

3. Optimal Level of Crop Insurance Combined with SURE and ACRE

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Art Barnaby was raised on a diversified farm, located in Elk County, Kansas. Art received his B.S. degree from Fort Hays State University, M.S. from New Mexico State University and a Ph.D. in Agricultural Economics from Texas A&M University. Art joined the Agricultural Economics faculty in 1979. He currently holds the rank of Professor. Art conducts statewide extension education programs on financial planning, risk, government commodity programs, and crop insurance. Art is an author of the KSU Risk Management WEB page located at: <http://www.agmanager.info>. He is an author on several research projects that cover alternative crop insurance designs and their impacts on farmers. Art has also worked with the private crop insurance industry, RMA, and Farmer Commodity groups on crop insurance issues. His research work with the private sector was the basis for the first revenue insurance contract, Crop Revenue Coverage. Art is a past three time winner of the American Agricultural Economics Association Distinguished Extension Program Award. Art is a frequent speaker at professional, farmer-producer, ag lenders, and insurance industry meetings.

Abstract/Summary

With the declining prices the question remains, why so little interest in ACRE? This session will explore the historical payouts that ACRE would have generated in addition to the most current year. For the current year, continuing to update prices and yield forecasts will ultimately determine the 2009 ACRE payment. In addition, the SURE program implementation rules are not expected until December. However, this will be the third wheat crop covered under SURE without knowing the SURE rules. Depending on the implementation rules, optimal levels of crop insurance could easily change.

Supplemental REvenue, & Average Crop Revenue Election & Crop Insurance Are Combined Programs

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Combined SURE, ACRE, & Crop Insurance

ACRE has \$73,000 effective payment limit

ACRE has a maximum payment limit of 25% of guarantee

Coverage by FSA farm serial number

Coverage is by state

Combined SURE, ACRE, & Crop Insurance

SURE has a \$100,000 payment limit

SURE coverage is 115% of whole farm revenue;
limited to 90% of expected farm revenue

Coverage is by whole farm

Combined SURE, ACRE, & Crop Insurance

Crop insurance has no payment limit

CI is limited to 85% of expected farm revenue/yield;
up to 90% with county unit

Coverage is by "field" (optional), by ownership (basic), enterprise unit, or county.

SURE is Whole Farm Revenue Coverage Less All Revenue

- Value of all crops produced
- ACRE and other government payments
- 15% of Direct payments
- All crop insurance indemnities
- NAP

Average Crop Revenue (ACRE)

ACRE is "GRIP" (put option) on Expected State Revenue.

Revenue is price times yield, so how is price and yield measured?

The benchmark price (strike) is based on a 2 year average MYA price.

ACRE uses a moving 5 year Olympic average State yield.

ACRE Revenue Guarantee is approved State yield X approved (strike) price X 90%.

Average Crop Revenue (ACR)

ACRE Payment = ACRE Guarantee - [Actual State Yield X Max (MYA price, 70% X Loan)], s.t. 2009 Farm level revenue is less than farm level benchmark + crop insurance premiums

Farm level benchmark can not trigger an ACRE payment, it can only prevent a payment.

There is 10% cups & caps on \$ Coverage after the first year, no limit on the first year.

Maximum payment is limited to 25% of ACRE guarantee.

Average Crop Revenue (ACR)

ACRE payment limit is \$65,000 plus the reduction in direct payments (Effective limit is \$73,000).

Must sign up all crops in ACRE by farm serial number. Both tenant and landlord must agree.

Accept a 20% reduction in direct payments

Accept a 30% reduction in loan rates.

Eliminates Counter Cyclical Payments

Average Crop Revenue (ACR)

2009 Farm Revenue must be below Farm Benchmark revenue.

Farm Benchmark Revenue = A moving 5 year Olympic average of farm level yields times ACRE benchmark price + crop insurance premiums.

Farm revenue to count is the actual yield in 2009 times the current MYA price for 2009/10.

If farm revenue is below Benchmark then farm is eligible for an ACRE payment based on State revenue.

DCP VS. ACRE

Payments		DCP	ACRE
Direct	Payment Rate	100% of the DCP direct payment rate.	80% of the DCP Direct Payment Rate.
	Payment Formula	Uses farm's base acreage.	Uses farm's base acreage.
	Advances	Available through 2011.	Available through 2011.
Counter-Cyclical (cc)	Payment Formula	Uses farm's base acreage.	
	Trigger	Low National Market Prices.	
	Advances	40% advance of projected payment through 2010.	
Average Crop Revenue Election (ACRE)	Payment Formula		Uses planted and considered planted (P&CP) acreages of commodity crops and peanuts.
	Triggers		Revenue must be below the historical state average and the farm average.
	Advances		Not available.
Loan Rates		100% of the Market Assistance Loan rates.	70% of the Market Assistance Loan rates.

2009 ACRE and DCP Rates

	ACRE		DCP		
	Direct Rate	National Loan Rate	Direct Rate	National Loan Rate	CC Trigger Price
Wheat (bu)	0.416	1.93	0.52	2.75	3.40
Barley (bu)	0.192	1.30	0.24	1.85	2.00
Oats (bu)	0.019	0.93	0.024	1.33	1.416
Corn (bu)	0.224	1.37	0.28	1.95	2.35
Grain Sorghum (bu)	0.280	1.37	0.35	1.95	2.22
Upland Cotton (lb)	0.05336	0.3640	0.0667	0.52	0.6458
Rice (cwt)	1.880	4.55	2.35	6.50	8.15
Soybeans (bu)	0.352	3.50	0.44	5.00	5.36
Other Oilseeds (cwt)	0.640	6.51	0.80	9.30	9.30
Peanuts (ton)	28.80	248.50	36.00	355.00	459.00
Dry Peas (cwt)		3.78		5.40	8.32
Lentils (cwt)		7.90		11.28	12.81
Sm. Chickpeas (cwt)		5.20		7.43	10.36
Lg. Chickpeas (cwt)		7.90		11.28	12.81

