Crop Insurance Decisions and the new Farm Bill

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2014 Illinois Farm Economics Summit

The Profitability of Illinois Agriculture: Back to the Future?

2014 Corn Yield Factors

Yield factors - 2014		
Coverage Level	**APH Yield fraction to trigger payment**	**Break-even Yield**
65%	.86	190 TA-APH x .86 = 163
70%	.93	190 TA-APH x .93 = 176
75%	.99	190 TA-APH x .99 = 189
80%	1.06	190 TA-APH x 1.06 = 201
85%	1.13	190 TA-APH x 1.13 = 214

- $4.62 Projected Price
- $3.49 Harvest Price = 76% PP

2014 Soybean Yield Factors

Yield factors - 2014		
Coverage Level	**APH Yield fraction to trigger payment**	**Break-even Yield**
65%	.71	50 TA-APH x .77 = 38
70%	.77	50 TA-APH x .82 = 41
75%	.82	50 TA-APH x .88 = 44
80%	.94	50 TA-APH x .94 = 47
85%	1.00	50 TA-APH x 1.00 = 50

- $11.36 Projected Price
- $9.65 Harvest Price = 85% PP

Insurance Guarantees lower

	2010	2011	2012	2013	2014	2015P
Corn						
Projected Price	3.99	6.01	5.68	5.65	4.62	*4.20 ?*
Harvest Price	5.46	6.32	7.50	4.39	3.49	
Soybeans						
Projected Price	9.23	13.49	12.55	12.87	11.36	*10.15 ?*
Harvest Price	11.63	12.14	15.39	12.87	9.65	

- **Projected price – average of Dec. (corn) of Nov. (beans) CME futures contract in February, used to set insurance guarantees.**
- **Harvest price – average of Dec. (corn) Nov. (beans) CME futures contract in October, used to calculate insurance revenue.**

Insurance Guarantees
2014 and 2015 projection

Coverage Level	2014	2015P
	---------- $ per acre ----------	
60%	527	479
65%	571	519
70%	614	559
75%	658	599
80%	702	638
85%	746	678

Based on a 190 TA-APH yield
2014 projected price = $4.62
2015 preliminary projected price = $4.20

Prices levels protected

Corn ($4.20 Projected Price)

Coverage Level	Payment Triggers at:
60%	$2.52
65%	$2.73
70%	$2.94
75%	$3.15
80%	$3.36
85%	$3.57

Soybeans ($10.15 Project Price)

