Managing Risk with Marketing and Crop Insurance

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Sponsored by
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Marketing & Risk Management Plans

- Farmer sells everything at harvest.
- Farmer stores everything and sells out of the grain bin.
- Buys puts, sell futures, forward contracts, counter cyclical/marketing loan, ACRE, SURE, etc.
- Farmer feeds his grain to hogs, cattle, dairy cows, etc.
- All Marketing Plans assume bushels will be produced at harvest otherwise, it is a speculative position.

Marketing & Risk Management Plans

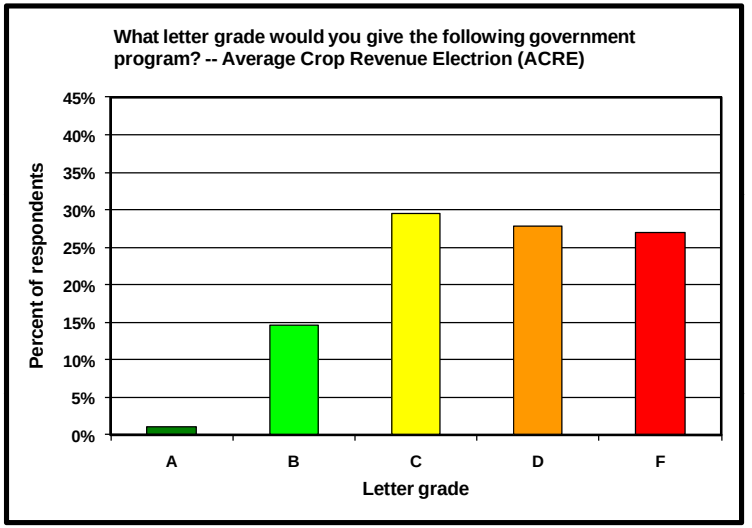
- Doing nothing is a decision!
- Only way to avoid the risk is don't plant.
- Farmers will suffer "sticker shock" on their crop insurance premiums if prices and volatility remain at current levels.
- Will the new Congress reduce the crop insurance premium cost share? Ethanol incentives?
- Understanding "options" in Crop Insurance will make it easier to make adjustments.

Common Crop Insurance Policy (CCIP)

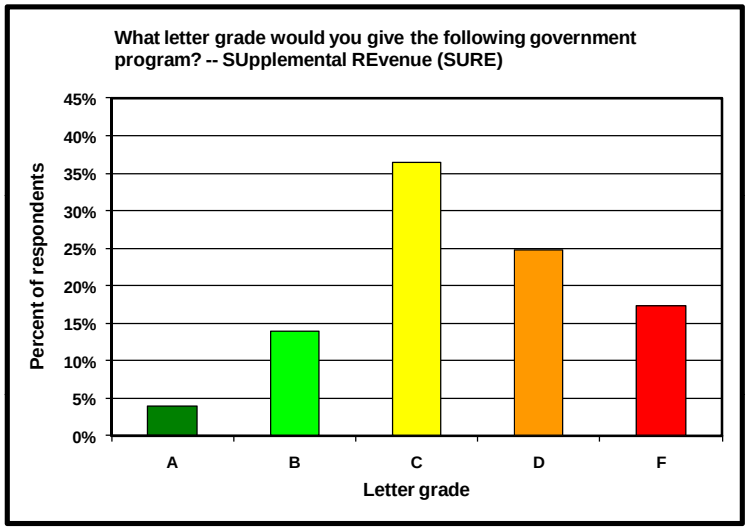
YP	Yield Protection; replaces APH or MPCI
RP	Revenue Protection; replaces CRC or RA-HPO
RP-HPE	Revenue Protection with Harvest Price Exclusion; replaces RA or IP

Common Crop Insurance Policy (CCIP) Questions

1. How does the new Common Crop Insurance Policy (CCIP) change crop insurance coverage?
2. Does it still pay farmers to purchase the revenue and harvest price endorsements in RP?
3. Yes,Yes!!; the revenue and harvest price endorsements are "cheap"!
4. If you think the endorsements are too expensive then buy the Yield Adjusted Asian (YAA) Options in RP and resell them on the Board.
5. Need to understand options to make the sale work.



Source: August 2010 Farm Futures Crop Survey



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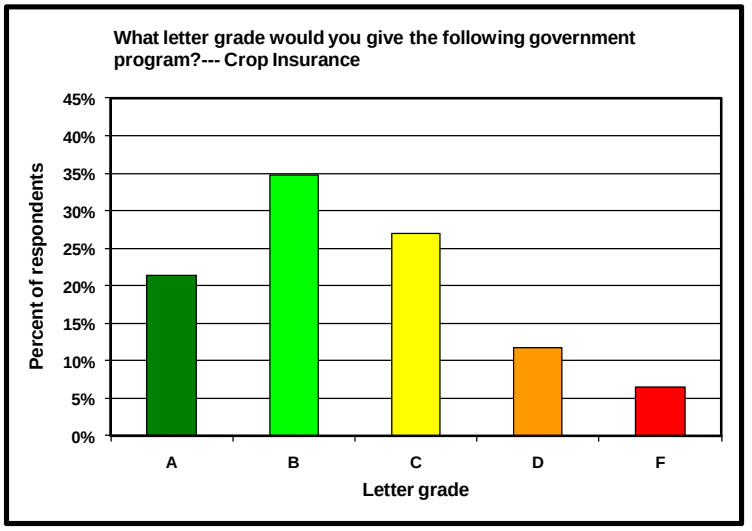

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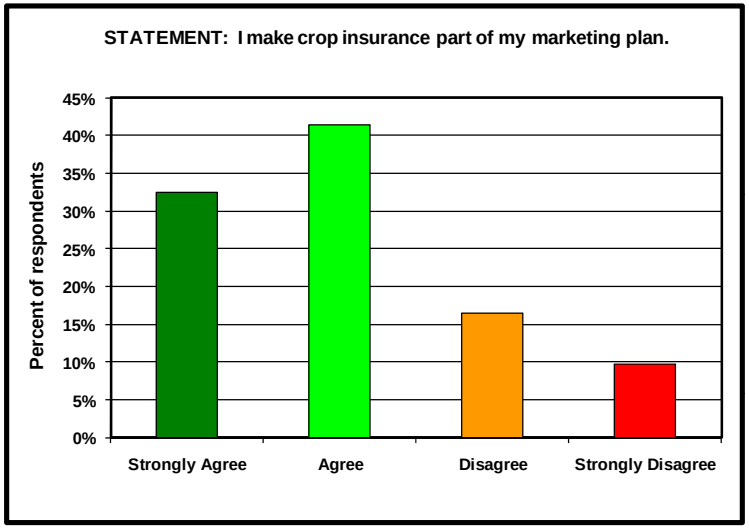

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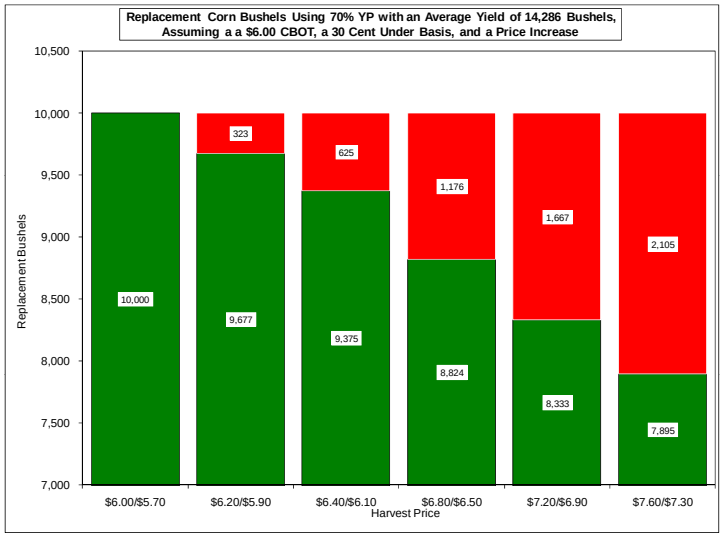