Estimated Weighted National Average Price and Projected % ACRE Price loss (07/31/09)

Crop	Wheat ¹		Corn ¹	Grain Sorghum ¹	Soy-beans ¹		
	Month	08				09	Month
	Jun	7.62	5.67	Sep	5.02	4.60	10.70
	Jul	7.15	4.92	Oct	4.37	3.96	9.94
	Aug	7.61		Nov	4.26	3.68	9.38
	Sep	7.43		Dec	4.05	2.87	8.97
	Oct	6.65		Jan	4.36	3.27	9.97
	Nov	6.29		Feb	3.87	2.83	9.55
	Dec	5.95		Mar	3.86	3.10	9.12
	Jan	6.20		Apr	3.85	3.12	9.79
	Feb	5.79		May	3.97	3.35	10.70
	Mar	5.71		Jun	4.03	3.53	11.40
	Apr	5.75		Jul	3.33	3.12	10.30
	May	8.54		Aug			

Estimated Weighted National Average Price and Projected % ACRE Price loss (07/31/09)

	Wheat	Corn	Sorghum	Soybeans
1 USDA 2008/09 NASS Price¹	6.78	4.05	3.20	10.00
3 07-08 NASS Published Price¹	6.48	4.20	4.08	10.10
4 KSU Est. 2008/09 NASS Price³	\$6.78	\$4.10	\$3.38	\$9.87
ACRE				
4 2009 ACRE Strike Price, Average of 2007/08 & 2008/09 MYA Price	6.63	4.15	3.73	9.99
5 Assume an "Average" State Yield, 2009 ACRE Payment Price X 90%⁴	5.97	3.73	3.36	8.99
6 Assuming an "Average" Yield, Maximum ACRE Price to Exceed the 25% Cap on Payments⁵	4.48	2.80	2.52	6.74

Average Crop Revenue (ACR)

Yield is the other half of the ACRE program

Soybeans state yield is based on NASS planted acres

Corn, wheat, & sorghum yield is based on NASS harvested acres + FSA Failed Acres

NASS does not split Arkansas & Delaware corn by practice, so FSA has a formula for irrigated and dryland corn.

FSA Formula for Irrigated/dryland Yields in States with No NASS Yields by Practice

I Yld = Irrigated yield

NI Yld = Non-irrigated yield

All Yld = Combined yield

I Yld/NI Yld = National irrigated yield to non-irrigated yield ratio

PCT I = Percentage of FSA reported acreage that is irrigated

Note that the results are rounded to the nearest bushel.

NI Yld = All Yld / ((I/NI ratio * Pct I + (1-PCT I))

Example

$$127.0 = 152.0 / (1.5574 * 35\% + (1 - 35\%))$$

The formula for calculating the irrigated yield:

I Yld = NI Yld * I Yld/NI Yld

Example

$$198.0 = 127.0 * 1.5574$$

Estimated 2009/10 Weighted National Average Price to Settle ACRE Claims (07/31/09)

	Wheat	Corn	Sorghum	Soybeans
7 USDA Est. 2009/10 NASS Price⁶	4.80-5.80	3.35-4.15	2.85-3.55	8.30-10.30
8 KSU Forecast of the 2009/10 New Crop MYA Price and range of price⁷	5.37	3.25	2.92	8.97
	4.57 -	2.60 -	2.48 -	7.32 -
	6.18	3.90	3.36	10.63
9 \$ ACRE in (out) of the Money	\$0.59	\$0.48	\$0.43	\$0.01
10 % ACRE in (out) of the Money Next Year's Cup & Cap	9.0%	11.6%	11.7%	0.1%

Kansas Wheat Estimated 2009/10 ACRE Payment

Yr	Plant-ed Acres ¹ (000)	Harv-ested Acres ¹ (000)	Acres Not Harvest-ed (000)	% of Unharv-ested Acres FSA			NASS			% Yield Change from Olympic Yield	% Price Change from 2 yr. Average.	% of Cov-erage Paid ⁴	2009 ACRE Pymt based on Hist-ory ⁵	
				Failed Acres ²	Con-siders Failed ³	Production (000)	Plant Yield	Harvest Yield	ACRE Yield					
80	13,000	12,000	1,000	178.1	17.8%	420,000	32.3	35.0	34.5	18.9%	3.99	17.9%	0.0%	0.00
81	13,900	12,100	1,800	491.1	27.3%	302,500	21.8	25.0	24.0	(22.5%)	3.69	(5.3%)	18.5%	38.98
82	14,100	13,100	1,000	167.3	16.7%	458,500	32.5	35.0	34.6	11.5%	3.45	(10.2%)	0.0%	0.00
83	13,200	10,800	2,400	881.2	36.7%	448,200	34.0	41.5	38.4	16.3%	3.51	(1.7%)	0.0%	0.00
84	13,300	11,200	2,100	680.5	32.4%	431,200	32.4	38.5	36.3	3.7%	3.39	(2.6%)	0.0%	0.00
85	12,400	11,400	1,000	184.8	18.5%	433,200	34.9	38.0	37.4	6.8%	3.08	(10.7%)	0.0%	0.00
86	11,500	10,200	1,300	316.1	24.3%	336,600	29.3	33.0	32.0	(11.1%)	2.42	(25.2%)	25.0%	52.66
87	10,700	9,900	800	139.3	17.4%	366,300	34.2	37.0	36.5	1.4%	2.57	(6.5%)	0.0%	0.00
88	10,200	9,500	700	114.2	16.3%	323,000	31.7	34.0	33.6	(9.2%)	3.72	49.1%	0.0%	0.00
89	12,400	8,900	3,500	1,918.7	54.8%	213,600	17.2	24.0	19.7	(43.6%)	3.72	18.3%	24.9%	52.45
90	12,400	11,800	600	76.0	12.7%	472,000	38.1	40.0	39.7	16.9%	2.61	(29.8%)	8.3%	17.45
91	11,800	11,000	800	129.3	16.2%	363,000	30.8	33.0	32.6	(4.1%)	3.00	(5.2%)	0.0%	0.00
92	12,000	10,700	1,300	305.1	23.5%	363,800	30.3	34.0	33.1	(2.8%)	3.24	15.5%	0.0%	0.00
93	12,100	11,100	1,000	188.4	18.8%	388,500	32.1	35.0	34.4	4.3%	3.26	4.5%	0.0%	0.00
94	11,900	11,400	500	57.6	11.5%	433,200	36.4	38.0	37.8	14.6%	3.45	6.2%	0.0%	0.00



