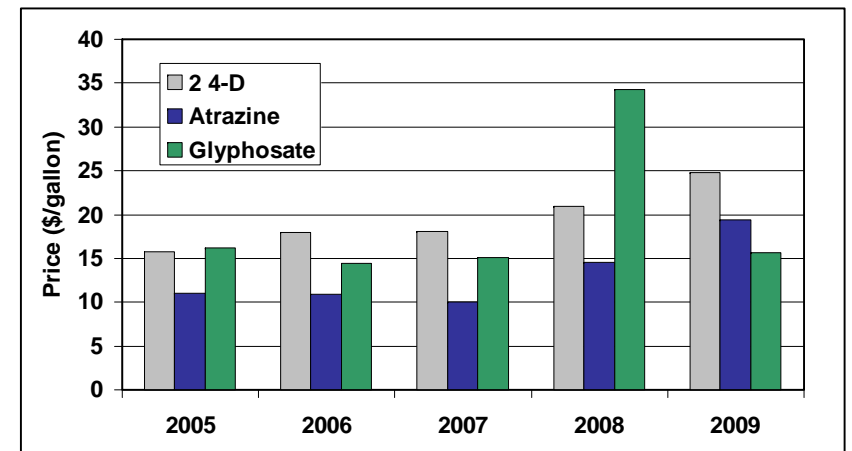
Fertilizer Product	Average	Minimum	Maximum
NH ₃ (82-0-0)	0.245	0.207	0.381
Urea (46-0-0)	0.421	0.386	0.458
UAN (32-0-0)	0.352	0.313	0.456
UAN (28-0-0)	0.378	0.313	0.573
P (10-34-0)	0.543	0.415	1.013
P (11-52-0)	0.350	0.286	0.540
K (0-0-60)	0.588	0.488	0.707

- Significant variability remains between dealers on fertilizers.
- Variability is less than 2008, but more than 2007.

