

Crop Insurance Decisions 2015

Gary Schnitkey, Bruce Sherrick,
and Nick Paulson

University of Illinois

Which best describes you?

- Landowner
- Farmer
- Both farmer and landowner
- Crop insurance agent
- Other

Where are you from?

- Illinois
- Other Midwest State
- Other area of US
- Outside of US

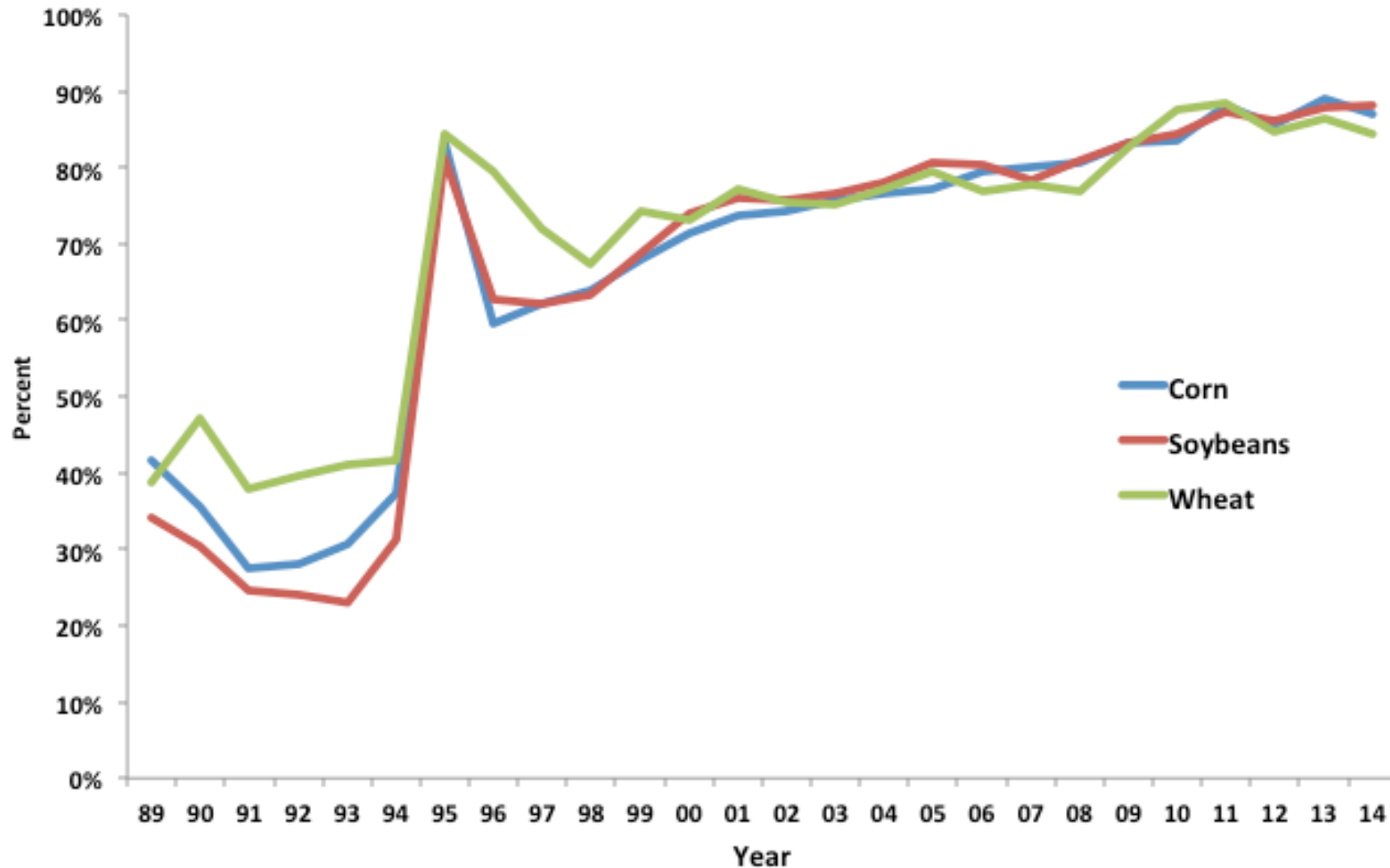


Topics

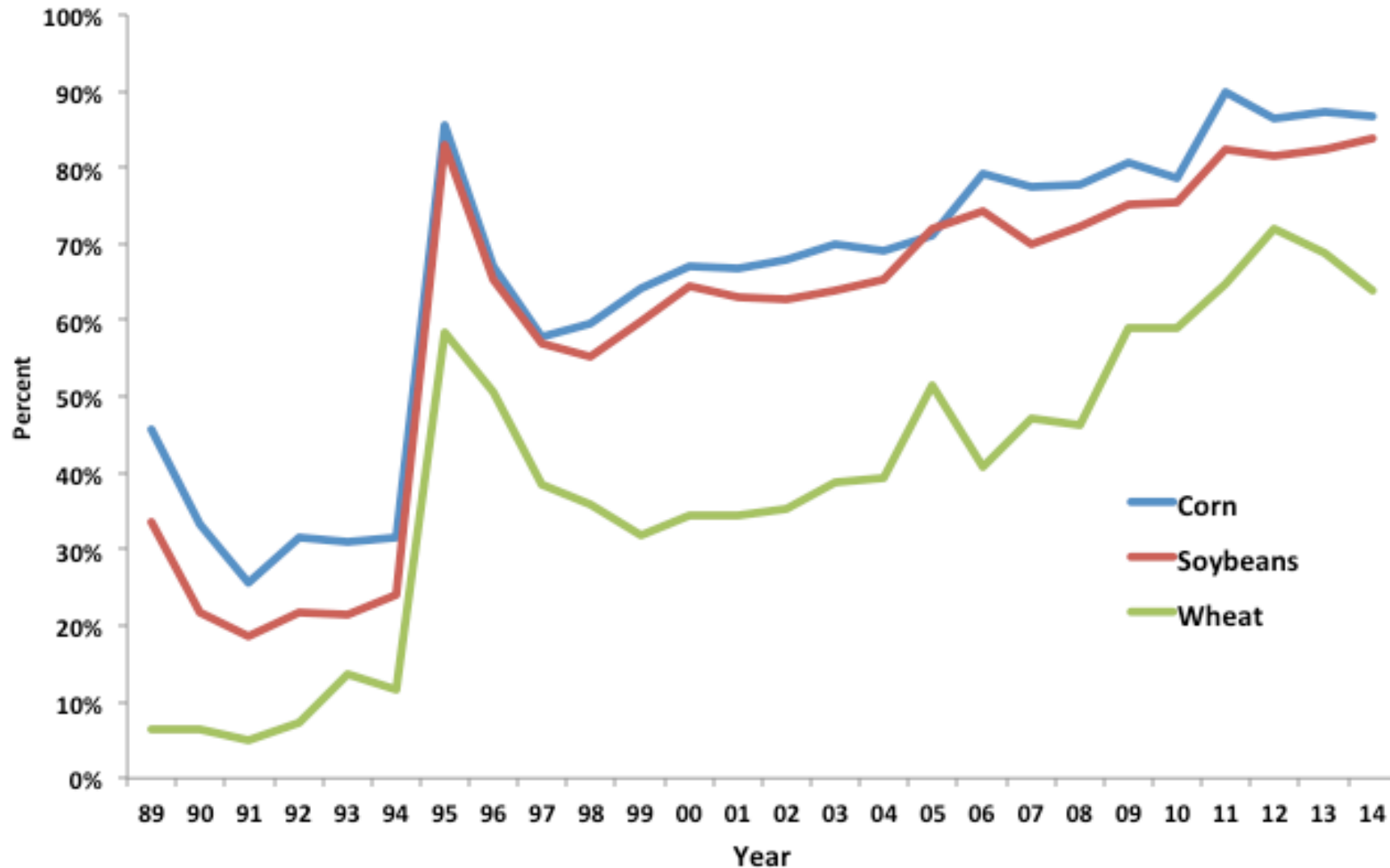
- ✓ Usage
- ✓ Tools
- ✓ Supplemental Coverage Option (SCO)
- ✓ Yield Exclusion (YE)
- ✓ Recommendations