Kansas Wheat Estimated 2009/10 ACRE Payment

Yr	Plant-ed Acres ¹ (000)	Harv-ested Acres ¹ (000)	Acres Not Harvest-ed (000)	% of Unharv-ested Acres FSA			NASS			% Yield Change from Olympic Yield	% Price Change from 2 yr. Average.	% of Cov-erage Paid ⁴	2009 ACRE Pymt based on Hist-ory ⁵	
				Failed Acres ²	Con-siders Failed ³	Production (000)	Plant Yield	Harvest Yield	ACRE Yield					
95	11,700	11,000	700	119.5	17.1%	286,000	24.4	26.0	25.7	(26.5%)	4.55	35.6%	0.0%	0.00
96	11,800	8,800	3,000	1,264.3	42.1%	255,200	21.6	29.0	25.4	(23.2%)	4.30	7.5%	9.5%	20.04
97	11,400	10,900	500	25.1	5.0%	501,400	44.0	46.0	45.9	48.0%	3.38	(23.6%)	0.0%	0.00
98	10,700	10,100	600	30.8	5.1%	494,900	46.3	49.0	48.9	48.0%	2.65	(31.0%)	0.0%	0.00
99	10,000	9,200	800	96.6	12.1%	432,400	43.2	47.0	46.5	29.2%	2.48	(17.7%)	0.0%	0.00
00	9,800	9,400	400	102.2	25.5%	347,800	35.5	37.0	36.6	(6.1%)	2.62	2.1%	0.0%	0.00
01	9,800	8,200	1,600	875.7	54.7%	328,000	33.5	40.0	36.1	(16.0%)	2.78	9.0%	0.0%	0.00
02	9,700	8,200	1,500	683.0	45.5%	270,600	27.9	33.0	30.5	(29.2%)	3.56	31.9%	0.0%	0.00
03	10,500	10,000	500	51.1	10.2%	480,000	45.7	48.0	47.8	19.4%	3.40	7.3%	0.0%	0.00
04	10,000	8,500	1,500	694.2	46.3%	314,500	31.5	37.0	34.2	(14.5%)	3.40	(2.3%)	7.7%	16.28
05	10,000	9,500	500	30.8	6.2%	380,000	38.0	40.0	39.9	10.8%	3.42	0.6%	0.0%	0.00
06	9,800	9,100	700	56.1	8.0%	291,200	29.7	32.0	31.8	(14.0%)	4.26	24.9%	0.0%	0.00
07	10,400	8,600	1,800	113.0	6.3%	283,800	27.3	33.0	32.6	(6.9%)	6.48	68.8%	0.0%	0.00
08	9,600	8,900	700	185.8	26.5%	356,000	37.1	40.0	39.2	8.8%	6.78	26.3%	0.0%	0.00
09	9,300	8,800	500	68.2	13.6%	360,800	38.8	41.0	40.7	5.37	5.37	0.0%	0.00	



Kansas Wheat Estimated 2009/10 ACRE Payment

Yr	Plant-ed Acres ¹ (000)	Harv-ested Acres ¹ (000)	Acres Not Harvest-ed (000)	% of Unharv-ested Acres FSA			NASS			% Yield Change from Olympic Yield	% Price Change from 2 yr. Average.	% of Cov-erage Paid ⁴	2009 ACRE Pymt based on Hist-ory ⁵	
				Failed Acres ²	Con-siders Failed ³	Production (000)	Plant Yield	Harvest Yield	ACRE Yield					
95	11,700	11,000	700	119.5	17.1%	286,000	24.4	26.0	25.7	(26.5%)	4.55	35.6%	0.0%	0.00
96	11,800	8,800	3,000	1,264.3	42.1%	255,200	21.6	29.0	25.4	(23.2%)	4.30	7.5%	9.5%	20.04
97	11,400	10,900	500	25.1	5.0%	501,400	44.0	46.0	45.9	48.0%	3.38	(23.6%)	0.0%	0.00
98	10,700	10,100	600	30.8	5.1%	494,900	46.3	49.0	48.9	48.0%	2.65	(31.0%)	0.0%	0.00
99	10,000	9,200	800	96.6	12.1%	432,400	43.2	47.0	46.5	29.2%	2.48	(17.7%)	0.0%	0.00
00	9,800	9,400	400	102.2	25.5%	347,800	35.5	37.0	36.6	(6.1%)	2.62	2.1%	0.0%	0.00
01	9,800	8,200	1,600	875.7	54.7%	328,000	33.5	40.0	36.1	(16.0%)	2.78	9.0%	0.0%	0.00
02	9,700	8,200	1,500	683.0	45.5%	270,600	27.9	33.0	30.5	(29.2%)	3.56	31.9%	0.0%	0.00
03	10,500	10,000	500	51.1	10.2%	480,000	45.7	48.0	47.8	19.4%	3.40	7.3%	0.0%	0.00
04	10,000	8,500	1,500	694.2	46.3%	314,500	31.5	37.0	34.2	(14.5%)	3.40	(2.3%)	7.7%	16.28
05	10,000	9,500	500	30.8	6.2%	380,000	38.0	40.0	39.9	10.8%	3.42	0.6%	0.0%	0.00
06	9,800	9,100	700	56.1	8.0%	291,200	29.7	32.0	31.8	(14.0%)	4.26	24.9%	0.0%	0.00
07	10,400	8,600	1,800	113.0	6.3%	283,800	27.3	33.0	32.6	(6.9%)	6.48	68.8%	0.0%	0.00
08	9,600	8,900	700	185.8	26.5%	356,000	37.1	40.0	39.2	8.8%	6.78	26.3%	0.0%	0.00
09	9,300	8,800	500	68.2	13.6%	360,800	38.8	41.0	40.7	5.37	5.37	0.0%	0.00	