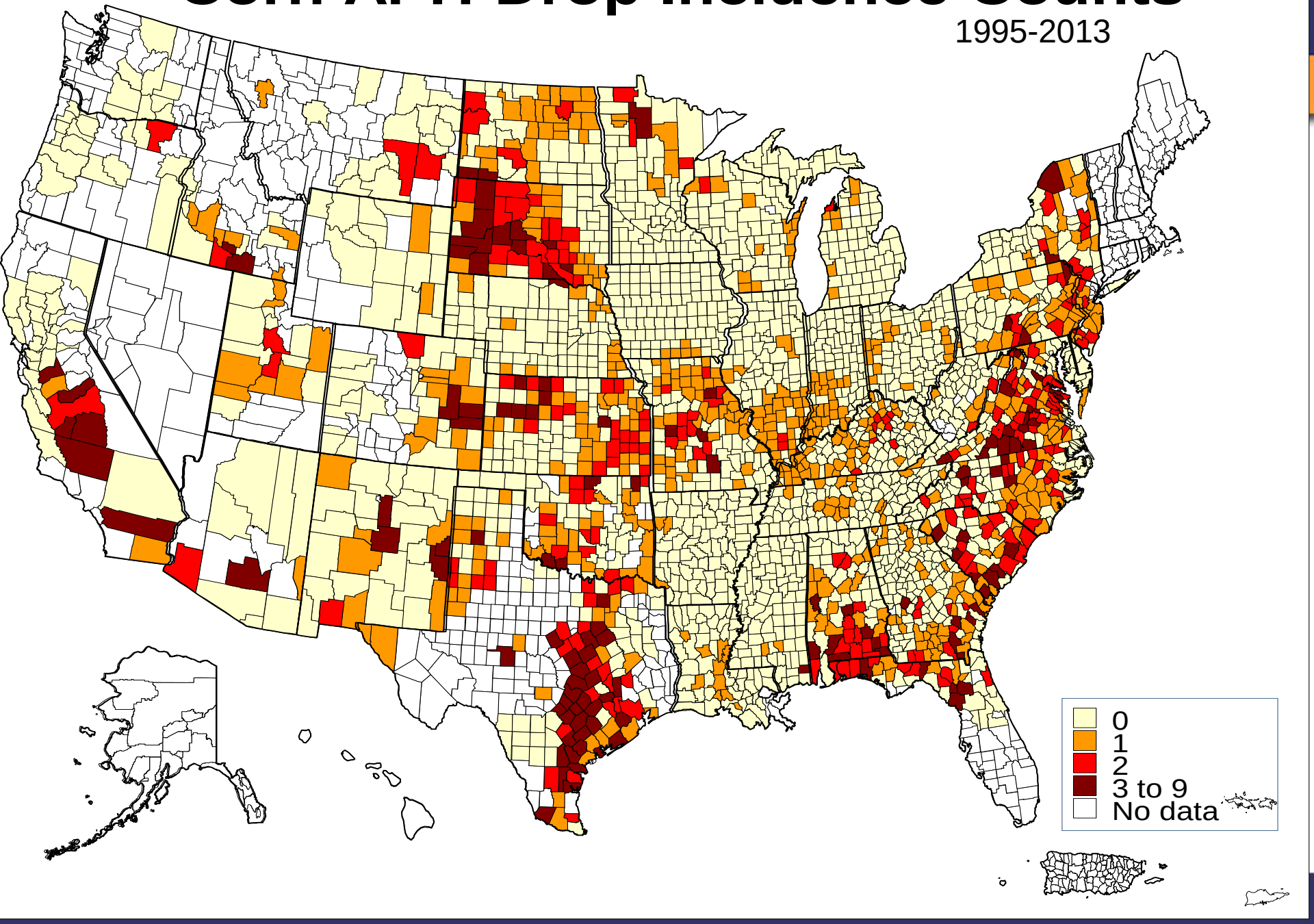
Coverage Level	Payment Triggers at:
60%	$6.09
65%	$6.60
70%	$7.11
75%	$7.61
80%	$8.12
85%	$8.63

Assumes actual yield equals TA-APH yield

- Conservation compliance applies to highly erodible farmland
- Ability to drop low yields from APH
  - Yield Exclusion allowed in cases where county or contiguous county had yield below 50% of simple average of prior 10 years
  - Does not change rate yield
  - Equivalent to change in effective coverage
  - May lose portion of Trend Adjustment
- New Supplemental Coverage Option or SCO