Source: KSU Farm Management Guide Crop Input Survey



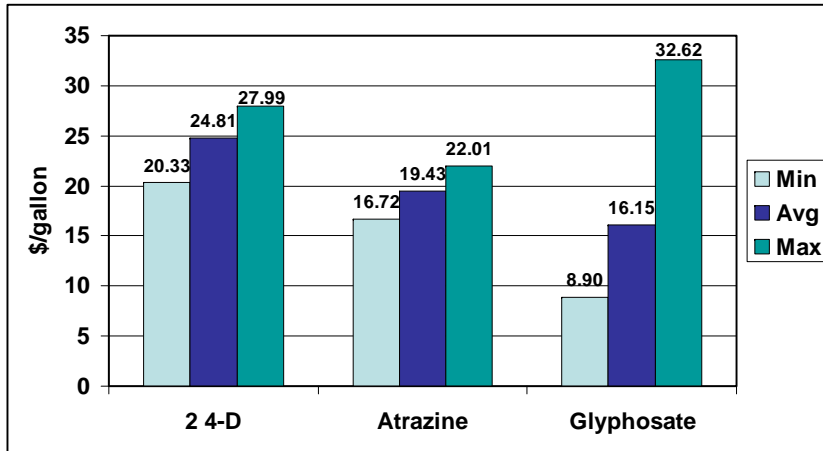
Select Herbicide Prices



Source: KSU Farm Management Guide Crop Input Survey



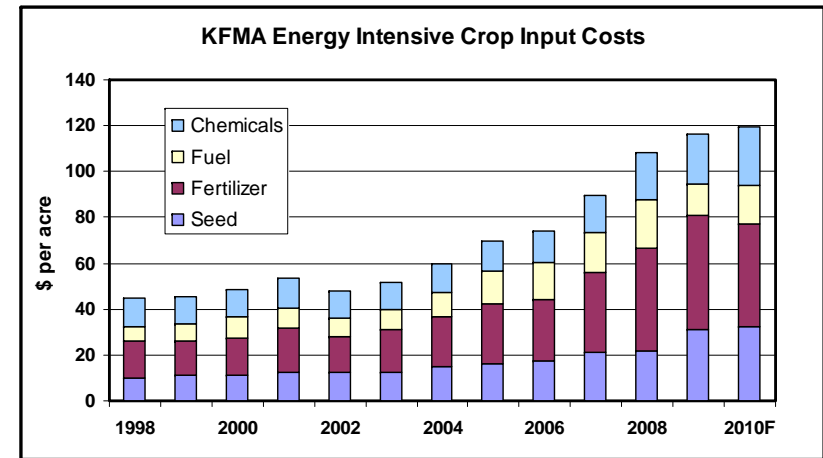
Select 2009 Herbicide Prices



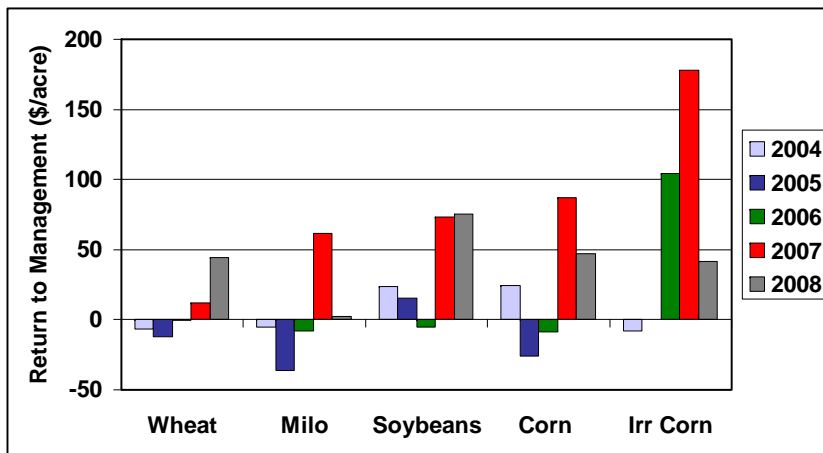
Source: KSU Farm Management Guide Crop Input Survey



Crop Input Cost Projections



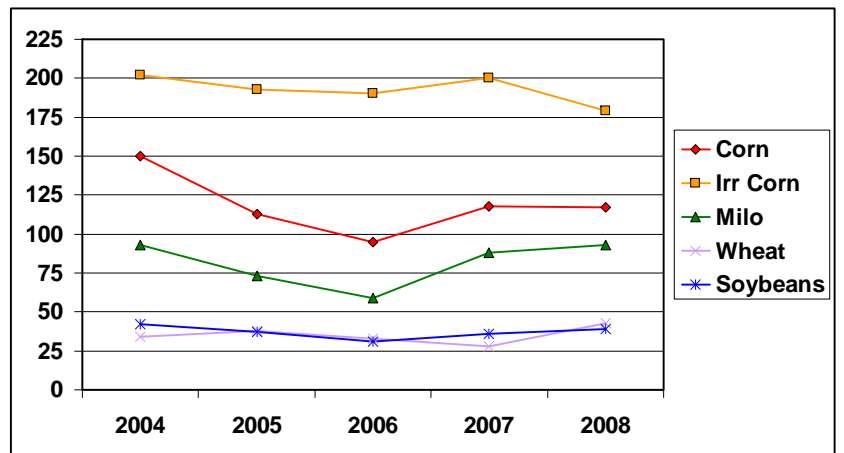
Returns for Selected Crop Enterprises



Source: KFMA Enterprise Profit Center Summary



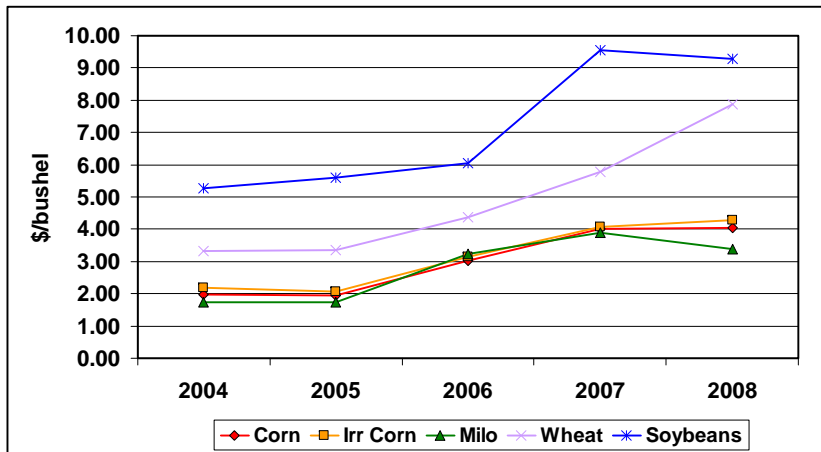
Yields for Selected Crops



Source: KFMA Enterprise Profit Center Summary



Prices for Selected Crops



Source: KFMA Enterprise Profit Center Summary



Wheat Returns by Profitability Category

	2007			2008		
	High 1/3	Mid 1/3	Low 1/3	High 1/3	Mid 1/3	Low 1/3
Yield	43.4	19.2	15.1	50.5	41.5	34.1
Price	\$5.99	\$5.47	\$5.23	\$7.21	\$6.59	\$6.39
Seed	\$5.93	\$9.37	\$6.91	\$12.29	\$14.01	\$13.04
Fertilizer	\$17.40	\$28.64	\$23.23	\$38.75	\$37.39	\$45.63
Machinery	\$52.89	\$44.57	\$56.05	\$58.95	\$59.89	\$76.33
Chemicals	\$8.56	\$7.67	\$9.53	\$10.67	\$10.35	\$15.34
Total Exp	\$175.81	\$163.83	\$168.71	\$213.82	\$211.59	\$255.57
Return/Mgmt	\$81.14	-\$7.83	-\$21.53	\$113.59	\$31.84	-\$41.90