KS Irrigated vs. Dryland Corn

	Dryland	Irrigated
80	8.9%	31.77
81	0.0%	0.00
82	0.0%	0.00
83	25.0%	89.64
84	4.3%	15.53
85	0.0%	0.00
86	10.8%	38.86
87	0.0%	0.00
88	0.0%	0.00
89	7.7%	27.70
90	5.1%	18.34
91	22.0%	78.76
92	0.0%	0.00
93	0.0%	0.00
94	0.0%	0.00
95	0.0%	0.00
96	0.0%	0.00
97	5.1%	18.35
98	0.0%	0.00
99	9.4%	33.70
00	6.6%	23.69
01	0.0%	0.00
02	10.0%	35.95
03	11.1%	39.74
04	0.0%	0.00
05	0.0%	0.00
06	0.0%	0.00
07	0.0%	0.00
08	0.0%	0.00



CO Wheat Expected to Pay No ACRE Payment

Ln #	Change	St Yd	\$3.95	\$4.16	\$4.37	\$4.60	\$4.85	\$5.10	\$5.37	\$5.64	\$6.06	\$6.67	\$7.33	Price
1	30.0%	46.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	20.0%	43.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10.0%	39.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	5.0%	37.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	2.5%	37.0	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6		36.1	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	(2.5%)	35.2	7.34	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	(5.0%)	34.3	10.90	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	(10.0%)	32.5	18.02	11.28	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	(20.0%)	28.9	32.27	26.27	19.96	13.31	6.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	(30.0%)	25.3	36.55	36.55	35.74	29.92	23.80	17.36	10.58	3.80	0.00	0.00	0.00	0.00
13	Expected Olympic Average Year for 2010				29.4	% Change in State Yield						19.8%		
14	Expected \$ ACRE Guarantee for 2010				\$160.53	% Change in \$ Guarantee						9.8%		

Why No CO Wheat ACRE Payment?

- "Low" Olympic Average Yield
- Yr Yield
- 04 21.5
- 05 23.3
- 06 20.5
- 07 38.2
- 08 28.7
- Olympic Average = 24.5
- 09 yield is 36.1, so will they gain it back on next year's ACRE Guarantee?

CO Wheat Expected to Pay No ACRE Payment

Ln #	Change	St Yd	\$3.95	\$4.16	\$4.37	\$4.60	\$4.85	\$5.10	\$5.37	\$5.64	\$6.06	\$6.67	\$7.33	Price
1	30.0%	46.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	20.0%	43.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	10.0%	39.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	5.0%	37.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	2.5%	37.0	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6		36.1	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	(2.5%)	35.2	7.34	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	(5.0%)	34.3	10.90	3.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	(10.0%)	32.5	18.02	11.28	4.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	(20.0%)	28.9	32.27	26.27	19.96	13.31	6.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	(30.0%)	25.3	36.55	36.55	35.74	29.92	23.80	17.36	10.58	3.80	0.00	0.00	0.00	0.00
13	Expected Olympic Average Year for 2010				29.4	% Change in State Yield						19.8%		
14	Expected \$ ACRE Guarantee for 2010				\$160.53	% Change in \$ Guarantee						9.8%		

OK Wheat Expected to Pay Maximum ACRE Payment

Ln #	Change	St Yd	\$3.95	\$4.16	\$4.37	\$4.60	\$4.85	\$5.10	\$5.37	\$5.64	\$6.06	\$6.67	\$7.33	Price
1	30.0%	26.1	14.28	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	40.17	29.13	13.30
2	20.0%	24.1	27.60	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	41.30	26.69
3	10.0%	22.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	40.08
4	5.0%	21.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.78
5	2.5%	20.6	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
6		20.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
7	(2.5%)	19.6	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
8	(5.0%)	19.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
9	(10.0%)	18.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
10	(20.0%)	16.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
11	(30.0%)	14.1	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84	46.84
13	Expected Olympic Average Year for 2010				27.7	% Change in State Yield						(11.6%)		
14	Expected \$ ACRE Guarantee for 2010				\$168.63	% Change in \$ Guarantee						(10.0%)		

ACRE Wheat Estimates Ranked in Order of States Most Likely to Make ACRE Payments (Combined Yields Only). States with Irrigated & Non-irrigated Practice are not included.