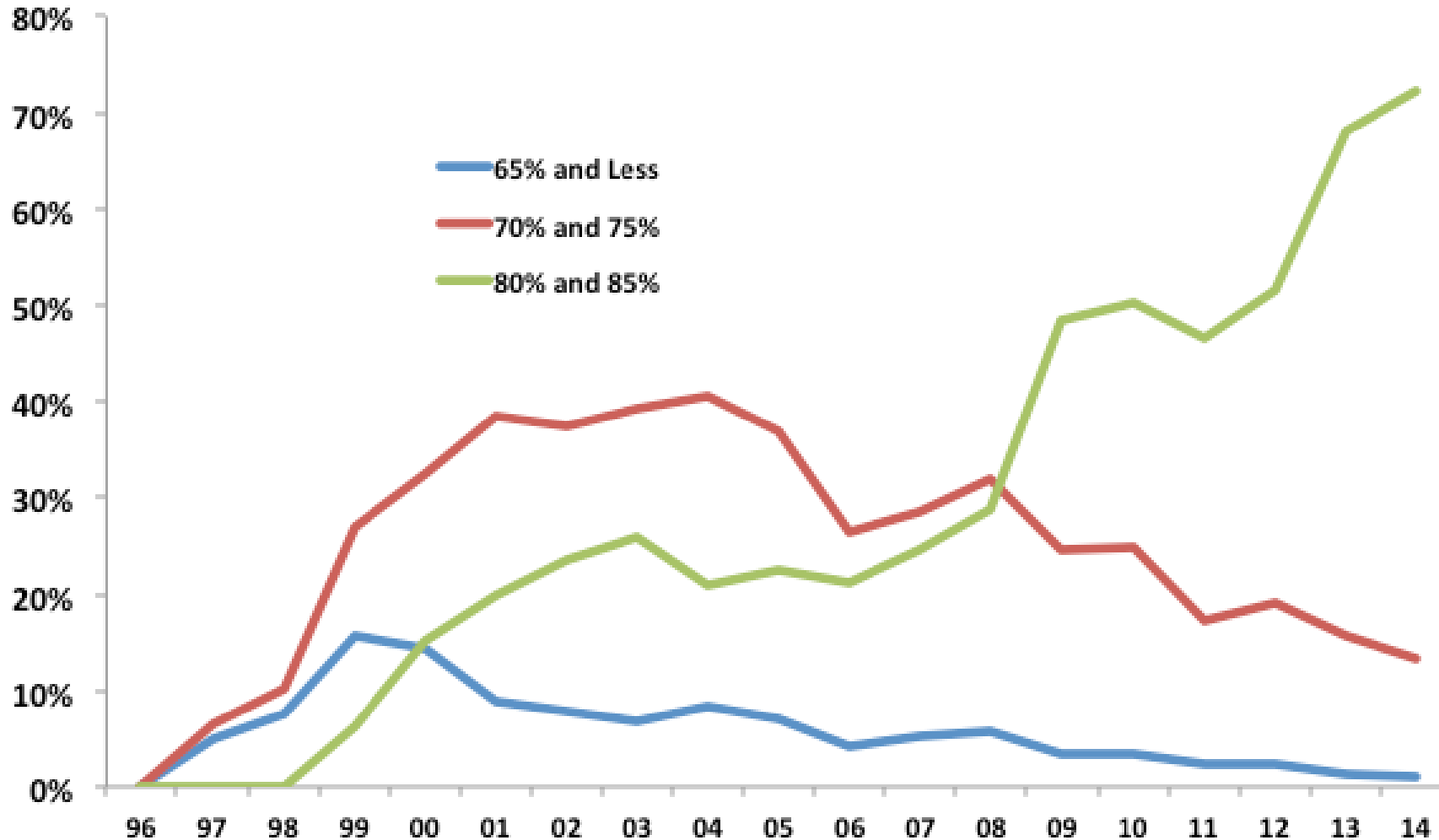
Percent Acres Insured, U.S.