Source: Kansas Farm Management Association



Sorghum Returns by Profitability Category

	2007			2008		
	High 1/3	Mid 1/3	Low 1/3	High 1/3	Mid 1/3	Low 1/3
Yield	96.6	89.1	69.9	111.1	84.1	74.6
Price	\$4.01	\$3.86	\$3.71	\$3.65	\$3.14	\$3.10
Seed	\$11.04	\$14.76	\$22.29	\$14.96	\$14.27	\$24.38
Fertilizer	\$35.86	\$38.01	\$43.58	\$54.17	\$47.83	\$62.74
Machinery	\$46.34	\$54.92	\$64.78	\$64.62	\$59.51	\$75.44
Chemicals	\$23.37	\$30.30	\$23.06	\$27.85	\$24.44	\$39.52
Total Exp	\$238.37	\$240.92	\$271.22	\$261.32	\$255.73	\$328.68
Return/Mgmt	\$128.63	\$57.05	-\$39.80	\$84.52	-\$15.20	-\$112.10

Source: Kansas Farm Management Association



Irrigated Corn Returns by Profitability Category

	2007			2008		
	High 1/3	Mid 1/3	Low 1/3	High 1/3	Mid 1/3	Low 1/3
Yield	209.5	201.8	191.8	192.3	169.9	178.4
Price	\$4.08	\$3.80	\$3.74	\$4.65	\$4.08	\$4.07
Seed	\$41.72	\$60.35	\$59.61	\$60.03	\$63.34	\$70.06
Fertilizer	\$72.28	\$74.61	\$81.66	\$99.74	\$93.15	\$116.80
Machinery	\$86.53	\$75.15	\$91.89	\$107.59	\$102.17	\$121.45
Chemicals	\$30.06	\$43.81	\$32.28	\$51.22	\$45.35	\$66.21
Irr. Fuel	\$56.96	\$67.91	\$75.88	\$77.62	\$91.05	\$112.15
Total Exp	\$495.11	\$528.24	\$527.32	\$604.74	\$583.69	\$714.67
Return/Mgmt	\$311.44	\$169.23	\$83.74	\$223.56	\$44.41	-\$188.98

Source: Kansas Farm Management Association



KSU Crop Decision Making Tools

- KSU-NPI_CropBudgets.xls
 - Excel spreadsheet for developing crop budgets where nitrogen and phosphate fertilizer and irrigation levels are optimally determined based on prices
- FM-Guides--Crops(2008).xls
 - Excel spreadsheet of projected crop budgets
- KSU-Lease.xls
 - Excel spreadsheet of projected crop budgets and equitable crop share and cash leases



Western KS Dryland Crop Budgets

	2009		2010	
	Wheat	Sorghum	Wheat	Sorghum
Yield (bu/acre)	43	75	44	78
Price (\$/bushel)	\$5.00	\$2.60	\$4.25	\$3.15
Returns (\$/acre)	\$225.90	\$205.85	\$197.33	\$258.66
Total Costs (\$/acre)	\$211.13	\$225.78	\$188.51	\$213.27
Net Returns (\$/acre)	\$14.37	-\$19.94	\$8.82	\$45.38
Total Cost/Bushel	\$4.95	\$3.03	\$4.33	\$2.73



North Central KS 2009 Crop Budgets

	Wheat	Corn	Milo	Soybeans
Yield (bu/acre)	48	86	84	35
Price (\$/bushel)	\$5.00	\$3.10	\$2.60	\$8.00
Returns (\$/acre)	\$252.16	\$280.33	\$233.42	\$290.80
Total Costs (\$/acre)	\$204.77	\$321.82	\$255.66	\$239.57
Net Returns (\$/acre)	\$47.39	-\$41.50	-\$22.24	\$51.23
Total Cost/Bushel	\$4.30	\$3.75	\$3.03	\$6.93

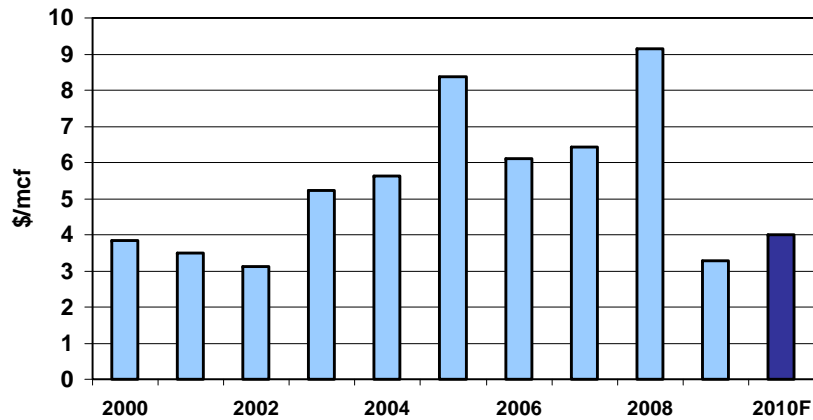


North Central KS 2010 Crop Budgets

	Wheat	Corn	Milo	Soybeans
Yield (bu/acre)	49	89	88	35
Price (\$/bushel)	\$4.25	\$3.55	\$3.10	\$7.90
Returns (\$/acre)	\$220.29	\$328.55	\$287.30	\$289.55
Total Costs (\$/acre)	\$183.53	\$303.28	\$239.72	\$211.53
Net Returns (\$/acre)	\$36.76	\$25.27	\$47.58	\$78.03
Total Cost/Bushel	\$3.78	\$3.42	\$2.72	\$6.07