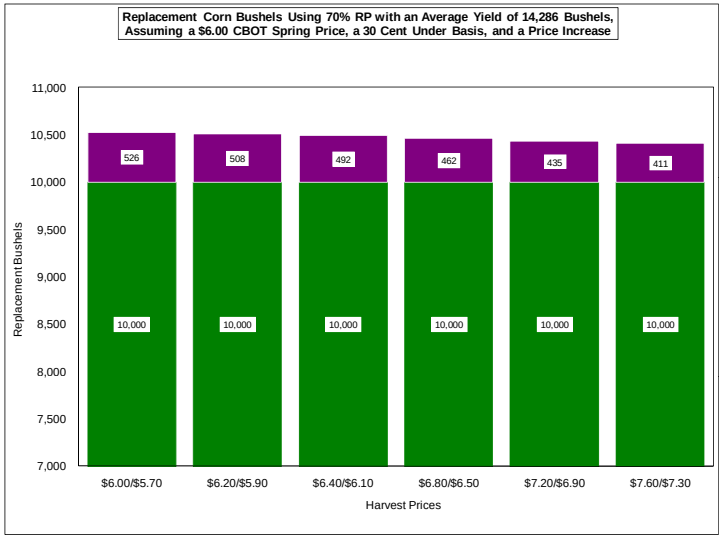

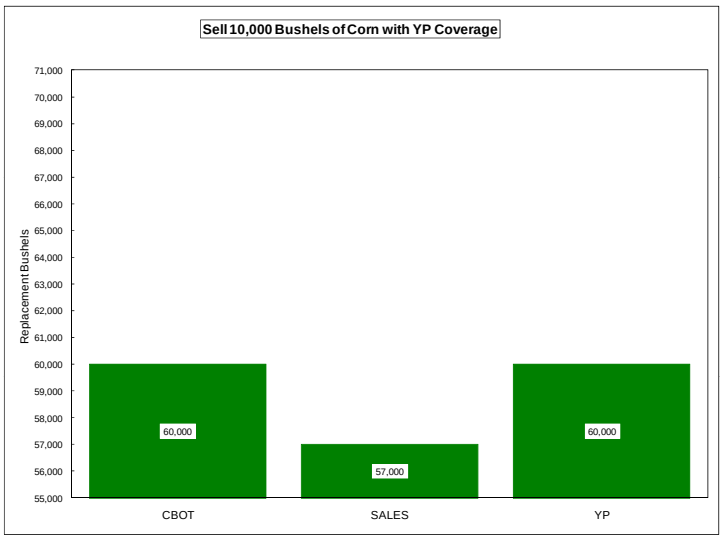

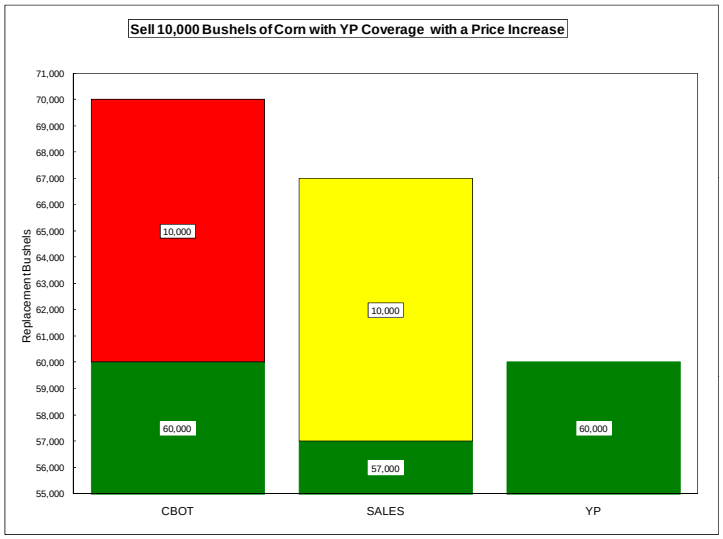

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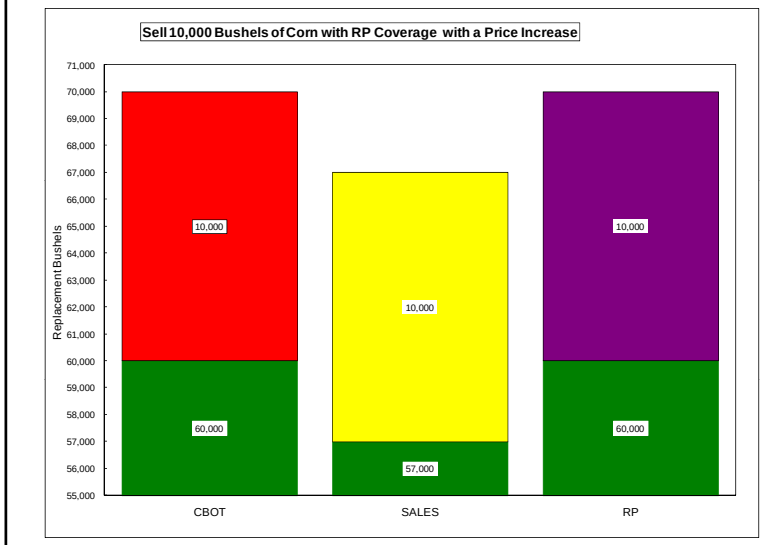

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Hedge

Instructions: Please solve for total net revenue received; assume zero commissions and a 40 Cent under basis.

Transaction	BEFORE Harvest	Harvest	Total Pymt Recvd
CBOT Futures			
Futures Price	$5.00	$4.00	
Quantity Sold	10,000		
Quantity Bought			
Gain (Loss)/Bu			
Total Gain (Loss)			
Harvest Sales			
Price @ Harvest			
Quantity Delivered			
Harvest Sales			
Total Revenue			

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Hedge

Instructions: Please solve for total net revenue received; assume zero commissions and a 40 Cent under basis.

Transaction	BEFORE Harvest	Harvest	Total Pymt Recvd
CBOT Futures			
Futures Price	$5.00	$6.00	
Quantity Sold	10,000		
Quantity Bought			
Gain (Loss)/Bu			
Total Gain (Loss)			
Harvest Sales			
Price @ Harvest			
Quantity Delivered			
Harvest Sales			
Total Revenue			

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Option

Instructions: Please solve for total net revenue received; assume zero time value, commissions and a 40 Cent under basis.

Transaction	BEFORE Harvest	Harvest	Total Pymt Recvd
CBOT Futures			
Futures Price	$5.00	$4.00	
PUTS			
Strike Price	$5.00		
Premium	$0.75		
Quantity Bought	10,000		
Quantity Sold			
Gain (Loss)/Bu			
Total Gain (Loss)			
Harvest Sales			
Price @ Harvest			
Quantity Delivered			
Harvest Sales			
Total Revenue			

Option

Instructions: Please solve for total net revenue received; assume zero time value, commissions and a 40 Cent under basis.

Transaction	BEFORE Harvest	Harvest	Total Pymt Recvd
CBOT Futures			
Futures Price	$5.00	$6.00	
PUTS			
Strike Price	$5.00		
Premium	$0.75		
Quantity Bought	10,000		
Quantity Sold			
Gain (Loss)/Bu			
Total Gain (Loss)			
Harvest Sales			
Price @ Harvest			
Quantity Delivered			
Harvest Sales			
Total Revenue			

Farmer Decisions for 2012

1. The final year for ACRE.
2. Impact of non conversion of cash & futures and loss of MF Global will effect farmers who do not use futures and options
3. AgManager.info will cover these issues. Please leave me your email address if you would like to be on the AgManager.info list.

Common Crop Insurance Policy (CCIP)

1. All contracts will use the same Projected Price and is a major change from previous crop insurance contracts.
2. As a result, all CCIP contracts have the same yield guarantee.
3. RP-HPE is YP plus a Yield Adjusted Asian Put option. Provides a replacement for the "loan rate" at the effective strike price where deductible disappears.
4. RP is RP-HPE plus a Yield Adjusted Asian Call option.