Percent Acres Insured, Illinois



Use of Farm-Level Revenue Products, Illinois, Corn, As a Percent of Insured Acres



Percent Acres Insured, Illinois, Corn, 2014

Coverage Level	RP	RPwHPE	YP	ARP	ARPwHPE	YP
50	0.3%	0.0%	1.2%			
55	0.1%	0.0%	0.1%			
60	0.2%	0.0%	0.1%			
65	0.4%	0.0%	0.2%			0.0%
70	2.7%	0.1%	0.2%	0.0%	0.0%	0.0%
75	8.9%	0.2%	0.5%	0.0%	0.0%	0.0%
80	23.7%	0.4%	0.5%	0.0%	0.0%	0.0%
85	39.0%	0.5%	0.4%	0.1%	0.0%	0.0%
90				6.3%	0.2%	0.2%
Total	75.4%	1.4%	3.1%	6.5%	0.2%	0.2%

87% of planted corn acres were insured

Percent Acres Insured, Illinois, Soybeans, 2014

Coverage Level	RP	RPwHPE	YP	GRIP-HR	GRIP	GRP
50	0.8%	0.2%	1.8%			
55	0.1%	0.0%	0.1%			
60	0.5%	0.0%	0.1%			
65	1.0%	0.0%	0.4%			0.0%
70	4.3%	0.2%	0.3%	0.0%	0.0%	0.0%
75	12.6%	0.3%	0.6%	0.0%	0.0%	0.0%
80	23.4%	0.4%	0.5%	0.0%	0.0%	0.0%
85	30.3%	0.6%	0.3%	0.1%	0.0%	0.0%
90				3.6%	0.0%	0.8%
Total	73.1%	1.8%	4.2%	3.7%	0.0%	1.2%

What insurance policy did you use on corn?

- RP
- RPwHPE
- YP
- ARP
- Other



What coverage level did you use

- 85% or 90%
- 80%
- 75%
- 70%
- 65% or lower



Tools

- ✓ Crop Insurance Decision Tool (Microsoft Excel Spreadsheet)
- ✓ iFarm Premium Calculator
- ✓ Ifarm Crop Insurance Evaluator

Crop Insurance

iFARM Tools

2014 Spring-Deadline Crops (Corn, Soybeans)

Online Tools (Corn & Soybeans)	FAST Spreadsheet
Premium Calculator Last Update: 2/10/2014	Crop Insurance Decision Tool Last Update: 2/11/2014
Payment Simulator Last Update: 2/12/2014	

Crop Insurance Payment Simulator For Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Spring 2014 Deadline Crops

iFARM >Credits

Describe insurance policy: >Clear

Select State ▾
Select County ▾
Select Crop ▾
Select Unit ▾

Calculate

The information in this evaluator is updated until March 1, 2014. Check back frequently for updates.

Making the following selections and clicking on "Calculate" will provide estimated insurance premiums per acre. These are not quotes. A number of assumptions had to be made to estimate the following per acre premiums. These assumptions will not be applicable to all farms. Actual quotes must be obtained from qualified insurance agents.



Click any state above for a detailed image of it's counties.