	Projected Gross Percent of Guaranteed Lost	Projected Percent of Guaranteed Paid	Projected State ACRE Payment
Oklahoma Wheat Estimated 2009/10 ACRE Payment	40.2%	25.0%	\$46.84
Texas Wheat Estimated 2009/10 ACRE Payment	38.7%	25.0%	42.96
Virginia Wheat Estimated 2009/10 ACRE Payment	24.5%	24.5%	94.60
Arkansas Wheat Estimated 2009/10 ACRE Payment	21.3%	21.3%	66.35
North Carolina Wheat Estimated 2009/10 ACRE Payment	20.8%	20.8%	68.36
Kentucky Wheat Estimated 2009/10 ACRE Payment	20.3%	20.3%	77.48
New Mexico Dryland Wheat Estimated 2009/10 ACRE Payment	20.3%	20.3%	15.85
Maryland Wheat Estimated 2009/10 ACRE Payment	19.2%	19.2%	75.54
Idaho Dryland Wheat Estimated 2009/10 ACRE Payment	18.3%	18.3%	59.05
Washington Wheat Estimated 2009/10 ACRE Payment	15.7%	15.7%	57.32
Missouri Wheat Estimated 2009/10 ACRE Payment	13.8%	13.8%	41.02
Illinois Wheat Estimated 2009/10 ACRE Payment	13.2%	13.2%	47.55
Oregon Wheat Estimated 2009/10 ACRE Payment	13.2%	13.2%	43.41
Delaware Wheat Estimated 2009/10 ACRE Payment	13.0%	13.0%	53.00
New Mexico Irrigated Wheat Estimated 2009/10 ACRE Payment	12.4%	12.4%	42.14
South Dakota Wheat Estimated 2009/10 ACRE Payment	12.1%	12.1%	30.40
Montana Wheat Estimated 2009/10 ACRE Payment	10.2%	10.2%	18.67
Idaho Irrigated Wheat Estimated 2009/10 ACRE Payment	10.1%	10.1%	98.95
Michigan Wheat Estimated 2009/10 ACRE Payment	9.9%	9.9%	39.12
Wisconsin Wheat Estimated 2009/10 ACRE Payment	9.7%	9.7%	35.89
Pennsylvania Wheat Estimated 2009/10 ACRE Payment	9.2%	9.2%	31.22
Minnesota Wheat Estimated 2009/10 ACRE Payment	8.9%	8.9%	26.59
Indiana Wheat Estimated 2009/10 ACRE Payment	8.4%	8.4%	33.12
Ohio Wheat Estimated 2009/10 ACRE Payment	4.8%	4.8%	18.73
North Dakota Wheat Estimated 2009/10 ACRE Payment	0.9%	0.9%	1.83
Kansas Wheat Estimated 2009/10 ACRE Payment	(5.5%)	0.0%	0.00
Nebraska Wheat Estimated 2009/10 ACRE Payment	(8.6%)	0.0%	0.00
Colorado Wheat Estimated 2009/10 ACRE Payment	(37.8%)	0.0%	0.00

ACRE Corn Estimates Ranked in Order of States Most Likely to Make ACRE Payments (Combined Yields Only). States with Irrigated & Non-irrigated Practice are not included.

	Projected Gross Percent of Guaranteed Lost	Projected Percent of Guaranteed Paid	Projected State ACRE Payment	Percent in Average Yield for all Practices
Texas Dryland Corn Estimated 2009/10 ACRE Payment	20.8%	20.8%	61.46	(2.7%)
Colorado Irrigated Corn Estimated 2009/10 ACRE Payment	20.0%	20.0%	137.89	(1.2%)
Texas Irrigated Corn Estimated 2009/10 ACRE Payment	17.4%	17.4%	119.88	(2.7%)
Washington Corn Estimated 2009/10 ACRE Payment	15.7%	15.7%	121.22	
Delaware Irrigated Corn Estimated 2009/10 ACRE Payment	15.6%	15.6%	108.65	
Wisconsin Corn Estimated 2009/10 ACRE Payment	14.9%	14.9%	76.70	
Idaho Corn Estimated 2009/10 ACRE Payment	12.8%	12.8%	81.09	
Oregon Corn Estimated 2009/10 ACRE Payment	12.7%	12.7%	86.98	
Delaware Dryland Corn Estimated 2009/10 ACRE Payment	12.7%	12.7%	51.80	
North Dakota Corn Estimated 2009/10 ACRE Payment	12.2%	12.2%	53.10	
Maryland Corn Estimated 2009/10 ACRE Payment	12.1%	12.1%	59.59	
Michigan Corn Estimated 2009/10 ACRE Payment	11.6%	11.6%	59.94	
Illinois Corn Estimated 2009/10 ACRE Payment	11.6%	11.6%	74.60	
Arkansas Irrigated Corn Estimated 2009/10 ACRE Payment	11.4%	11.4%	70.55	
Oklahoma Dryland Corn Estimated 2009/10 ACRE Payment	11.0%	11.0%	32.76	(13.6%)
Oklahoma Irrigated Corn Estimated 2009/10 ACRE Payment	10.8%	10.8%	69.00	(13.6%)
Minnesota Corn Estimated 2009/10 ACRE Payment	9.5%	9.5%	57.22	
Indiana Corn Estimated 2009/10 ACRE Payment	9.2%	9.2%	53.62	
Virginia Corn Estimated 2009/10 ACRE Payment	8.9%	8.9%	38.44	
Missouri Corn Estimated 2009/10 ACRE Payment	8.1%	8.1%	41.75	
Kansas Dryland Corn Estimated 2009/10 ACRE Payment	7.5%	7.5%	26.84	5.1%
Kansas Irrigated Corn Estimated 2009/10 ACRE Payment	7.4%	7.4%	51.85	5.1%
Nebraska Irrigated Corn Estimated 2009/10 ACRE Payment	7.3%	7.3%	49.90	4.2%
Arkansas Dryland Corn Estimated 2009/10 ACRE Payment	7.2%	7.2%	32.47	
Kentucky Corn Estimated 2009/10 ACRE Payment	5.8%	5.8%	30.06	
Iowa Corn Estimated 2009/10 ACRE Payment	5.7%	5.7%	36.51	
Pennsylvania Corn Estimated 2009/10 ACRE Payment	5.1%	5.1%	24.05	
Ohio Corn Estimated 2009/10 ACRE Payment	4.1%	4.1%	23.02	
Nebraska Dryland Corn Estimated 2009/10 ACRE Payment	1.4%	1.4%	6.34	4.2%
South Dakota Corn Estimated 2009/10 ACRE Payment	0.1%	0.1%	0.54	
Colorado Dryland Corn Estimated 2009/10 ACRE Payment	(8.1%)	0.0%	0.00	(1.2%)