RP Replaces the Market Loan

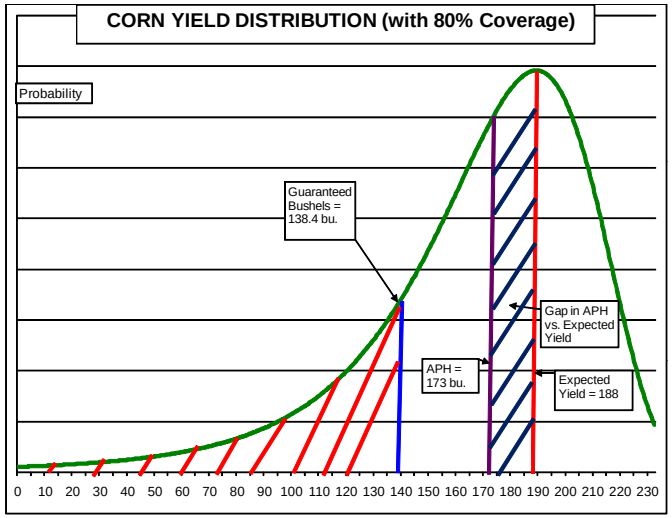
1. The marketing loan is fixed, e.g. corn loan rate is $1.95 or $1.37 if one selected ACRE. For most crops the loan provides very little protection.
2. RP replaces loan at the effective strike price that is equal to % coverage X Projected Price, e.g. 85% X $5.77 = $4.90 for corn.
3. Farmers pay none of the cost for Marketing Loan protection, so they always want the maximum coverage.

RP Replaces the Market Loan

4. Farmers pay a significant share of the cost for RP, and as a result most farmers do not select the maximum coverage.
5. Sell off part of the RP coverage by selling out of the money puts, a "bear spread".

Common Crop Insurance Policy Values for Example Corn Farm

APH	173.0
Coverage Level	80%
Guaranteed Bu.	138.4
Base (Strike) Price	$6.00
Maximum Price	$12.00
$ Coverage	$830.40
Catastrophic Max Pay	$1,660.80

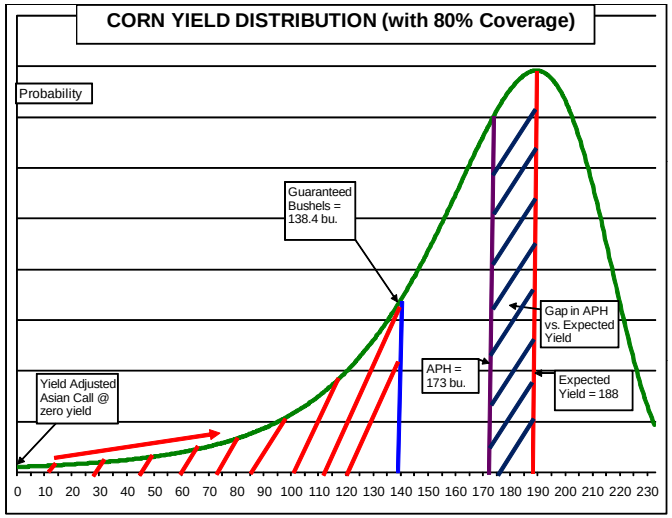


Yield Protection (YP) Payout Table

Price Change →

Hvst Price	3.50	4.00	4.50	5.00	5.50	**6.00**	7.00	8.00	9.00	10.00
Yield										
123	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0
87	1	1	1	1	1	1	1	1	1	1
75	73	73	73	73	73	73	73	73	73	73
63	145	145	145	145	145	145	145	145	145	145
51	217	217	217	217	217	217	217	217	217	217
39	289	289	289	289	289	289	289	289	289	289
27	361	361	361	361	361	361	361	361	361	361
15	433	433	433	433	433	433	433	433	433	433
0	523	523	523	523	523	523	523	523	523	523

Yield Decrease ↓



Intrinsic Value of CME Call Option

Price Increase →

Hvst Price	4.50	5.00	5.50	**$6.00**	6.50	7.00	7.50	8.00
Yield								
199	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
179	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
159	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
139	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
119	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
99	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
79	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
59	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
39	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
19	0.00	0.00	0.00	0.00	70.00	139.00	209.00	278.00
0	0.00	0.00	0.00	0.00	**70.00**	**139.00**	**209.00**	**278.00**

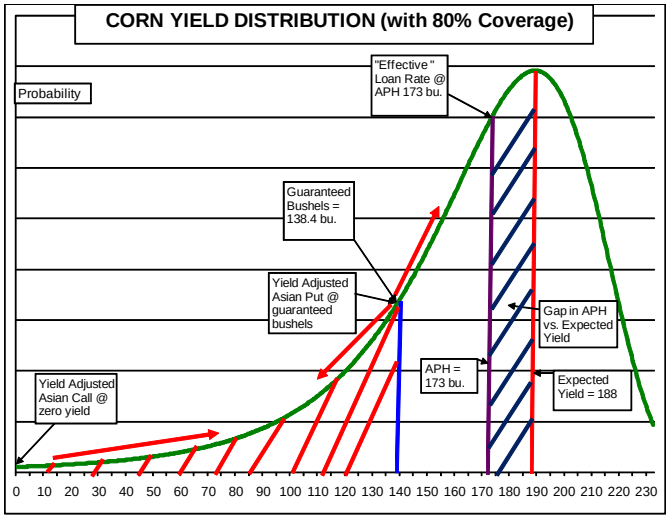
Yield Decrease ↓

"Call" in RP; Balance of Payment from "YP" Loss

Price Increase →

Hvst Price	4.50	5.00	5.50	**$6.00**	6.50	7.00	7.50	8.00
Yield								
199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
119	0.00	0.00	0.00	0.00	10.00	20.00	30.00	40.00
99	0.00	0.00	0.00	0.00	20.00	40.00	60.00	80.00
79	0.00	0.00	0.00	0.00	30.00	60.00	90.00	120.00
59	0.00	0.00	0.00	0.00	40.00	80.00	120.00	160.00
39	0.00	0.00	0.00	0.00	50.00	100.00	150.00	200.00
19	0.00	0.00	0.00	0.00	60.00	120.00	180.00	240.00
0	0.00	0.00	0.00	0.00	**70.00**	**139.00**	**209.00**	**278.00**

Yield Decrease ↓



Intrinsic Value of CME Put Option

Price Increase →

Hvst Price	4.50	5.00	5.50	**$6.00**	6.50	7.00	7.50	8.00
Yield								
199	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
179	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
159	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
139	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
119	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
99	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
79	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
59	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
39	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
19	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00
0	209.00	139.00	70.00	0.00	0.00	0.00	0.00	0.00

Yield Decrease ↓

"Put" in Revenue Protection with Harvest Price Exclusion

Price Increase →

Table 4. Yield Adjusted Asian Put Value in Revenue Protection

Hvst Price	4.50	5.00	5.50	**$6.00**	6.50	7.00	7.50	8.00
Yield								
199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	118.00	39.00	0.00	0.00	0.00	0.00	0.00	0.00
139	208.00	139.00	69.00	0.00	0.00	0.00	0.00	0.00
119	178.00	119.00	59.00	0.00	(59.00)	(119.00)	(120.00)	(120.00)
99	148.00	99.00	49.00	0.00	(49.00)	(99.00)	(148.00)	(197.00)
79	118.00	79.00	39.00	0.00	(39.00)	(79.00)	(118.00)	(157.00)
59	88.00	59.00	29.00	0.00	(29.00)	(59.00)	(88.00)	(117.00)
39	58.00	39.00	19.00	0.00	(19.00)	(39.00)	(58.00)	(77.00)
19	28.00	19.00	9.00	0.00	(9.00)	(19.00)	(28.00)	(37.00)
0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Yield Decrease ↓