Historical and forecasted natural gas prices



Source: EIA



Irrigation Energy Cost Comparison

Compares energy costs of irrigation pumping with different fuels at various prices and levels of performance.

Source	Cost (\$)	Use	----- Cost as percent of: -----			
			Elec.	Nat. Gas	Diesel	Propane
Electricity	\$5.13	64 kWh	100%	93%	49%	48%
Natural Gas	\$5.52	1 mcf	108%	100%	53%	52%
Diesel	\$10.44	8 gal	204%	189%	100%	98%
Propane	\$10.70	8 gal	209%	194%	103%	100%

Developed by Kevin Dhuyvetter (kcd@ksu.edu) and Troy Dumler (tdumler@ksre.ksu.edu)
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Western KS Irrigated Crop Budgets

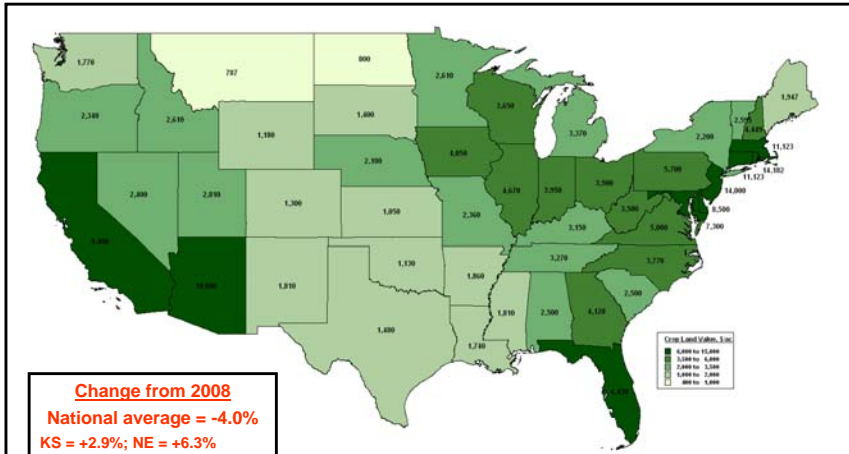
	2009		2010	
	Corn	Soybeans	Corn	Soybeans
Yield (bu/acre)	194	54	200	54
Price (\$/bushel)	\$3.10	\$8.00	\$3.55	\$7.90
Returns (\$/acre)	\$632.44	\$461.09	\$741.36	\$460.51
Total Costs (\$/acre)	\$641.79	\$426.84	\$645.82	\$420.53
Net Returns (\$/acre)	-\$9.35	\$34.25	\$95.45	\$39.98
Total Cost/Bushel	\$3.32	\$7.97	\$3.23	\$7.76



Land Values and Rents



Crop Land Average Value per Acre January 1, 2009



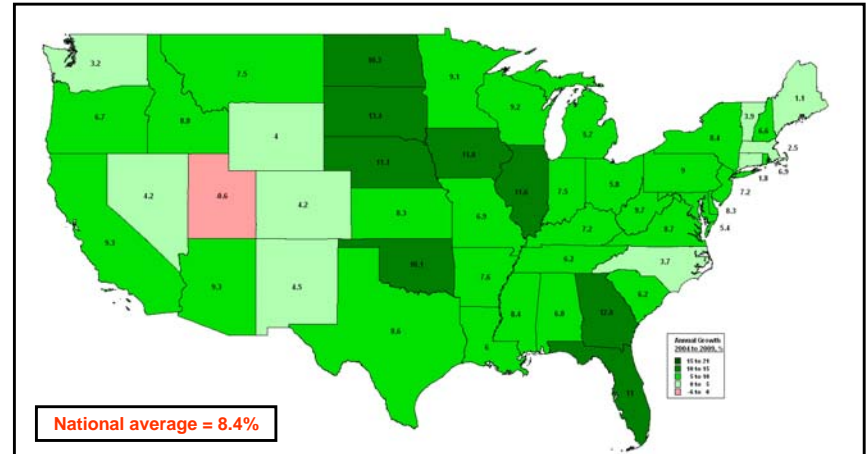
Change from 2008
 National average = -4.0%
 KS = +2.9%; NE = +6.3%
 OK = +1.8%; MO = -5.6%

Source: USDA NASS *Land Values and Cash Rents 2009 Summary* and Dhuyvetter and Kastens, August 2009

* Corresponding changes in pasture land values were US=0.0%; KS=0.0%; NE=-6.3%; OK=1.0%; and MO=-5.6%.