ACRE Soybean Estimates Ranked in Order of States Most Likely to Make ACRE Payments (Combined Yields Only). States with Irrigated & Non-irrigated Practice are not included.

	Projected Gross Percent of Guaranteed Lost	Projected Percent of Guaranteed Paid	Projected State ACRE Payment
Texas Soybean Estimated 2009/10 ACRE Payment	7.9%	7.9%	17.44
North Dakota Soybean Estimated 2009/10 ACRE Payment	4.8%	4.8%	13.47
Indiana Soybean Estimated 2009/10 ACRE Payment	3.2%	3.2%	13.93
Illinois Soybean Estimated 2009/10 ACRE Payment	2.7%	2.7%	11.43
Michigan Soybean Estimated 2009/10 ACRE Payment	0.8%	0.8%	2.66
Arkansas Irrigated Soybean Estimated 2009/10 ACRE Payment	0.6%	0.6%	2.16
Minnesota Soybean Estimated 2009/10 ACRE Payment	0.4%	0.4%	1.44
Oklahoma Soybean Estimated 2009/10 ACRE Payment	(0.2%)	0.0%	0.00
Kentucky Soybean Estimated 2009/10 ACRE Payment	(2.6%)	0.0%	0.00
Nebraska Dryland Soybean Estimated 2009/10 ACRE Payment	(2.9%)	0.0%	0.00
Wisconsin Soybean Estimated 2009/10 ACRE Payment	(2.9%)	0.0%	0.00
Nebraska Irrigated Soybean Estimated 2009/10 ACRE Payment	(3.8%)	0.0%	0.00
Maryland Soybean Estimated 2009/10 ACRE Payment	(4.8%)	0.0%	0.00
Ohio Soybean Estimated 2009/10 ACRE Payment	(5.6%)	0.0%	0.00
Iowa Soybean Estimated 2009/10 ACRE Payment	(6.8%)	0.0%	0.00
North Carolina Soybean Estimated 2009/10 ACRE Payment	(7.4%)	0.0%	0.00
Virginia Soybean Estimated 2009/10 ACRE Payment	(7.7%)	0.0%	0.00
Kansas Soybean Estimated 2009/10 ACRE Payment	(9.5%)	0.0%	0.00
Missouri Soybean Estimated 2009/10 ACRE Payment	(10.8%)	0.0%	0.00
South Dakota Soybean Estimated 2009/10 ACRE Payment	(11.9%)	0.0%	0.00
Mississippi Soybean Estimated 2009/10 ACRE Payment	(12.5%)	0.0%	0.00
Pennsylvania Soybean Estimated 2009/10 ACRE Payment	(15.8%)	0.0%	0.00
Arkansas Dryland Soybean Estimated 2009/10 ACRE Payment	(18.3%)	0.0%	0.00
Delaware Soybean Estimated 2009/10 ACRE Payment	(25.5%)	0.0%	0.00

ACRE Grain Sorghum Estimates Ranked in Order of States Most Likely to Make ACRE Payments (Combined Yields Only). States with Irrigated & Non-irrigated Practice are not included.

	Projected Gross Percent of Guaranteed Lost	Projected Percent of Guaranteed Paid	Projected State ACRE Payment
Oklahoma Grain Sorghum Estimated 2009/10 ACRE Payment	33.1%	25.0%	41.94
New Mexico Dryland Grain Sorghum Estimated 2009/10 ACRE Payment	31.9%	25.0%	25.17
Texas Grain Sorghum Estimated 2009/10 ACRE Payment	31.5%	25.0%	47.82
New Mexico Irrigated Grain Sorghum Estimated 2009/10 ACRE Payment	25.0%	25.0%	68.79
Arkansas Grain Sorghum Estimated 2009/10 ACRE Payment	22.3%	22.3%	62.73
Illinois Grain Sorghum Estimated 2009/10 ACRE Payment	13.3%	13.3%	41.85
Missouri Grain Sorghum Estimated 2009/10 ACRE Payment	13.1%	13.1%	40.33
Kansas Grain Sorghum Estimated 2009/10 ACRE Payment	9.6%	9.6%	24.56
Nebraska Grain Sorghum Estimated 2009/10 ACRE Payment	7.5%	7.5%	21.44
Colorado Grain Sorghum Estimated 2009/10 ACRE Payment	0.4%	0.4%	0.41
South Dakota Grain Sorghum Estimated 2009/10 ACRE Payment	(1.9%)	0.0%	0.00