"Put" in Revenue Protection with Harvest Price Exclusion

Price Increase →

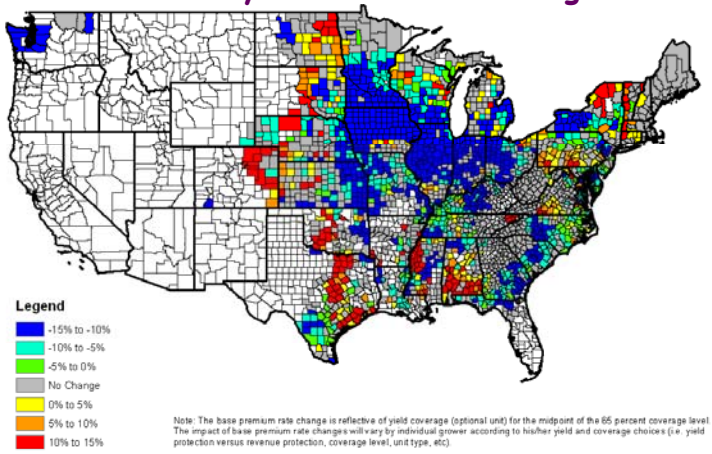
Hvst Price	4.50	5.00	5.50	**$6.00**	6.50	7.00	7.50	8.00
Yield								
199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
179	28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
159	118.00	39.00	0.00	0.00	0.00	0.00	0.00	0.00
139	208.00	139.00	69.00	0.00	0.00	0.00	0.00	0.00
119	298.00	239.00	179.00	120.00	61.00	1.00	0.00	0.00
99	388.00	339.00	289.00	240.00	191.00	141.00	92.00	43.00
79	478.00	439.00	399.00	360.00	321.00	281.00	242.00	203.00
59	568.00	539.00	509.00	480.00	451.00	421.00	392.00	363.00
39	658.00	639.00	619.00	600.00	581.00	561.00	542.00	523.00
19	748.00	739.00	729.00	720.00	711.00	701.00	692.00	683.00
0	833.00	834.00	834.00	834.00	834.00	834.00	835.00	835.00

Yield Decrease ↓

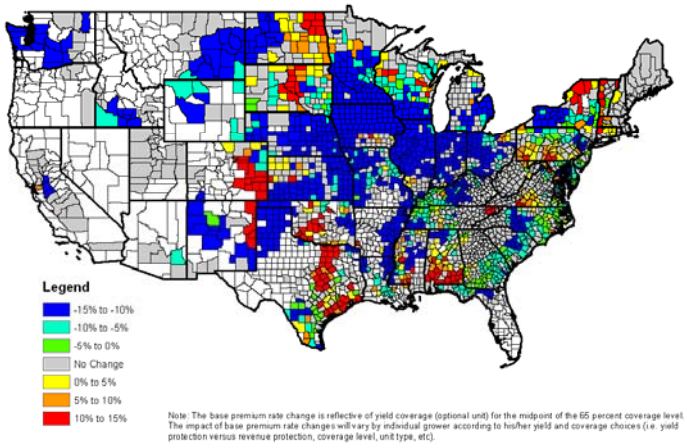
What, a "put" with Negative Values?

- YP with 119 bushel yield pays $120.
- RP-HPE reduces the payment by $119 to $1 with a 119 bushel yield and a $1 increase in price.
- YP will pay more than RP-HPE when prices increase because of negative YA put values.
- RP that includes the YA call will eliminate any negative values in the YA put.

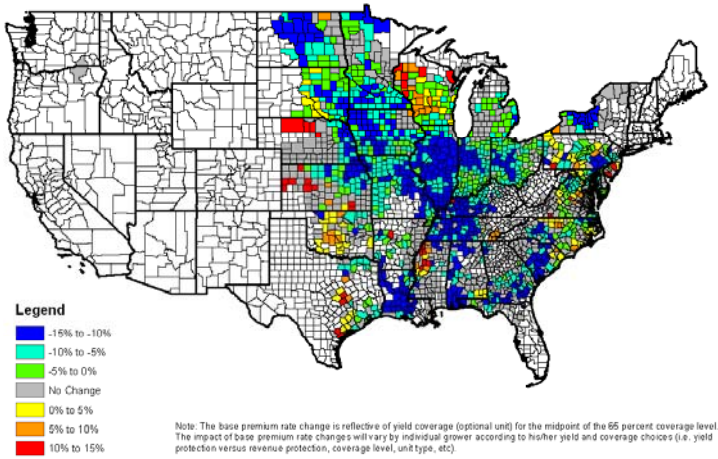
RMA Dryland Corn Rate Changes



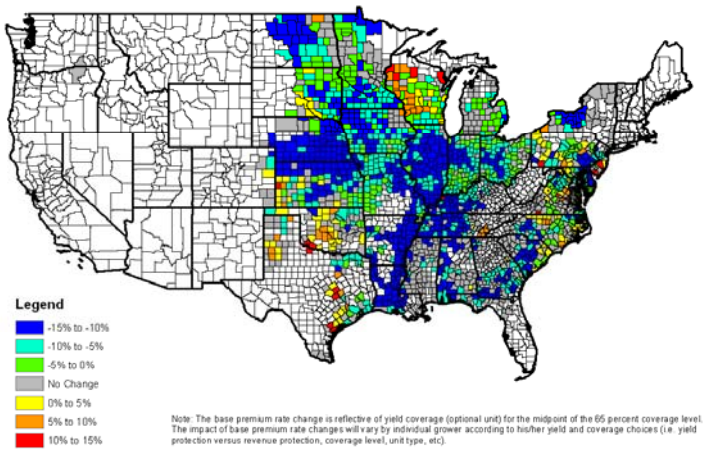
RMA Irrigated Corn Rate Changes



RMA Dryland Soybean Rate Changes



RMA Irrigated Soybean Rate Changes



15 Year (1995-2011) Buyup Crop Insurance Totals By State, All Crops, All Coverages, All Products

State	Net Acre (000,000)	Total $ Cov-erage (000,000)	Total $ Prem-ium (000,000)	Total Gross $ Sub-sidy (000,000)	Farmer Paid Prem-ium (000,000)	Indem-nity (000,000)	Average $Cove-rage/ AC	Ave-rage Farmer Paid Prem-ium/ AC	Ave-rage Non-subsidy Rate	Ave-rage % Prem-ium Sub-sidy	Loss Ratio	Far-mer Loss Ratio
IOWA	287	93,699	6,402	3,284	3,118	2,820	326.84	10.87	6.83%	51.3%	0.44	0.90
ILLINOIS	204	74,721	5,620	2,862	2,758	2,261	367.08	13.55	7.52%	50.9%	0.40	0.82
MINNESOTA	234	63,060	5,677	3,105	2,572	2,832	270.04	11.02	9.00%	54.7%	0.50	1.10
NEBRASKA	206	55,785	4,900	2,658	2,242	2,282	271.19	10.90	8.78%	54.2%	0.47	1.02
NORTH DAKOTA	306	41,896	6,460	3,685	2,774	6,210	136.82	9.06	15.42%	57.1%	0.96	2.24
INDIANA	100	36,315	3,044	1,535	1,509	1,561	363.61	15.11	8.38%	50.4%	0.51	1.03
KANSAS	227	35,605	4,957	2,806	2,150	3,980	156.93	9.48	13.92%	56.6%	0.80	1.85
TEXAS	302	35,546	6,517	3,831	2,686	8,275	117.64	8.89	18.33%	58.8%	1.27	3.08
SOUTH DAKOTA	200	32,661	4,543	2,669	1,874	3,599	163.65	9.39	13.91%	58.8%	0.79	1.92
CALIFORNIA	23	26,785	1,791	971	820	1,401	1,177.53	36.03	6.69%	54.2%	0.78	1.71
OHIO	71	22,048	2,001	1,074	927	1,318	312.29	13.13	9.08%	53.7%	0.66	1.42
FLORIDA	7	21,111	1,011	583	429	1,153	2,818.30	57.21	4.79%	57.6%	1.14	2.69
MISSOURI	71	16,715	2,079	1,211	868	1,441	234.14	12.16	12.44%	58.2%	0.69	1.66
WISCONSIN	48	15,402	1,598	911	687	1,038	322.38	14.38	10.38%	57.0%	0.65	1.51
NORTH CAROLINA	34	15,096	1,407	786	620	1,767	442.74	18.19	9.32%	55.9%	1.26	2.85
MICHIGAN	36	11,681	1,138	644	494	763	325.85	13.78	9.74%	56.6%	0.67	1.54
WASHINGTON	26	11,118	728	365	364	752	420.46	13.75	6.55%	50.1%	1.03	2.07