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

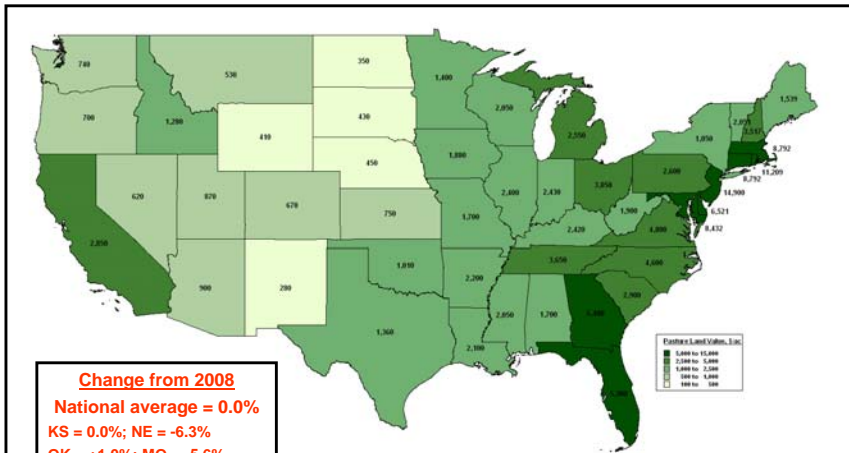


National average = 8.4%

Source: USDA NASS *Land Values and Cash Rents 2009 Summary* and Dhuyvetter and Kastens, August 2009



Pasture Land Average Value per Acre January 1, 2009



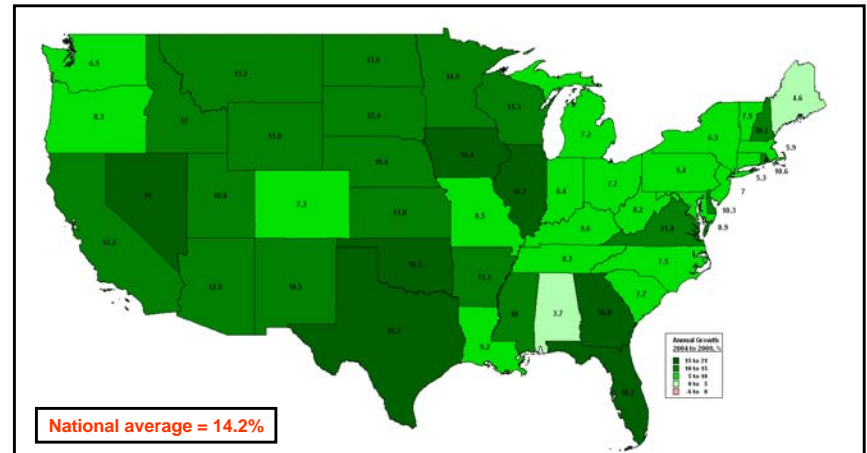
Change from 2008
 National average = 0.0%
 KS = 0.0%; NE = -6.3%
 OK = +1.0%; MO = -5.6%

Source: USDA NASS *Land Values and Cash Rents 2009 Summary* and Dhuyvetter and Kastens, August 2009

* Corresponding changes in crop land values were US=-4.0%; KS=2.9%; NE=6.3%; OK=1.8%; and MO=-5.6%.



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

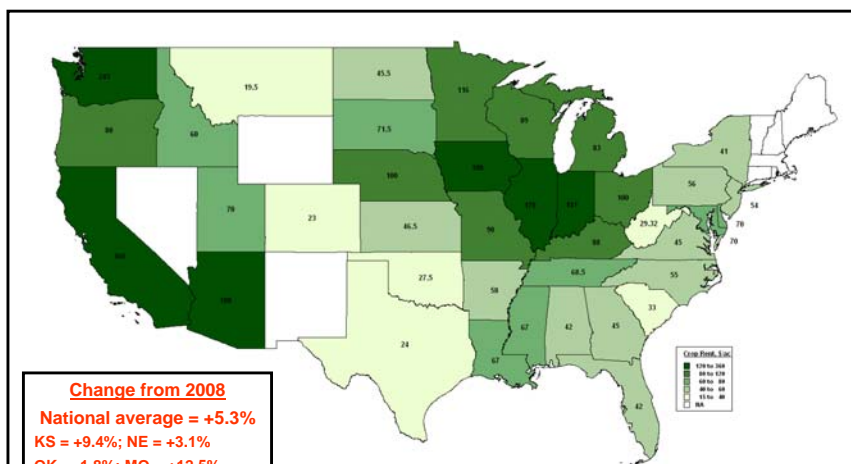


National average = 14.2%

Source: USDA NASS *Land Values and Cash Rents 2009 Summary* and Dhuyvetter and Kastens, August 2009