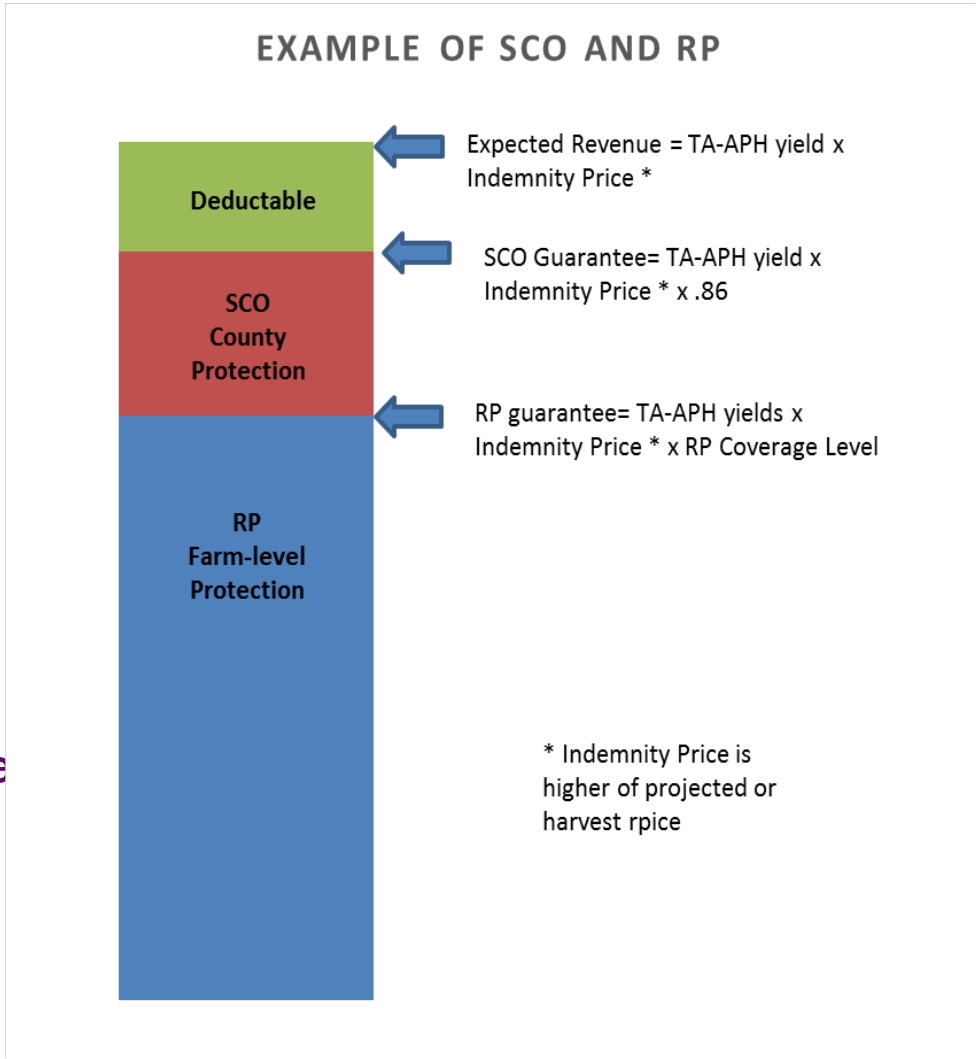
Corn APH Drop Incidence Counts

1995-2013

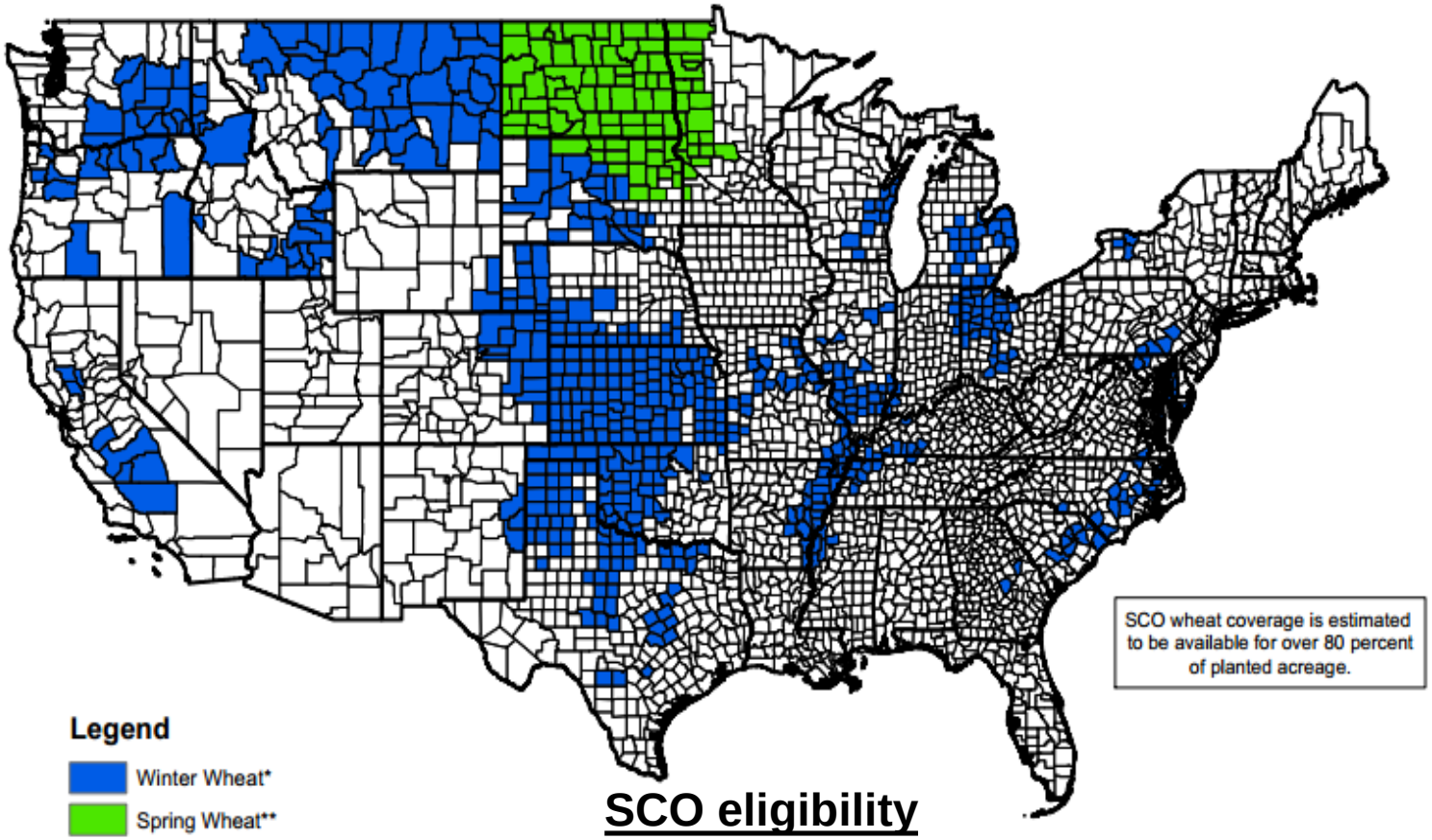


SCO – schematic

- SCO provides county protection from 86% down to coverage level of combo product used
- SCO same coverage as COMBO product (RP, RPwExcl, or YP)
- SCO protection:
  - Liability based on farm yields
  - Payment based on county revenue



Wheat SCO



SCO eligibility

1. **Do not select ARC** as commodity program choice
2. Be in a county where SCO is offered
   - Wheat map above
   - Corn and soybeans in all counties
3. Select a COMBO product (RP, RPwExcl, YP**)**

SCO Example

Corn McLean County, Illinois

Farm Parameters

- 185 bushels per acre
- $4.20 projected price

Guarantee for RP at 80% coverage level

$622 = 185 TA-APH x $4.20 projected price x .80

SCO Guarantee:

$668 = 185 TA-APH x $4.20 projected price x .86

RP and SCO Guarantees

Coverage Level	SCO Guarantee	RP Guarantee	Max SCO Payment
60%	668	466	202
65%	668	505	163
70%	668	544	124
75%	668	583	85
80%	668	622	47
85%	668	660	8

SCO Guar = 185 TA-APH x $4.20 x .86
RP Guar = 185 TA-APH x $4.20 x .coverage level
Max SCO payment = SCO – RP guar