15 Year (1995-2011) Buyup Crop Insurance Totals By State, All Crops, All Coverages, All Products

State	Net Acre (000,000)	Total $ Cov-erage (000,000)	Total $ Prem-ium (000,000)	Total Gross $ Sub-sidy (000,000)	Farmer Paid Prem-ium (000,000)	Indem-nity (000,000)	Average $Cove-rage/ AC	Ave-rage Farmer Paid Prem-ium/ AC	Ave-rage Non-subsidy Rate	Ave-rage % Prem-ium Sub-sidy	Loss Ratio	Far-mer Loss Ratio
GEORGIA	29	10,528	1,337	745	592	1,391	367.48	20.68	12.70%	55.7%	1.04	2.35
MONTANA	218	9,801	1,470	822	648	1,263	44.97	2.97	14.99%	55.9%	0.86	1.95
COLORADO	61	9,661	1,460	820	641	1,278	157.68	10.46	15.11%	56.1%	0.88	2.00
KENTUCKY	22	8,075	756	436	320	701	366.06	14.52	9.37%	57.7%	0.93	2.19
OKLAHOMA	66	6,974	1,200	691	509	1,571	105.14	7.68	17.21%	57.6%	1.31	3.08
MISSISSIPPI	27	6,677	791	460	331	899	244.44	12.12	11.85%	58.1%	1.14	2.71
IDAHO	16	6,161	570	293	277	454	376.73	16.96	9.26%	51.4%	0.80	1.64
TENNESSEE	18	5,906	580	347	234	538	336.40	13.31	9.83%	59.7%	0.93	2.30
ARKANSAS	25	5,547	650	396	254	580	218.52	10.02	11.73%	60.9%	0.89	2.28
LOUISIANA	22	5,017	567	350	218	520	228.51	9.91	11.31%	61.6%	0.92	2.39
VIRGINIA	13	4,355	458	259	199	512	335.50	15.36	10.52%	56.5%	1.12	2.57
ALABAMA	14	4,207	575	322	252	610	292.86	17.56	13.66%	56.1%	1.06	2.42
SOUTH CAROLINA	10	3,667	460	276	184	489	351.10	17.61	12.53%	60.0%	1.06	2.66
PENNSYLVANIA	11	3,168	425	259	166	332	285.10	14.95	13.43%	60.9%	0.78	2.00
OREGON	12	2,819	256	117	139	423	239.76	11.85	9.08%	45.5%	1.65	3.04
NEW YORK	5	2,310	200	123	77	212	483.22	16.02	8.66%	61.7%	1.06	2.76
MARYLAND	8	2,064	250	148	102	191	250.03	12.36	12.12%	59.2%	0.77	1.88

15 Year (1995-2011) Buyup Crop Insurance Totals By State, All Crops, All Coverages, All Products

State	Net Acre (000,000)	Total $ Cov-erage (000,000)	Total $ Prem-ium (000,000)	Total Gross $ Sub-sidy (000,000)	Farmer Paid Prem-ium (000,000)	Indem-nity (000,000)	Average $Cove-rage/ AC	Ave-rage Farmer Paid Prem-ium/ AC	Ave-rage Non-subsidy Rate	Ave-rage % Prem-ium Sub-sidy	Loss Ratio	Far-mer Loss Ratio
ARIZONA	3	1,646	133	69	64	139	601.01	23.25	8.05%	52.0%	1.05	2.19
WYOMING	41	1,177	132	72	60	138	29.05	1.48	11.17%	54.5%	1.05	2.31
HAWAII	0	1,163	16	9	7	11	3,728.12	21.98	1.39%	57.4%	0.67	1.58
NEW MEXICO	7	1,047	157	94	63	155	145.66	8.72	14.98%	60.0%	0.99	2.48
DELAWARE	3	760	88	52	36	72	243.05	11.67	11.58%	58.5%	0.81	1.96
MAINE	1	547	55	31	23	56	904.69	38.25	9.98%	57.6%	1.03	2.43
MASSACHUSETTS	0	475	31	18	13	54	2,810.32	79.21	6.52%	56.7%	1.73	4.00
CONNECTICUT	0	453	40	23	17	71	2,801.72	107.80	8.92%	56.9%	1.76	4.09
NEW JERSEY	1	282	32	20	12	23	278.23	12.08	11.42%	62.0%	0.72	1.89
VERMONT	0	175	13	8	5	17	365.01	10.15	7.40%	62.4%	1.30	3.47
UTAH	1	166	27	16	12	31	140.52	9.79	16.52%	57.8%	1.12	2.65
WEST VIRGINIA	1	161	23	13	10	23	293.67	17.61	14.18%	57.7%	1.00	2.36
NEVADA	0	122	15	8	7	22	443.58	24.72	12.48%	55.3%	1.46	3.27
NEW HAMPSHIRE	0	61	4	3	1	5	1,030.47	24.15	6.48%	63.8%	1.15	3.19
RHODE ISLAND	0	9	1	0	0	0	1,288.48	40.83	7.65%	58.6%	0.70	1.68
ALASKA	0	2	0	0	0	0	116.86	9.11	16.67%	53.2%	0.96	2.06
USA	3,017	714,426	72,647	40,279	32,367	56,235	236.76	10.73	10.17%	55.4%	0.77	1.74

15 Year (1995-2011) Iowa Buyup Crop Insurance, All Crops, All Coverages, All Products

Year	Net Acre (000)	Total $ Cov-erage (000)	Total $ Prem-ium (000)	Total Gross $ Subsidy (000)	Farmer Paid Prem-ium (000)	Indem-nity (000)	Average $Cove-rage/ AC	Ave-rage Farmer Paid Prem-ium/ AC	Ave-rage Non-subsidy Rate	Ave-rage % Prem-ium Sub-sidy	Loss Ratio	Farmer Loss Ratio
2011	21,187	14,599,008	1,028,674	585,203	443,472	128,104	689.05	20.93	7.05%	56.9%	0.12	0.29
2010	20,795	9,277,039	591,352	340,477	250,875	349,649	446.11	12.06	6.37%	57.6%	0.59	1.39
2009	20,614	9,087,495	742,488	422,266	320,222	168,224	440.84	15.53	8.17%	56.9%	0.23	0.53
2008	**19,844**	**11,496,862**	**912,006**	**488,539**	**423,467**	**1,094,043**	**579.38**	**21.34**	**7.93%**	**53.6%**	**1.20**	**2.58**
2007	19,456	8,175,900	598,219	319,204	279,015	90,536	420.22	14.34	7.32%	53.4%	0.15	0.32
2006	19,294	5,212,008	365,356	194,486	170,870	58,309	270.13	8.86	7.01%	53.2%	0.16	0.34
2005	18,833	4,414,152	308,467	164,385	144,082	72,714	234.39	7.65	6.99%	53.3%	0.24	0.50
2004	18,432	4,952,660	351,724	188,040	163,684	109,233	268.69	8.88	7.10%	53.5%	0.31	0.67
2003	17,764	3,905,412	248,745	131,784	116,961	236,334	219.85	6.58	6.37%	53.0%	0.95	2.02
2002	17,535	3,575,098	222,434	116,728	105,706	55,830	203.88	6.03	6.22%	52.5%	0.25	0.53
2001	17,303	3,522,627	226,614	120,095	106,519	151,894	203.58	6.16	6.43%	53.0%	0.67	1.43
2000	17,134	3,523,983	208,182	40,729	167,453	95,008	205.67	9.77	5.91%	19.6%	0.46	0.57
1999	15,780	2,981,277	165,194	41,179	124,015	61,414	188.92	7.86	5.54%	24.9%	0.37	0.50
1998	14,360	3,045,038	144,052	43,844	100,208	83,314	212.05	6.98	4.73%	30.4%	0.58	0.83
1997	13,956	2,786,974	131,297	40,367	90,930	14,122	199.70	6.52	4.71%	30.7%	0.11	0.16
1996	14,390	3,143,547	157,130	47,074	110,056	51,174	218.46	7.65	5.00%	30.0%	0.33	0.46
Iowa Total	286,679	93,699	6,402	3,284	3,118	2,820	326.84	10.87	6.83%	48.7%	0.44	0.90

Corn Trend Adjusted Adjustment by State

Irrigated Max	Irrigated Min	Irrigated Avg	State	Non-Irrigated Max	Non-Irrigated Min	Non-Irrigated Avg
2.12	0.20	1.01	Colorado			
2.43	1.64	1.95	Illinois	2.43	1.56	1.97
1.90	1.53	1.79	Indiana	1.92	1.51	1.75
2.50	1.93	2.18	Iowa	2.50	1.93	2.27
2.22	0.29	1.51	Kansas	2.00	1.26	1.63
2.07	1.05	1.84	Kentucky	2.07	1.05	1.84
1.89	1.10	1.69	Michigan	2.01	1.05	1.78
2.50	1.57	2.27	Minnesota	2.50	1.36	2.28
2.10	1.63	1.88	Missouri	2.11	1.36	1.86
2.50	1.53	2.17	Nebraska	2.50	1.49	2.12
2.50	1.85	2.38	North Dakota	2.50	1.49	2.18
1.83	0.88	1.51	Ohio	1.88	0.78	1.59
2.50	1.46	2.30	South Dakota	2.50	0.88	2.12
2.33	1.09	1.55	Wisconsin	2.33	1.09	1.55