Crop Land Average Rent per Acre, 2009

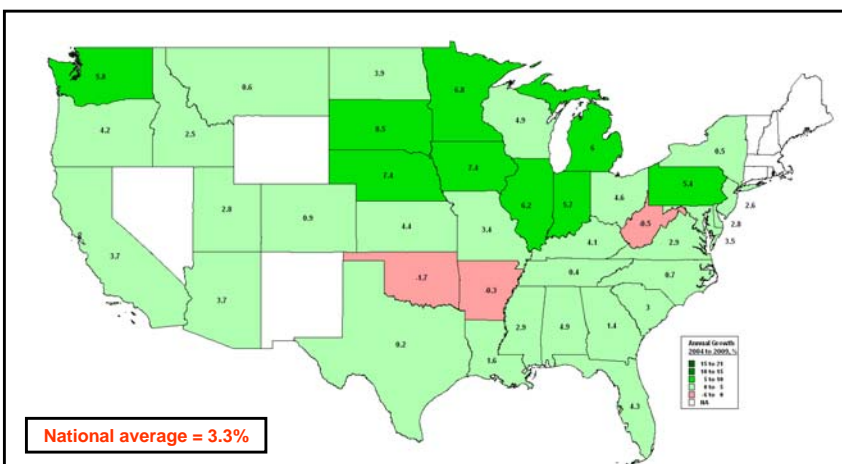


Source: USDA NASS Land Values and Cash Rents 2009 Summary and Dhuyvetter and Kastens, August 2009

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



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



Source: USDA NASS Land Values and Cash Rents 2009 Summary and Dhuyvetter and Kastens, August 2009



Land values and rents -- KAS surveyed rates

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

AGRICULTURAL LAND VALUES & CASH RENTS
Kansas Agricultural Statistics

Cooperating with the Kansas Department of Agriculture
FD-202 (2004) - Revised 04/05/2004 - FD-202 (2002) - www.nass.usda.gov

Released: August 21, 2009

Highlights

The average value of all farmland and buildings for 2009 in Kansas is estimated to be \$1,030 per acre. This compares with \$1,020 in 2008 and \$900 in 2007. Kansas' average value of all farmland and buildings increased 1.0 percent from 2008 to 2009. Irrigated cropland values rose 3.4 percent from 2008 while non-irrigated cropland increased 2.0 percent in value from last year. The value of Kansas pasture land remains unchanged from 2008 at \$750 per acre, leaving off after a 23 year increasing trend. Rental rates for irrigated cropland were up \$11.00 per acre and non-irrigated cropland increased by \$4.00 per acre. Pasture rents for 2009 rose \$1.00 to \$16.50 per acre.

Year	Cropland		Pasture and Rangeland		All Farmland and Buildings
	Irrigated	Non-Irrigated	Irrigated	Non-Irrigated	
1999	1,020	625	660	370	600
2000	1,040	630	650	380	625
2001	1,060	635	670	390	645
2002	1,080	640	679	400	665
2003	1,090	645	684	410	685
2004	1,080	650	688	420	700
2005	1,180	770	700	500	810
2006	1,200	820	740	550	870
2007	1,260	880	814	610	960
2008	1,450	980	1,020	620	1,030
2009	1,500	1,030	1,030	650	1,030

Survey Background

The 5-year Census of Agriculture was used to make historic revisions to land value estimates in non-census years. The Agricultural Land Values Survey and June Agriculture Survey provide data to make annual estimates of market values for the different categories of farmland. A more extensive Cash Rents Survey is currently being conducted to establish District and County level cash rent estimates that will be published in April 2010.

KAS report

Farm Management Guide MF-1100

Kansas Land Prices and Cash Rental Rates

Department of Agricultural Economics - www.agprgnr.edu

Kansas State University Agricultural Experiment Station and Geographic Extension Service
Kevin C. Dhuyvetter
Agricultural Economist
Crop Production

Kansas Land Prices

The Farm Management Guide reports Kansas land prices and cash rents for 1990-2009. These data are useful to farm managers in determining cash rental rates, in determining appropriate values for making time adjustments to land prices, and to landowners and renters who have expectations on historical price and rental levels for farmland. The average price in the guide represents per acre of land that vary widely in productivity. Thus, these data are more appropriate for analyzing trends than for establishing market value or rental rates for specific tracts of farmland.

Kansas Agricultural Statistics

For reporting purposes, Kansas Agricultural Statistics Service has divided the state into 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 three types of land: irrigated cropland, non-irrigated cropland, and pasture. This information is contained in two additional land groupings: all cropland and all land in farms. The all-cropland land values represent an average-weighted average of irrigated and non-irrigated cropland. Although these two groupings do not represent a particular class of land in a geographical region, they provide a broader classification of interest. The land value all-land in farms reported also includes the value of any buildings that are on the land. The value of the buildings represents a small portion of the total value, on average, and thus the reporting method does not significantly affect the accuracy of land values reported.