Crop Insurance and SURE Wheat Calculation Worksheet

	RA-HPO
1 Crop Ins. Coverage Level	70%
2 Crop Insurance aph	45.3
3 Crop Ins. Price Election	\$8.77
4 \$ Crop Ins. Coverage (ln1 X ln2 X ln3)	\$278.10
5 Yield	10.0
6 Crop Ins. RA Harvest Price	\$6.00
7 Final Revenue Guarantee Max (ln3 , ln6) X ln1 X ln2	\$278.10
8 \$ to Count (ln5 X ln6)	\$60.00
9 APH Indemnity Bu. (ln1 X ln2 - 5ln)	N/A
10 Indemnity Pymt (RA-HPO) (ln7 - ln8)	\$218.10
11 15% of Direct Pymt² + Other Gov Pymts	\$1.00

Crop Insurance and SURE Wheat Calculation Worksheet

	???
12 SURE "aph"	70%
13 Coverage (Same as Crop Ins.)	70%
14 "Price"³	115%
15 SURE 115% Factor	115%
16 SURE Coverage (ln12 X ln13 X ln14 X ln15)	115%
17 Max Rev Cap (ln12 X ln3 X 90%)	115%
18 Lesser of line 16 or line 15	115%
18 NASS Price³	\$5.80
19 SURE Crop "Sales" (ln5 X ln18)	\$5.80
20 Gov Pymts & Crop Ins. (ln10 + ln11)	\$5.80
21 Gross SURE Pymt (ln18 - ln19 - ln20)	\$5.80
22 60% X SURE Pymt (net) (ln21 X 60%)	\$5.80
23 Total Revenue (ln19 + ln20 + ln22)	\$5.80
24 Crop Ins. Premium⁵	\$16.69
Total Revenue Less Crop	\$16.69
25 Ins. Premium ln23 - ln24	\$16.69

Calculate SURE "aph"

60% of T aph Yield:		
2008		66.4
2007	18.6	9.0
2006		40.8
2005		45.0
2004		52.7
2003		48.4
2002		N/A
2001		N/A
2000		N/A
1999		N/A
Simple Average		43.7
aph Yield		45.3
SURE Yield		<u>50.7</u>

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Crop Insurance and SURE Wheat Calculation Worksheet

	50.7
12 SURE "aph"	50.7
13 Coverage (Same as Crop Ins.)	70%
14 "Price"³	\$8.77
15 SURE 115% Factor	115%
16 SURE Coverage (ln12 X ln13 X ln14 X ln15)	\$357.93
17 Max Rev Cap (ln12 X ln3 X 90%)	\$400.18
18 Lesser of line 16 or line 15	\$357.93
18 NASS Price³	\$5.80
19 SURE Crop "Sales" (ln5 X ln18)	\$58.00
20 Gov Pymts & Crop Ins. (ln10 + ln11)	\$219.10
21 Gross SURE Pymt (ln18 - ln19 - ln20)	\$80.84
22 60% X SURE Pymt (net) (ln21 X 60%)	48.50
23 Total Revenue (ln19 + ln20 + ln22)	\$325.60
24 Crop Ins. Premium⁵	\$16.69
Total Revenue Less Crop	\$16.69
25 Ins. Premium ln23 - ln24	\$308.91

Combined ACRE, DCP, & SURE Payments

Summary	ACRE	DCP
Planted Base Acres		
SURE Guarantee	\$310.63	\$310.63
Less SURE Value of Crop	118.21	118.21
Less 15% of Direct payments	1.50	1.87
Less ACRE Payment	54.68	0.00
Less Crop Insurance Payment	149.56	149.56
Gross SURE Payment	0.00	40.99
Pay 60% of Sure Payment	0.00	24.59
Direct Payment	10.00	12.50
Remaining 3 years of Direct Payments	29.99	37.49
ACRE Payment	54.68	0.00
Payment of SURE on acres over limit		
Total Government Payments	94.66	74.57
Payment Difference	<u>27%</u>	\$20.09

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Value of Production to Count in SURE

Production	22.0
2009/10 Wheat NASS Price	5.37
Production Value to Count	118.21
Direct Payments on Base payment Acres	15.00
Direct Paid on 83.3% of Base Acres	12.50

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Value of ACRE to Count in SURE

2007/08 Wheat NASS Price	\$6.48
2008/09 Wheat NASS Price	\$6.78
ACRE Benchmark (Strike) Price	<u>\$6.63</u>
OK State Yield by Year	State
2004	34.5
2005	31.9
2006	23.6
2007	27.8
2008	36.9
State Olympic Average Yield	<u>31.4</u>
ACRE Coverage X 90% ²	<u>\$187.36</u>
Actual 2009 State Yield	21.0
Max (2009/10 MYA Price, 70% X Loan)	5.37
Revenue to Count	112.84
Gross ACRE Payment	74.52
25% Payment Cap	46.84
Pay the Lesser of In 15 or In 16	46.84

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Value of Farm Level ACRE to Count in SURE

Farm's Olympic Yield ³	44.0
Benchmark Price	6.63
Farm's Crop Insurance Premium	\$22.00
Farm Benchmark	<u>\$313.72</u>
Farm Yield in 2009	22.0
Farm Revenue to Count	<u>\$118.21</u>
Eligibility Requires Farm Revenue to be less than Farm Benchmark	<u>YES</u>
If No, then ACRE payment for the farm is zero and Stop Calculations	
Farm's Olympic Yield Ratio / State Olympic Yield	1.401
Farm Level ACRE Payment	<u>\$65.64</u>
Payment Factor 0.833 (0.85 in 2012)	<u>\$54.68</u>

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Crop Insurance Indemnity to Count in SURE