Soybean Trend Adjusted Adjustment by State

Irrigated Max	Irrigated Min	Irrigated Avg	State	Non-Irrigated Max	Non-Irrigated Min	Non-Irrigated Avg
0.54	0.32	0.42	Illinois	0.50	0.34	0.41
0.58	0.42	0.51	Indiana	0.58	0.43	0.51
0.58	0.43	0.49	Iowa	0.58	0.40	0.50
0.58	0.02	0.27	Kansas	0.56	0.39	0.47
0.58	0.40	0.50	Kentucky	0.55	0.34	0.43
0.56	0.39	0.46	Michigan	0.58	0.43	0.48
0.57	0.30	0.41	Minnesota	0.45	0.07	0.23
0.53	0.32	0.41	Missouri	0.56	0.31	0.42
0.58	0.49	0.57	Nebraska	0.50	0.32	0.43
0.56	0.39	0.46	North Dakota	0.58	0.33	0.55
0.58	0.34	0.43	Ohio	0.58	0.39	0.54
0.51	0.44	0.47	South Dakota	0.48	0.44	0.46
0.58	0.29	0.50	Wisconsin	0.58	0.29	0.50

Trend Adjusted % Increase in APH to Gain an Additional 5% of Coverage Level

1. Elect Trend Adjustment and cut coverage by 5% and pay less premium for same coverage.

Coverage	80%	75%	70%	65%	60%	55%	50%
Trend Increase	106%	107%	107%	108%	108%	109%	110%

2. When trend is below above % adjustment, one can not cut coverage 5% and keep the same protection.

3. Alternative, stay at the same coverage level and add trend will increase the number of YAA puts and guaranteed bushels at replacement value.

Corn Belt Corn Trend Adjustment

Corn Belt Corn
Optional Unit
APH 180.7 bu
Trend APH 192 bu
Price Election $5.70 Price Election for 2012
Volatility 0.23 Volatility for 2012

Revenue Protection Rates for 2012	With Subsidy		Without Subsidy	
Coverage	85%	80%	85%	80%
Coverage	$875.52	$824.02	$875.52	$824.02
Coverage Trend	$930.24	$875.52	$930.24	$875.52
Farm Paid Premium	$34.86	$21.62	$56.22	$41.57
Trend Farmer Paid Premium	$46.16	$30.37	$74.45	$58.41
Farm Paid Premium Rate	3.98%	2.62%	6.42%	5.04%
Trend Farmer Paid Premium Rate	4.96%	3.47%	8.00%	6.67%
Added Coverage	**$51.50**		**$51.50**	
Added Coverage Trend		**$51.50**		**$51.50**
Added Farm Paid Premium	**$13.24**		**$14.65**	
Added Trend Farmer Paid Premium		**$8.75**		**$16.84**
Added Farm Paid Premium Rate	**25.7%**		**28.4%**	
Added Trend Farmer Paid Premium Rate		**17.0%**		**32.7%**

Corn Belt Corn Trend Adjustment

Optional Unit Coverage								
Coverage %		85%	80%	75%	70%	65%	60%	55%
Coverage No Trend		**875.52**	**824.02**	**772.52**	**721.02**	**669.52**	**618.01**	**566.51**
Coverage %	85%	80%	75%	70%	65%	60%	55%	50%
Coverage with Trend	**930.24**	**875.52**	**820.80**	**766.08**	**711.36**	**656.64**	**601.92**	**547.20**
Change in Coverage		$0.00	-($3.22)	-($6.44)	-($9.66)	-($12.88)	-($16.09)	-($19.31)
Coverage %		85%	80%	75%	70%	65%	60%	55%
Farmer Premium, No Trend		**34.86**	**21.62**	**13.05**	**7.97**	**5.10**	**3.06**	**1.98**
Coverage %	85%	80%	75%	70%	65%	60%	55%	50%
Farmer Premium, With Trend		**30.37**	**19.41**	**11.58**	**7.66**	**4.28**	**2.69**	**1.59**
Change In Farmer Paid Premium		-($4.49)	-($2.21)	-($1.47)	-($0.31)	-($0.82)	-($0.37)	-($0.39)
Farmer rate, no trend		4.0%	2.6%	1.7%	1.1%	0.8%	0.5%	0.3%
Farmer rate, with trend		**3.5%**	**2.4%**	**1.5%**	1.1%	0.7%	0.4%	0.3%
No Subsidy								
Premium, No Trend		**56.22**	**41.57**	**29.01**	**19.43**	**12.44**	**8.50**	**5.49**
Premium, With Trend		**58.41**	**43.14**	**28.25**	**18.69**	**11.90**	**7.46**	**4.83**
Change In Premium		$2.19	$1.57	-($0.76)	-($0.74)	-($0.54)	-($1.04)	-($0.66)
Rate, no trend		6.4%	5.0%	3.8%	2.7%	1.9%	1.4%	1.0%
Rate, with trend		**6.7%**	**5.3%**	3.7%	2.6%	1.8%	1.2%	0.9%

80% RP with Trend Yield, Corn Belt Corn Premiums

- 85% RP without trend provided $875 of coverage with a $5.70 price and 181 bu. APH.
- Increased APH to 192 with trend adjustment.
- 80% RP with 192 bu. trend adjusted APH provides $875 of coverage with a $5.70 price.
- Or effectively the same coverage at 80% RP with 181 bu. APH and $6.04; 80% X 181 bu. X $6.04 = $875.
- Increasing price or yield will proved the same dollars and increase the market value of the Asian yield adjusted puts

RP Replaces the Market Loan

1. The marketing loan is fixed, e.g. corn loan rate is $1.95 or $1.37 if one selected ACRE.
2. RP replaces loan at the effective strike price where deductible disappears and is equal to % coverage X Projected Price, e.g. 85% X $5.70 = $4.85 for corn.
3. Farmers pay none of the cost for Marketing Loan protection, so they always want the maximum coverage.
4. Farmers pay a significant share of the cost for RP, and as a result most farmers do not select the maximum coverage.
5. Sell off part of the RP coverage by selling out of the money puts, a "bear spread".

Corn Belt Dryland Corn Trend Adjustment

Corn Belt Non-Irrigated Corn

APH	192.0	$5.70 Price Elect			Optional Unit			0.23 Vol
Crop Insurance per Acre								
Coverage %	85%	80%	75%	70%	65%	60%	55%	50%
Bu. Guarantee	163.2	153.6	144.0	134.4	124.8	115.2	105.6	96.0
Coverage	930.24	875.52	820.80	766.08	711.36	656.64	601.92	547.20
Farmer Paid Premiums, Optional Unit								
YP	18.27	12.74	8.57	5.7	4.22	2.69	1.88	1.24
RP-HPE	26.29	17.84	11.52	6.96	4.63	2.57	1.7	1.1
RP	46.16	30.37	19.41	11.58	7.66	4.28	2.69	1.59
Farmer Paid Rate								
YP Rate	1.96%	1.46%	1.04%	0.74%	0.59%	0.41%	0.31%	0.23%
RP-HPE Rate	2.83%	2.04%	1.40%	0.91%	0.65%	0.39%	0.28%	0.20%
RP Rate	4.96%	3.47%	2.36%	1.51%	1.08%	0.65%	0.45%	0.29%
Crop Insurance Cents per Bushel								
Total per bu.	28.3	19.8	13.5	08.6	06.1	03.7	02.5	01.7
Yield/bu.	11.2	08.3	06.0	04.2	03.4	02.3	01.8	01.3
YAA Put Cost/bu.	04.9	03.3	02.0	00.9	00.3	-(00.1)	-(00.2)	-(00.1)
YAA Call Cost/bu.	12.2	08.2	05.5	03.4	02.4	01.5	00.9	00.5
Put Trigger Price if Actual Yield equals APH	**$4.85**	**$4.56**	**$4.28**	**$3.99**	**$3.71**	**$3.42**	**$3.14**	**$2.85**
Marginal Rate								
YP	10.1%	7.6%	5.2%	2.7%	2.8%	1.5%	1.2%	xxxxxx
RP-HPE	15.4%	11.5%	8.3%	4.3%	3.8%	1.6%	1.1%	xxxxxx
RP	28.9%	20.0%	14.3%	7.2%	6.2%	2.9%	2.0%	xxxxxx

80% RP "Options" for Great Plains Irrigated Corn Premiums

- HPE has "put" cost equal to RP-HPE minus YP premium divided by guaranteed bushels.
- Ex. RP-HPE = $17.84 minus YP = $12.74 equal $5.10 divided by 153.6 bu. = 3.3 cents.
- RP "call" cost equal to RP minus RP-HPE premium divided by guaranteed bushels.
- Ex. RP = $30.37 minus RP-HPE = $17.84 equal $12.53 divided by 153.6 bu. = 8.2 cents.
- CME over 50-60 Cents for at the money New Crop Corn Options.