Individual Farm Level Policies

Quote input -->	APH Yield: 170.0	Use TA adjustment Yes	TA Yield: 181.0	Rate yield: 170.0	Risk class: None							
	Acres: 100	Type: Grain	Practice: Non-Irrigated	Prevented planting: Standard								
Coverage Level	Revenue Protection				Revenue Protection with Harvest Price Exclusion				Yield Protection			
	Enterprise	Basic	Optional	Minimum Revenue Guarantee	Enterprise	Basic	Optional	Revenue Guarantee	Enterprise	Basic	Optional	Yield Guarantee
	\$ per Acre			\$/acre	\$ per Acre			\$/acre	\$ per Acre			Bu./acre
50%	0.53	1.02	1.46	376	0.41	0.82	1.13	376	0.49	0.80	1.18	90.5
55%	0.78	1.75	2.37	413	0.48	1.20	1.55	413	0.69	1.25	1.74	99.6
60%	1.10	2.51	3.19	451	0.52	1.48	1.86	451	0.92	1.65	2.20	108.6
65%	1.53	3.98	4.85	488	0.63	2.14	2.68	488	1.19	2.44	3.10	117.7
70%	2.44	6.04	6.96	526	1.03	3.13	3.55	526	1.56	3.19	3.86	126.7
75%	4.18	9.46	10.43	563	1.72	4.64	5.03	563	2.23	4.36	5.07	135.8
80%	8.20	15.39	16.42	601	3.42	7.62	7.96	601	4.00	6.49	7.27	144.8
85%	16.98	25.89	26.70	638	7.24	13.04	13.17	638	7.61	10.04	10.77	153.9
Parameters		Projected Price: \$4.15		Volatility (revenue): 0.21		Volatility (rev with exclusion): 0.21		Parameters				

County Level Products

Quote input -->	Type: Grain				Practice: Non-irrigated							
Coverage Level	Area Revenue Protection				Area Revenue Protection Harvest Price Exclusion				Area Yield Protection			
	Protection Factor			Minimum Revenue Guarantee	Protection Factor			Revenue Guarantee	Protection Factor			Yield Guarantee
	120%	95%	80%		120%	95%	80%		120%	95%	80%	
	\$ per Acre			\$/acre	\$ per Acre			\$/acre	\$ per Acre			Bu./acre
70%	9.13	7.23	6.09	541	3.76	2.98	2.51	541	6.66	5.27	4.44	130.4
75%	15.03	11.90	10.02	580	7.43	5.88	4.95	580	8.22	6.51	5.48	139.7
80%	22.21	17.58	14.81	619	11.65	9.22	7.77	619	11.56	9.15	7.71	149.0
85%	36.71	29.06	24.47	657	21.48	17.00	14.32	657	17.20	13.62	11.47	158.4
90%	57.41	45.45	38.27	696	36.99	29.28	24.66	696	26.28	20.81	17.52	167.7
Parameters		Exp. Yield: 186.3	Proj Price: \$4.15	Vol: 0.21		Parameters						

Notes

Supplemental Coverage Option (SCO)

The <i>iFARM Premium Calculations</i> developed at the University of Illinois and is available for download at farmdoc (www.farmdoc.illinois.edu. Updated: March 4, 2015.	Type: Grain	Product	Rev Prot.
	Practice: Non-Irrigated	Coverage Level	75%
	Range	Unit	Enterprise
		Protection Level	100%
		Premium per acre	\$4.18
		Cost per APH bu.	\$0.02
		Subsidy per acre	\$13.99
		Yield guarantee	135.75
		Revenue guarantee	\$563



iFarm Crop Insurance Evaluator

Average Insurance Payments/Acre

Sangamon Co. Illinois -- Corn Enterprise Units

Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	\$0.06	\$0.02	\$0.06			
55%	\$0.16	\$0.11	\$0.21			
60%	\$0.34	\$0.37	\$0.62			
65%	\$0.73	\$1.03	\$1.49			
70%	\$1.51	\$2.44	\$3.34	\$1.14	\$4.20	\$5.62
75%	\$2.95	\$5.08	\$6.76	\$2.35	\$8.94	\$11.80
80%	\$5.56	\$9.35	\$12.32	\$4.63	\$16.76	\$22.00
85%	\$9.95	\$15.86	\$20.88	\$8.70	\$28.52	\$37.51
90%				\$15.65	\$44.43	\$59.37