RP Premium

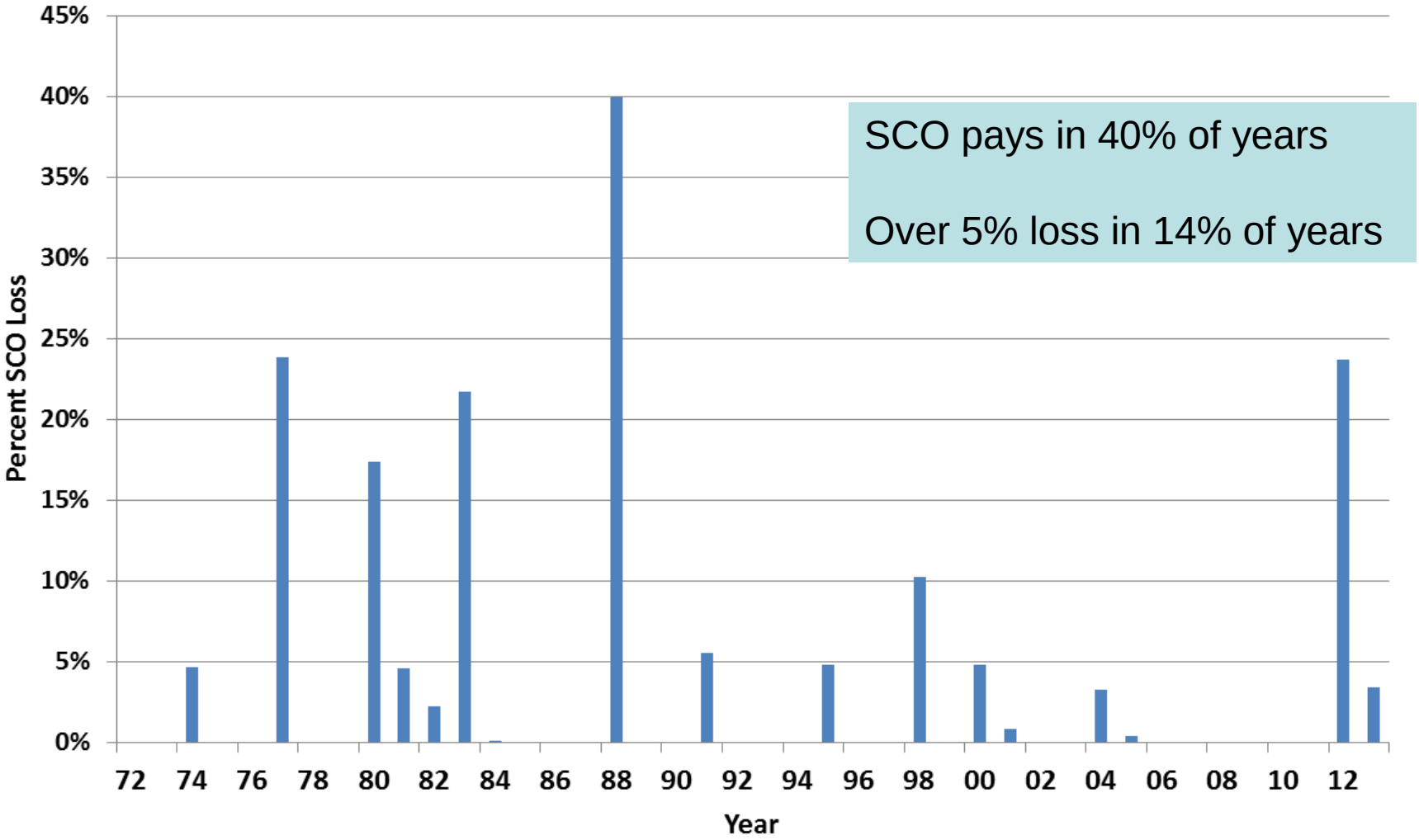
Coverage Premium	RP Premium
60%	$0.84
65%	$1.19
70%	$1.90
75%	$3.33
80%	$6.83
85%	$14.79

- $ per acre
- Using 2014 rates with $4.20 projected price and .21 Vol Factor
- Enterprise units

RP Premium

Coverage Premium	RP Premium	SCO Premiums	SCO + RP
60%	$0.84	16	16.84
65%	$1.19	15	16.19
70%	$1.90	13	14.90
75%	$3.33	10	13.33
80%	$6.83	6	12.83
85%	$14.79	1	15.79

Historic Payments on SCO, McLean County, Corn



Will SCO Strategies Pay More?

farmdoc
Harness the Power of the Internet

Crop Insurance Risk Management Subsidies			
Coverage Level	Basic And Optional	Enterprise	SCO
50%	0.67	0.80	0.65
55%	0.64	0.80	0.65
60%	0.65	0.80	0.65
65%	0.59	0.80	0.65
70%	0.59	0.80	0.65
75%	0.55	0.77	0.65
80%	0.48	0.68	0.65
85%	0.38	0.53	0.65