Corn Belt Dryland Corn Trend Adjustment

Corn Belt Non-Irrigated Corn

APH	192.0	$5.70 Price Elect			Enterprise Unit			0.23 Vol
Crop Insurance per Acre								
Coverage %	85%	80%	75%	70%	65%	60%	55%	50%
Bu. Guarantee	163.2	153.6	144.0	134.4	124.8	115.2	105.6	96.0
Coverage	930.24	875.52	820.80	766.08	711.36	656.64	601.92	547.20
Farmer Paid Premiums, Optional Unit								
YP	8.74	4.62	2.51	1.6	1.21	0.9	0.63	0.45
RP-HPE	10.47	5.44	2.74	1.47	0.87	0.53	0.34	0.26
RP	22.75	11.44	5.7	2.98	1.81	1.11	0.63	0.42
Farmer Paid Rate								
YP Rate	0.94%	0.53%	0.31%	0.21%	0.17%	0.14%	0.10%	0.08%
RP-HPE Rate	1.13%	0.62%	0.33%	0.19%	0.12%	0.08%	0.06%	0.05%
RP Rate	2.45%	1.31%	0.69%	0.39%	0.25%	0.17%	0.10%	0.08%
Crop Insurance Cents per Bushel								
Total per bu.	13.9	07.4	04.0	02.2	01.5	01.0	00.6	00.4
Yield/bu.	05.4	03.0	01.7	01.2	01.0	00.8	00.6	00.5
YAA Put Cost/bu.	01.1	00.5	00.2	-(00.1)	-(00.3)	-(00.3)	-(00.3)	-(00.2)
YAA Call Cost/bu.	07.5	03.9	02.1	01.1	00.8	00.5	00.3	00.2
Put Trigger Price if Actual Yield equals APH	**$4.85**	**$4.56**	**$4.28**	**$3.99**	**$3.71**	**$3.42**	**$3.14**	**$2.85**
Marginal Rate								
YP	7.5%	3.9%	1.7%	0.7%	0.6%	0.5%	0.3%	xxxxxx
RP-HPE	9.2%	4.9%	2.3%	1.1%	0.6%	0.3%	0.1%	xxxxxx
RP	20.7%	10.5%	5.0%	2.1%	1.3%	0.9%	0.4%	xxxxxx

Great Plains Irrigated Corn Example

APH	191	$5.76 Price Elect			Optional Unit			0.24 Vol
Crop Insurance per Acre								
Coverage %	85%	80%	75%	70%	65%	60%	55%	50%
Bu. Guarantee	162.4	152.8	143.3	133.7	124.2	114.6	105.1	95.5
Coverage	935.42	880.13	825.41	770.11	715.39	660.1	605.38	550.08
Farmer Paid Premiums, Optional Unit								
YP	27.88	18.28	12.15	8.31	6.08	4	2.88	1.79
RP-HPE	34.37	22.12	14.01	9.08	6.38	4.05	2.84	1.73
RP	53.4	34.62	22.4	14.87	10.54	6.64	4.59	2.71
Farmer Paid Rate								
YP Rate	2.98%	2.08%	1.47%	1.08%	0.85%	0.61%	0.48%	0.33%
RP-HPE Rate	3.67%	2.51%	1.70%	1.18%	0.89%	0.61%	0.47%	0.31%
RP Rate	5.71%	3.93%	2.71%	1.93%	1.47%	1.01%	0.76%	0.49%
Crop Insurance Cents per Bushel								
Total per bu.	32.9	22.7	15.6	11.1	08.5	05.8	04.4	02.8
Yield/bu.	17.2	12.0	08.5	06.2	04.9	03.5	02.7	01.9
YAA Put Cost/bu.	04.0	02.5	01.3	00.6	00.2	00.0	-(00.0)	-(00.1)
YAA Call Cost/bu.	11.7	08.2	05.9	04.3	03.3	02.3	01.7	01.0
Put Trigger Price if Actual Yield equals APH	**$4.90**	**$4.61**	**$4.32**	**$4.03**	**$3.74**	**$3.46**	**$3.17**	**$2.88**
Marginal Rate								
YP	17.4%	11.2%	6.9%	4.1%	3.8%	2.0%	2.0%	xxxxxx
RP-HPE	22.2%	14.8%	8.9%	4.9%	4.2%	2.2%	2.0%	xxxxxx
RP	34.0%	22.3%	13.6%	7.9%	7.1%	3.7%	3.4%	xxxxxx

80% RP "Options" for Great Plains Irrigated Corn Premiums

- HPE has "put" cost equal to RP-HPE minus YP premium divided by guaranteed bushels.
- Ex. RP-HPE = $22.12 minus YP = $18.28 equal $3.84 divided by 152.8 bu. = 2.5 cents.
- RP "call" cost equal to RP minus RP-HPE premium divided by guaranteed bushels.
- Ex. RP = $34.62 minus RP-HPE = $22.12 equal $12.50 divided by 152.8 bu. = 8.2 cents.
- CME over 60-80 Cents for at the money New Crop Corn Options.

Selling out of the money Covered Puts

1. Strike price where deductible disappears plus CBOT put premium. For example 85% X $5.70 = $4.85 for corn plus 28.5 cent premium = max strike $5.135
2. Sell $5.10 puts. First 28.5 cent loss is covered by put premium, then any price below $4.85 either causes indemnities or yield is greater than APH.
4. When prices increase, deductible does not disappear, making selling of calls more risky. Selecting 85% coverage and trend will reduce the risk of selling out of the money calls.
5. If one does sell calls, likely better to sell them in the summer and a dollar out of money but one will always have a minimum 15% deductible.

Current Dec 12 Corn Option Premium (Feb 17, Market $5.6825; ATM Option $5.70)

Call	Strike	Put		Call	Strike	Put
171.6	400	4.3		69.3	540	41.3
162.6	410	5.3		64.3	550	46.2
154.0	420	6.5		59.6	560	51.4
145.4	430	8.0	ATM	**55.2**	**570**	**57.0**
137.1	440	9.5		51.0	580	62.5
129.0	450	11.4		47.1	590	68.6
121.2	460	13.5		43.5	600	75.1
113.6	470	16.1		40.2	610	81.6
106.4	480	18.6		37.1	620	88.4
99.4	490	21.6		34.1	630	95.4
92.7	500	25.0		31.3	640	102.5
86.4	510	28.5		28.7	650	110.1
80.5	520	32.5		26.4	660	118.3
74.7	530	36.7				

Corn Example

Policy Type	YP	RP	
Acres	917		
APH/Ac	109		
Coverage	80%		
Price Election	$5.76		
Maximum Price		$11.52	
Out of Money Put		$4.61	

Policy Type	YP	RP	
APH	109	100,000	
Bu Guaranteed	87	80,000	
Revenue bu		55,000	
First 1+ Prem		25,000	31.3% Puts Sold
Crop Ins Premium	14,101	19,330	
CME Puts sold		4,750	19 Cents
Premium	14,101	14,580	1 out of the money
Price @ Net margin loss		$4.80	
Trigger price with APH		$4.80	

Example Corn Farm, Net CME Put, YA-Put, and Crop Insurance Payments with APH Yield

Production bu. 100,000 **Yield Per Ac.** 109.0 bu.