The table above contains average annual per acre indemnity payments. For example, an entry of \$7.50 would indicate that the product would pay \$7.50 per acre per year with some years being greater, some years being zero, but averaging \$7.50 per acre per year through time.

iFarm Crop Insurance Evaluator

Estimated Net Average Cost of Insurance

Sangamon Co. Illinois -- Corn Enterprise Units

Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	0.12	0.39	0.56			
55%	0.78	0.66	1.01			
60%	0.93	0.52	1.01			
65%	0.96	0.15	0.75			
70%	0.77	(0.75)	(0.10)	1.05	(1.93)	(2.53)
75%	0.56	(2.30)	(1.37)	0.25	(5.51)	(6.25)
80%	1.08	(3.61)	(1.41)	(0.38)	(9.82)	(10.98)
85%	2.19	(4.35)	0.47	(2.66)	(14.22)	(16.73)
90%				(5.38)	(18.41)	(23.04)

The table above contains long run average net costs of insurance by product and election level. Net cost is defined as farmer-paid premium less average payment recieved. A negative value indicates that the product pays back more on average than the farmer-paid premium for the case farm considered.

iFarm Crop Insurance Evaluator

VAR at 0.01

Sangamon Co. Illinois -- Enterprise Units

Coverage Election	YP	RP-HPE	RP	AYP	ARP-HPE	ARP
50%	\$386.55	\$384.01	\$384.48			
55%	\$387.65	\$384.53	\$384.47			
60%	\$388.71	\$394.00	\$393.26			
65%	\$390.40	\$416.85	\$415.79			
70%	\$390.31	\$445.55	\$444.00	384.54	413.43	413.91
75%	\$393.51	\$475.44	\$472.83	384.13	433.12	433.56
80%	\$391.05	\$504.95	\$499.78	384.34	449.95	446.63
85%	\$390.78	\$534.15	\$524.31	385.25	468.57	466.48
90%				384.56	479.71	479.39
1% Value at risk without insurance			386.07			

iFarm Premium Calculator

Revenue Protection (with Trend Adjusted Yield Endorsement)

Coverage Level	Enterprise (100 acres)		Basic (100 acres)		Optional Unit		SCO Premium
	Without Sco	With SCO	Without SCO	With SCO	Without SCO	With SCO	
	\$ per acre						
50%	1.71	13.10	2.90	14.29	4.13	15.52	11.39
55%	2.26	13.22	4.27	15.23	5.83	16.79	10.96
60%	2.83	13.30	5.59	16.06	7.28	17.75	10.47
65%	3.77	13.49	8.72	18.44	10.84	20.56	9.72
70%	5.14	14.12	11.78	20.76	13.99	22.97	8.98
75%	7.97	15.65	17.50	25.18	19.93	27.61	7.68
80%	14.49	19.72	26.97	32.20	29.63	34.86	5.23
85%	28.05	29.13	41.96	43.04	44.28	45.36	1.08