Year	NW	WC	SW	NC	C	SC	NE	EC	SE	State
1990	810	821	840	848	846	815	812	825	830	827
1991	810	821	840	848	846	815	812	825	830	827
1992	810	821	840	848	846	815	812	825	830	827
1993	810	821	840	848	846	815	812	825	830	827
1994	810	821	840	848	846	815	812	825	830	827
1995	810	821	840	848	846	815	812	825	830	827
1996	810	821	840	848	846	815	812	825	830	827
1997	810	821	840	848	846	815	812	825	830	827
1998	810	821	840	848	846	815	812	825	830	827
1999	810	821	840	848	846	815	812	825	830	827
2000	810	821	840	848	846	815	812	825	830	827
2001	810	821	840	848	846	815	812	825	830	827
2002	810	821	840	848	846	815	812	825	830	827
2003	810	821	840	848	846	815	812	825	830	827
2004	810	821	840	848	846	815	812	825	830	827
2005	810	821	840	848	846	815	812	825	830	827
2006	810	821	840	848	846	815	812	825	830	827
2007	810	821	840	848	846	815	812	825	830	827
2008	810	821	840	848	846	815	812	825	830	827
2009	810	821	840	848	846	815	812	825	830	827

Land Economics - Annual September 2009

KSU report



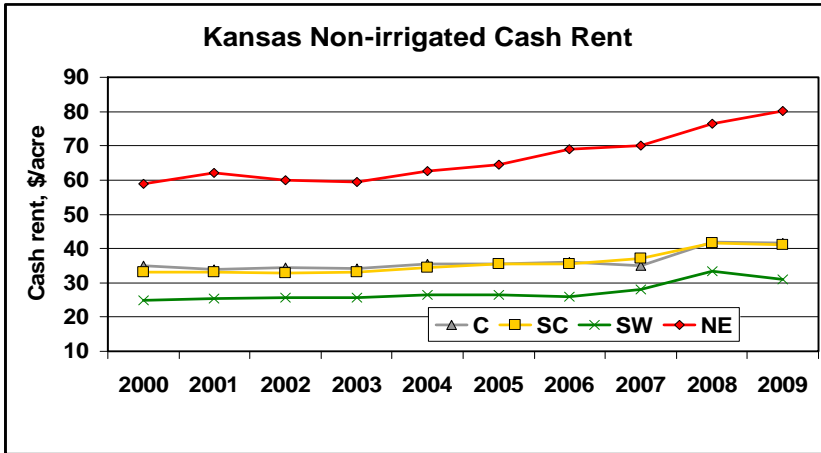
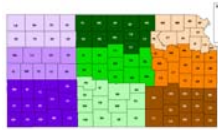
Cropland Values and Rents

Year	Value		Rent	
	Irrigated	Non-irrigated	Irrigated	Non-irrigated
2005	\$1,180	\$770	\$73.00	\$38.50
2006	\$1,200	\$820	\$74.00	\$39.00
2007	\$1,260	\$880	\$82.00	\$41.00
2008	\$1,450	\$980	\$92.00	\$42.50
2009	\$1,500	\$1,000	\$103.00	\$46.50
% Change '08 to '09	3.4%	2.0%	12.0%	9.4%

Source: Kansas Agricultural Statistics and KSU



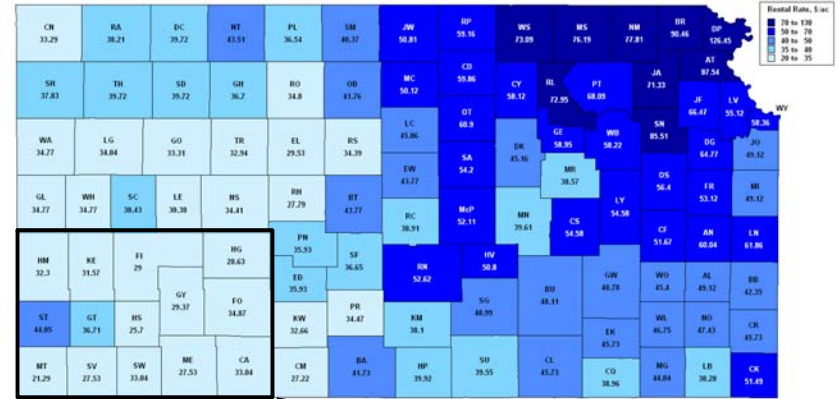
Market going rate...