- For enterprise units, the "best" expected paying SCO strategy is RP 80% with SCO to take advantage of differential subsidies
- Likely pay up to $5 more than RP-85% strategy alone, but less correlated with actual income shortfalls.
- Could be more incentive to buy down for basic and optional and combine with SCO, but less risk protection in most cases

Crop Insurance Decisions

- Lower Projected Prices and higher APH levels are primary impacts from 2014, more important than Farm Bill options
- Lower total revenue coverage
- Highest coverage levels will often be “best” options in terms of both expected returns and most offset to lower revenues
- Some areas will have attractive ARP products, but great variation from county to county

Dekalb County

iFARM Crop Insurance Evaluation Model FAST

Case Farm Information

County: DeKalb	Crop: Corn		Farm Yield	County Yield
Farm Average Yield	**179.3** *bu./acre*		*bu./acre*	*bu./acre*
Farm St. Dev. of yield	**19.59** *bu./acre*	30% of years yields below:	**170.97**	**172.76**
County Average Yield	**179.3** *bu./acre*	20% of years yields below:	**163.87**	**166.99**
County St. Dev. of yield	**15.86** *bu./acre*	10% of years yields below:	**153.13**	**158.17**
Average Futures Price	**$4.71** */bu*	5% of years yields below:	**143.49**	**150.14**
St. Dev. of Price	**$0.99** */bu*	Farm Trend Adjusted-APH	***179***	*bu./acre*
Ave. Harvest Cash Basis	**$0.35** */bu*	County TA Rate	***1.65***	*bu./acre/yr*
Average Gross Crop Rev.	**$775** */acre*	Farm APH (ref)	***171***	*bu./acre*

- case: Enterprise unit on 320 acres. Projected price of 4.2 *as of date:* 12/10/2014

Preliminary Premiums

Est.Premiums - $/Per acre

DeKalb Co. Illinois -- Corn Enterprise Units

Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	0.42	0.37	0.46			
55%	0.61	0.43	0.67			
60%	0.81	0.47	0.95			
65%	1.06	0.53	1.33			
70%	1.42	0.76	1.95	6.56	3.71	9.00
75%	2.26	1.35	3.58	8.10	7.32	14.81
80%	4.11	2.73	7.18	11.40	11.48	21.89
85%	7.61	5.71	14.56	16.95	21.17	36.18
90%				26.61	36.97	56.58