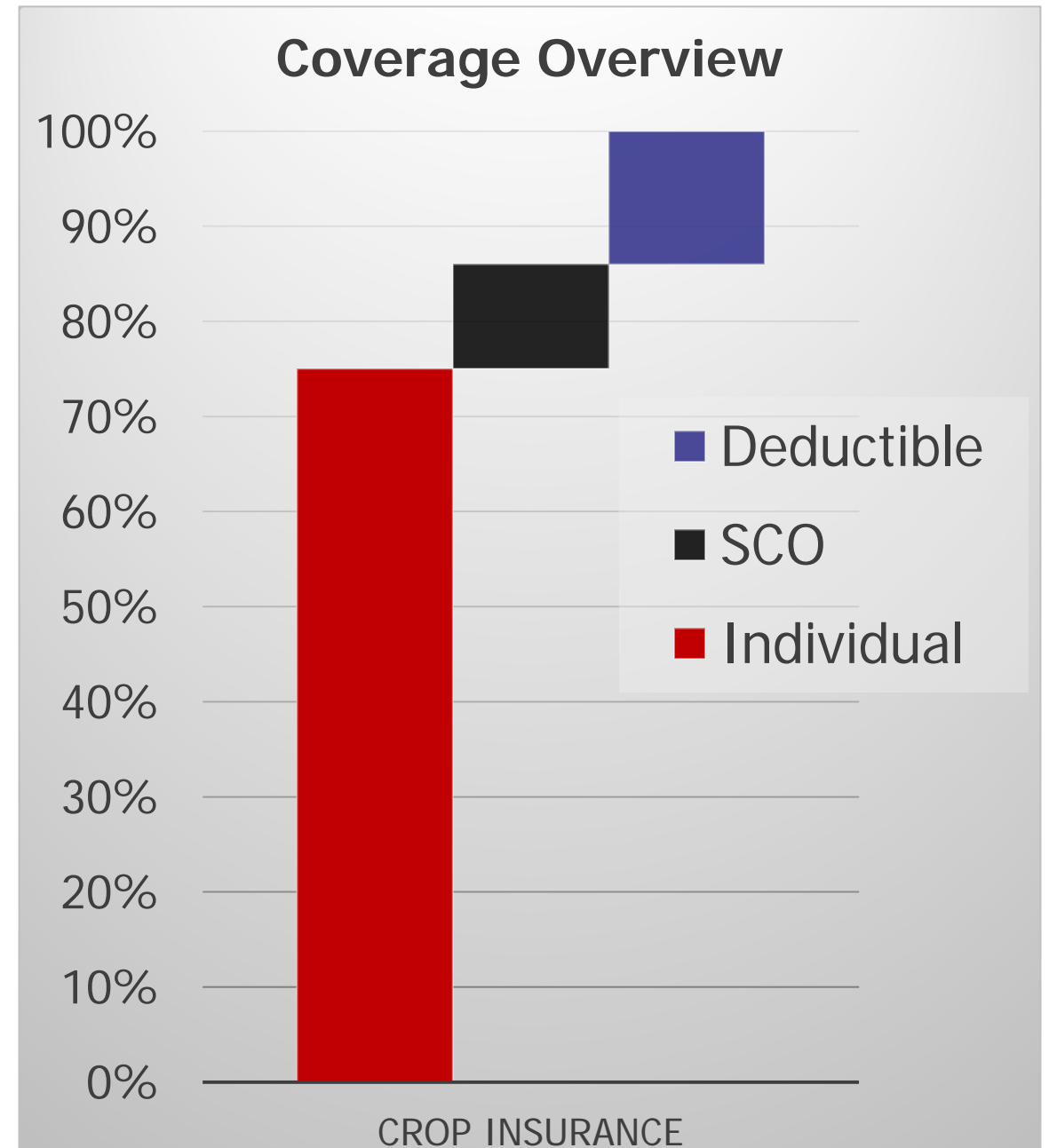
TA yield = 172 bu, APH yield = 163 bu

Supplemental Coverage Option

- ✓ Crop insurance program introduced in 2014 Farm Bill (run by RMA, not by FSA)
- ✓ Underlying combo product required
 - SCO covers a portion of the underlying policy deductible range
- ✓ County-triggered (86%), coverage down to individual policy coverage level
- ✓ Farms/commodities enrolled in ARC program are not eligible for SCO
- ✓ Payments on planted acreage, no payment limit on indemnities received

Supplemental Coverage Option

- ✓ Example: SCO with a 75% RP crop insurance policy
- ✓ SCO range from 86% to 75%
- ✓ County trigger applied to individual deductible