RA-HPO Crop Insurance	
Crop Ins. Coverage Level	70%
Crop Insurance aph	44.0
Crop Ins. Price Election	\$8.77
\$ Crop Ins. Coverage	<u>\$270.12</u>
Yield	22.0
Crop Ins. RA Harvest Price	\$5.48
Final Revenue Guarantee	<u>\$270.12</u>
\$ to Count	<u>\$120.56</u>
Indemnity Pymt (RA-HPO)	<u>\$149.56</u>
Crop Ins. Premium ⁵	\$22.00
Net Indemnity Pymt (RA-HPO)	<u>\$127.56</u>

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Combined ACRE, DCP, & SURE Payments When Over Payment limit

Summary	ACRE	DCP	ACRE & SURE
Planted Base Acres	4,066	4,066	4,066
SURE Guarantee	1,263,021	1,263,021	1,263,021
Less SURE Value of Crop	480,646	480,646	480,646
Less 15% of Direct payments	6,096	7,621	4,800
Less ACRE Payment	222,309	0	73,000
Less Crop Insurance Payment	608,088	608,088	608,088
Gross SURE Payment	0	166,667	96,487.28
Pay 60% of Sure Payment	0	100,000	57,892
Direct Payment	32,000	40,000	32,000
Remaining 3 years of Direct Payments	96,000	120,000	96,000
ACRE Payment	73,000	0	73,000
Payment of SURE on acres over limit			
Total Government Payments	201,000	260,000	258,892
Payment Difference	-23%	-59,000.00	-1,108

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Combined ACRE, DCP, & SURE Payments When Over Payment limit

- SURE works best on single enterprise farm!
- A large number of acres under NAP will lower the average whole farm coverage.
- Ghost Crop is not applied to uninsurable crops due to practice, e.g double crop dryland sorghum.
- SURE price, yield, and indemnity has not been defined by FSA.

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Is ACRE a Substitute for Crop Insurance?

Is your farm corn yield correlated with the state yield? More likely is the case in a small state like Delaware vs. a large state like Iowa

Is your state yield negative correlated with price? A corn crop failure in Delaware will likely have no effect on corn price but is that true for Iowa?

ACRE would not have paid on the 2007 Kansas wheat crop failure. NW farm yields were above normal so farmers could not meet the farm level benchmark test and the short crop caused higher market prices eliminated SURE payments for Central Kansas wheat farmers with zero yields.

Because ACRE is a "put option" on expected state revenue, ACRE will be the most attractive if new crop prices are trading significantly below the SURE strike price; i.e. an in the money put.

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Other Considerations

- If planting corn on wheat base or a base with a very “small” direct payment then one is betting a small amount of cash for a chance to collect more than \$100. A 20% of direct wheat payments may only be \$2 and acre or \$8 for the 4 years verses \$20 or more for rice for a total of \$80.
- At the other extreme if farmers are over the payment limits, then they are betting \$32,000 (20% of \$40,000 for 4 years) for a chance to collect up to \$73,000 or nothing. History suggests that if there is an ACRE payment it will only happen in 1 of the 4 years, but farmers will increase the odds of collect if they only signup when ACRE is “in the money”.

On August 14

- State Benchmark yields (Olympic average) were set for all crops.
- Wheat benchmark (strike) price was known.
- Kansas Wheat settlement yield was known (or a strong estimate) NASS released its 4th estimate of winter wheat yields on 8/12/09.
- Wheat settlement Price was a **forecast** but it is 3 months in to the marketing year. The first 3 months historically have accounted for 40-50% of the price.

On August 14

- Corn, Milo, Beans benchmarks (strike) prices was a **forecast**.
- Kansas Corn, Milo, Beans settlement yields was a **forecast**. **NASS released first yield estimate for fall crops but dryland and irrigated yields were not split.**
- Corn, Milo, Beans settlement Price was a **forecast**.

Summary

- Few people expect any CC or LDP payments on soybeans, feedgrains, or wheat, therefore the tradeoff is a potentially “large” ACRE payment in return for a 20% reduction in direct payments and a 30% reduction the loan for the next 4 years (signup is for the duration of the Farm Bill).
- If all crop ACRE “options” are out of money; Do not signup.
- If all crop ACRE “options” are in the money; then the odds increase for an ACRE payment. Historical data suggest if there is a “large” ACRE payment it will only happen in one of the four years.

Summary

- If there is a mix of in and out of the money ACRE “options” then the ACRE decision will depend on the following:
 - 1. Is your dominant crop in the money?
 - 2. Are you over the payment limit?
 - 3. Does the crop base generate only “small” direct payments so if ACRE does not pay there is a “small” loss in direct payments?
 - 4. Will farmers’ landlords agree to ACRE?

Summary

- If there is a mix of in and out of the money ACRE “options” then it will depend on the following:
 - 5. Does their state have a negative price-yield correlation?
 - 6. What state is the farm located? ACRE is “nearly” a county program in Delaware versus a very large corn-soybean state like Illinois.
 - 7. Because ACRE is based on the crop planted farmers may change their acreage of a crop next year to a crop that is in the money.
 - 8. Farmers that do not elect ACRE in 2009 may elect in any of the following years. Farmers that elect ACRE in 2010 give up 20% of their direct payments for the next 3 years versus 4 years for those electing ACRE in 2009.

SUMMARY

■ ACRE

- Participation in either or both programs
- Start Date 2009
- Signup, before June 1 (annually)
- After signup, in ACRE for the duration of Farm Bill
- Cost 20% Direct & 30% loan reduction & no CC
- Farm Serial #

■ SURE

- Participation in either or both programs
- Start Date 2008
- Signup, None; May have to “certify” all acres insured
- Annual (May 18 for 2008)
- Insure all crops
- Whole farm, all crops

Thank You

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