Insurance Payments - ave

Average Insurance Payments/Acre

DeKalb Co. Illinois -- Corn Enterprise Units

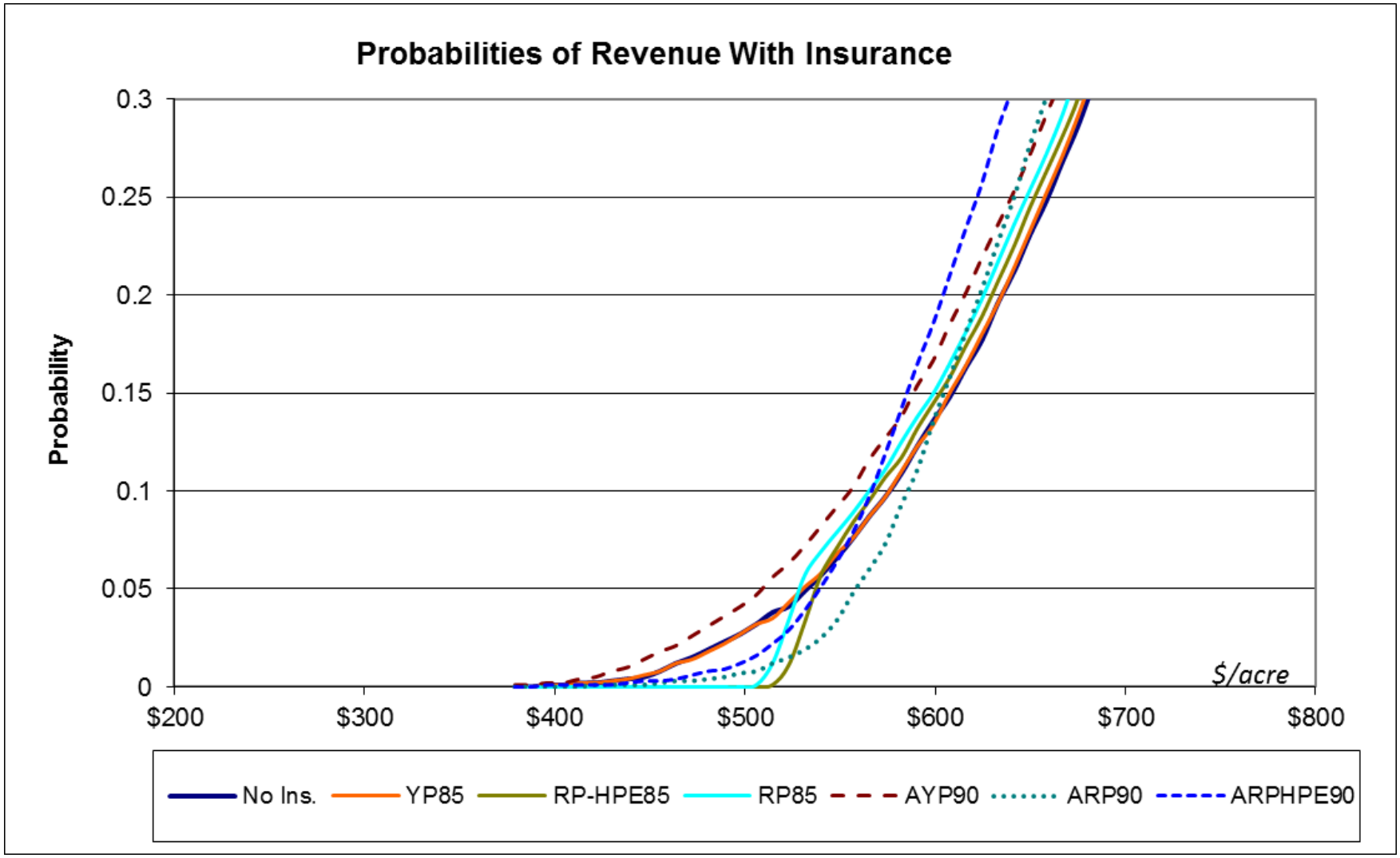
Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	$0.01	$0.00	$0.00			
55%	$0.02	$0.00	$0.01			
60%	$0.06	$0.00	$0.05			
65%	$0.17	$0.02	$0.15			
70%	$0.40	$0.13	$0.44	$0.41	$0.40	$1.02
75%	$0.95	$0.42	$1.09	$1.03	$1.14	$2.68
80%	$2.13	$1.12	$2.61	$2.47	$2.95	$6.52
85%	$4.57	$2.52	$5.65	$5.55	$6.30	$14.01
90%				$11.79	$11.74	$27.39

Net Long Run Cost

Estimated Net Average Cost of Insurance — DeKalb Co. Illinois -- Corn Enterprise Units

Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	0.41	0.37	0.46			
55%	0.59	0.43	0.66			
60%	0.75	0.47	0.90			
65%	0.89	0.51	1.18			
70%	1.02	0.63	1.51	6.15	3.31	7.98
75%	1.31	0.93	2.49	7.07	6.18	12.13
80%	1.98	1.61	4.57	8.93	8.53	15.37
85%	3.04	3.19	8.91	11.40	14.87	22.17
90%				14.82	25.23	29.19

Risk Mitigation Summary



Final Thoughts

- In cases where COMBO max coverage level is 75%, risk management benefit to using SCO may exist
- Little downside risk addition potential when have a COMBO product with 85% coverage level
- For SCO from 86% to 80% expect $5 per acre more payments than premiums over time, need to consider COMBO product's "value" if lower coverage level
- Reduce prevented planting payments if reduce underlying COMBO product coverage level
- Not likely the best choice for most Midwest producers
- Most will find ARC to be far better program