Source: Kansas Agricultural Statistics and KSU



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

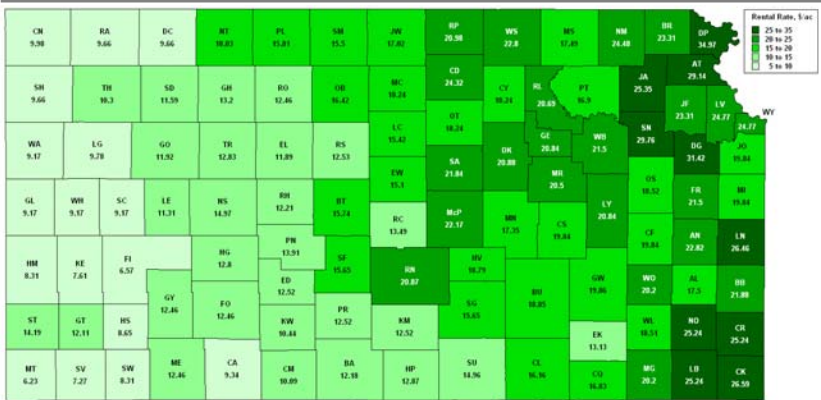


Based on KAS state average reported value for 2009 (\$46.50) (county-level survey in August of 2009 data available in April of 2010)

Acreage-weighted average of counties equals \$31.07 (KSU estimate of SW CRD)



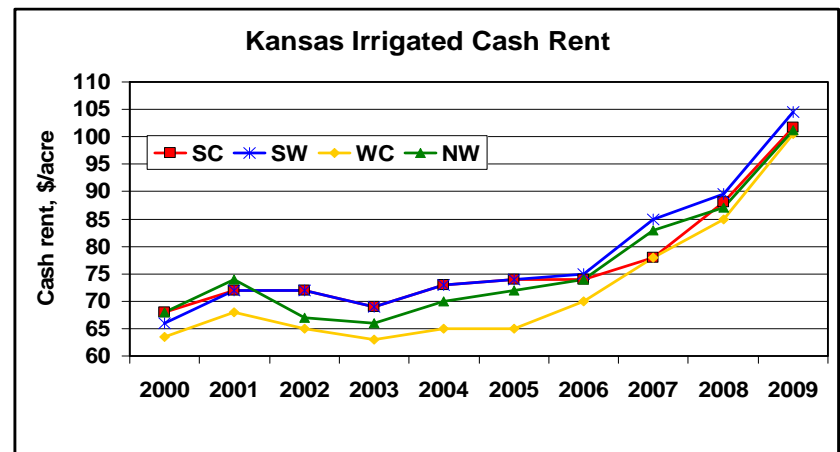
Kansas county-level pasture cash rents ...



Based on KAS state average reported value for 2009 (\$16.50) (county-level survey in August of 2009 data available in April of 2010)



Market going rate...



Source: Kansas Agricultural Statistics and KSU



Flexible Cash Rents



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
 - Other...



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)
- Why not simply give landowner ad hoc “bonuses” when times are good?

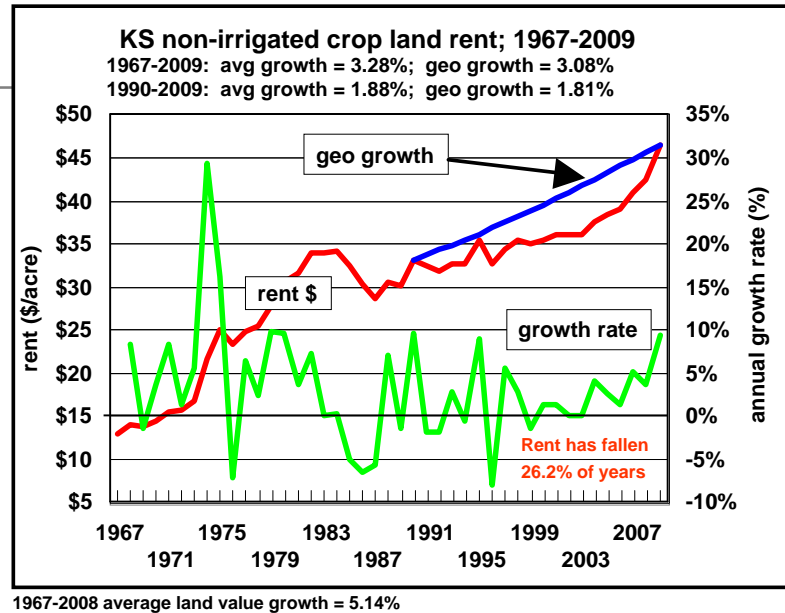


Flexible Cash Rents – WHY?

- Less need to negotiate lease every year...
 - 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 this true?)



Cash rent historical perspective



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 (method of formalizing bonuses)

- 1) Establish base cash rent
 - 2) Flex/modify base rent based on...
 - price deviation from base (fixed bushel rent)
 - yield deviation from base
 - price and yield (revenue) deviation from base
 - cost deviation from base
- Communication and documentation are important to ensure everybody understands what it is they are agreeing to.

Flexible cash rents – HOW?

Questions to ask

1. Does cash rent flex up and down or only up? (should impact base rent 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 – SUMMARY

- Flexible cash leases are simply a way of sharing risks of unpredictable markets (and yields?) without the hassles of crop ownership
- 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?)
- It is important that both parties know and understand what they are agreeing to!



Questions???

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