Har-vest Price	CME Put	Sold Put Prem	Net Prem	CME Put Prem Earned	YA Put on Sold Puts	Net CME Sold Put + YA-Put	YA Put on Un-Sold Puts	Yield Loss	Net CME Put + YA-Put + RP
Bushels				25,000	25,000		55,000		
$4.80	0.00	0.19	$0.19	4,750	**0**	0	0	0	4,750
$4.60	$0.20	0.19	($0.01)	(250)	**250**	0	550	0	550
$4.40	$0.40	0.19	($0.21)	(5,250)	**6,500**	1,250	14,300	0	15,550
$4.20	$0.60	0.19	($0.41)	(10,250)	**12,750**	2,500	28,050	0	30,550
$4.00	$0.80	0.19	($0.61)	(15,250)	**19,000**	3,750	41,800	0	45,550
$3.80	$1.00	0.19	($0.81)	(20,250)	**25,250**	5,000	55,550	0	60,550
$3.60	$1.20	0.19	($1.01)	(25,250)	**31,500**	6,250	69,300	0	75,550

Example Corn Farm,, Net CME Put, YA-Put, and Crop Insurance Payments with 80% X APH Yield

Production bu. 80,000 **Yield Per Ac.** 87.2 bu.

Har-vest Price	CME Put	Sold Put Prem	Net Prem	CME Put Prem Earned	YA Put on Sold Puts	Net CME Sold Put + YA-Put	YA Put on Un-Sold Puts	Yield Loss	Net CME Put + YA-Put + RP
Bushels				25,000	25,000		55,000		
$4.80	0.00	0.00	$0.00	0	**24,000**	24,000	52,800	0	76,800
$4.60	$0.20	0.00	($0.20)	(5,000)	**29,000**	24,000	63,800	0	87,800
$4.40	$0.40	0.00	($0.40)	(10,000)	**34,000**	24,000	74,800	0	98,800
$4.20	$0.60	0.00	($0.60)	(15,000)	**39,000**	24,000	85,800	0	109,800
$4.00	$0.80	0.00	($0.80)	(20,000)	**44,000**	24,000	96,800	0	120,800
$3.80	$1.00	0.00	($1.00)	(25,000)	**49,000**	24,000	107,800	0	131,800
$3.60	$1.20	0.00	($1.20)	(30,000)	**54,000**	24,000	118,800	0	142,800

Example Corn Farm, Net CME Put, YA-Put, and Crop Insurance Payments with 40% X APH Yield

Production bu. 40,000 **Yield Per Ac.** 43.6 bu.

Har-vest Price	CME Put	Sold Put Prem	Net Prem	CME Put Prem Earned	YA Put on Sold Puts	Net CME Sold Put + YA-Put	YA Put on Un-Sold Puts	Yield Loss	Net CME Put + YA-Put + RP
Bushels				25,000	25,000		15,000		
$4.80	0.00	0.00	$0.00	0	**12,000**	12,000	7,200	230,400	249,600
$4.60	$0.20	0.00	($0.20)	(5,000)	**14,500**	9,500	8,700	230,400	248,600
$4.40	$0.40	0.00	($0.40)	(10,000)	**17,000**	7,000	10,200	230,400	247,600
$4.20	$0.60	0.00	($0.60)	(15,000)	**19,500**	4,500	11,700	230,400	246,600
$4.00	$0.80	0.00	($0.80)	(20,000)	**22,000**	2,000	13,200	230,400	245,600
$3.80	$1.00	0.00	($1.00)	(25,000)	**24,500**	(500)	14,700	230,400	244,600
$3.60	$1.20	0.00	($1.20)	(30,000)	**27,000**	(3,000)	16,200	230,400	243,600

Example Corn Farm, Net CME Put, YA-Put, and Crop Insurance Payments with 110% X APH Yield

Production bu. 110,000 **Yield Per Ac.** 119.9 bu.

Har-vest Price	CME Put	Sold Put Prem	Net Prem	CME Put Prem Earned	YA Put on Sold Puts	Net CME Sold Put + YA-Put	YA Put on Un-Sold Puts	Yield Loss	Net CME Put + YA-Put + RP
Bushels				25,000	25,000		55,000		
$4.80	$0.00	0.19	$0.19	4,750	**0**	0	0	0	4,750
$4.60	$0.20	0.19	($0.01)	(250)	**0**	(250)	0	0	(250)
$4.40	$0.40	0.19	($0.21)	(5,250)	**0**	(5,250)	0	0	(5,250)
$4.20	$0.60	0.19	($0.41)	(10,250)	**0**	(10,250)	0	0	(10,250)
$4.00	$0.80	0.19	($0.61)	(15,250)	**6,569**	(8,681)	32	0	(8,650)
$3.80	$1.00	0.19	($0.81)	(20,250)	**13,444**	(6,806)	29,576	0	22,770
$3.60	$1.20	0.19	($1.01)	(25,250)	**20,319**	(4,931)	44,701	0	39,770

Selling Part of the RP Coverage

1. Sell 1/4 to 1/3 of the YAA puts as CME puts a dollar out of the money.
2. Forward Contract, HTA, or hedge up to 100% of the guaranteed bushels.
3. Retain 2/3 to 3/4 of the YAA puts.
4. Retain 100% of the YAA calls.
5. After selling part of the RP coverage one will still have more coverage than provided by YP.

Cash Flow to Harvest when Selling Puts

Revenue Protection	CME Traded Option
Higher prices cause negative "put" values in RP-HPE. RP will prevent negative values.	No negative Option values
No time Value	Zero time value @ Expatriation
No Exercise Rights	Right to Exercise
Settle on monthly average price	Settle on a spot price
Single Strike Price	Multiple Strike prices
Price limit on "call" (harvest Price)	No limit on price
Payment adjusted for yield	No yield adjustment, 5,000 bu. Fixed.

Selling Out of the Money Put Options with Revenue Protection

Only Farmers who have "lost money trading options" should consider this alternative but I expect there will be marketing "experts" suggesting this alternative.

Summary

1. It pays to elect the trend because of subsidy.
2. The YAA put in RP is cheap, so stay at current coverage level and add trend.
3. RP Premiums are lower because of base rate cuts, lower strike price, and a volatility decline from 0.29 to 0.23.
4. Lower volatility lowers the return from selling covered puts.
5. Sell options on limit orders only because the out of the money market is thin.
6. Don't assume lower premium is the only objective. If one buys higher levels of coverage and trend they will have more low cost YAA puts and more guaranteed bushels at replacement values.

Crop Insurance Prices for 2011

Corn Price

Date	Ending Value	Price	Volatility[2]
1-Feb	5.7675	5.77	
2-Feb	5.79	5.78	
3-Feb	5.815	5.79	
6-Feb	5.8125	5.8	
7-Feb	5.7525	5.79	
8-Feb	5.735	5.78	
9-Feb	5.68	5.76	
10-Feb	5.5975	5.74	
13-Feb	5.67	5.74	
14-Feb	5.6425	5.73	
15-Feb	5.5975	5.71	
16-Feb	5.68	5.71	
17-Feb	5.6825	5.71	
21-Feb	5.6375	5.7	0.2301
22-Feb	5.645	5.7	0.2264
23-Feb	5.5875	5.69	0.2268
24-Feb	5.58	5.69	0.2223
27-Feb	5.57	5.68	0.2248
28-Feb	5.635	5.68	
29-Feb	5.685	5.68	

Soybean Price

Date	Ending Value	Price	Volatility[2]
1-Feb	12.1825	12.18	
2-Feb	12.2375	12.21	
3-Feb	12.3725	12.26	
6-Feb	12.39	12.3	
7-Feb	12.4125	12.32	
8-Feb	12.4	12.33	
9-Feb	12.385	12.34	
10-Feb	12.395	12.35	
13-Feb	12.59	12.37	
14-Feb	12.575	12.39	
15-Feb	12.605	12.41	
16-Feb	12.5525	12.42	
17-Feb	12.62	12.44	
21-Feb	12.6225	12.45	0.1801
22-Feb	12.64	12.47	0.1789
23-Feb	12.6775	12.48	0.1793
24-Feb	12.7075	12.49	0.1781
27-Feb	12.8125	12.51	0.177
28-Feb	12.885	12.53	
29-Feb	12.89	12.55	

Dec 2012 Corn

Nov 2012 Soybeans

Thank You, & Please Complete Evaluation

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