Supplemental Coverage Option

✓ Yield component

- Same county trend/expected yields used for existing area products (i.e. GRIP/GRP, or ARPI)

✓ Price component

- Same futures prices used for existing products

✓ Premium

- Set by RMA
- Subsidy rate of 65%

✓ Indemnity

- Max payment per acre: Insurance price x APH yield
- Percentage loss at county multiplied by max farm payment

Supplemental Coverage Option

- ✓ Available for corn and soybeans in all IL counties for 2015
<http://www.rma.usda.gov/news/currentissues/farmbill/2015scomap.pdf>
- ✓ Same sales closing date as other insurance products (March 15)
- ✓ FSA program election deadline of March 31
 - If acreage/crop with SCO coverage is enrolled in ARC, SCO will be cancelled and producer may have to forfeit 20% of premium cost

Do you plan to use SCO in 2015 or future crop years?

- o Yes
- o No
- o Unsure



Yield Exclusion

- ✓ Allows specific years to be dropped from calculation of APH
- ✓ Years are determined by RMA
- ✓ In Illinois: 1995, 2002, 2005, 2012
- ✓ See farmdocDaily, January 13, 2015

Figure 1. Counties where Yield Exclusion Exists for 2012, Corn (Shaded (blue) counties have YE in 2012)



✓ Example of YE calculation

✓ 2012 can be excluded

✓ TA-APH goes from 186 bu. to 194 bu.

Table 1. Example of Yield Calculation when Yield Exclusion is Available for 2012.

Year	Actual Yield	TA-APH Yield ¹	
		without YE	with YE
	\$/bu.	\$/bu.	\$/bu.
2005	161	179	179
2006	182	198	198
2007	196	211	211
2008	190	203	203
2009	186	197	197
2010	170	179	179
2011	160	167	167
2012	110	115	
2013	189	193	193
2014	220	222	222
APH Yield	176		
TA-APH		186	194

¹ Trend increase is 1.83 bushels per acre.

With exclusion,
 get a higher
 guarantee at
 the same
 coverage level
 Take YE if
 raises TA-APH

Table 2. Premiums and Guarantee, Without and With Yield Exclusion.

Coverage Level	Without Exclusion		With Exclusion	
	Premium	Guarantee	Premium	Guarantee
		\$/acre		\$/acre
50%	0.46	386	0.52	403
55%	0.64	425	0.8	443
60%	0.93	463	1.14	483
65%	1.39	502	1.75	523
70%	2.08	540	2.67	564
75%	3.62	579	4.92	604
80%	7.93	618	9.77	644
85%	16.10	656	19.88	684

Are you taking YE for corn?

o Yes

o No

Young Farmer Discount

- ✓ 10% reduction in premium if you qualify for discount

Did you receive crop insurance payments in 2014?

- o Yes
- o No

Projected and Harvest Prices

(Midwest States)

	2010	2011	2012	2013	2014	2015
Corn						
Projected Price	3.99	6.01	5.68	5.65	4.62	<i>\$4.15</i>
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	<i>\$9.64</i>
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.**



Revenue Guarantees per Acre by Year

Year	Projected Price	RP Minimum Guarantee
	\$/bu	\$/acre
2011	6.01	971
2012	5.68	917
2013	5.65	912
2014	4.62	746
2015P	4.15	670

Corn, 180 bu TA-APH, 85% coverage level

RP Insurance Premiums & Guarantees

Coverage Level	Premiums		Per Acre Guarantees	
	2014	2015	2014	2015
60%	1.52	1.65	514	464
65%	2.20	2.39	557	502
70%	3.19	3.48	600	541
75%	5.34	5.77	643	580
80%	10.85	11.58	686	618
85%	21.35	23.50	729	657

Revenue Protection premium in Sangamon County, enterprise units
Based on a 86 TA-APH yield

Basic Insurance Product

- ✓ Revenue Protection
- ✓ 75%, 80% and 85%
- ✓ Enterprise Units
- ✓ With Trend Adjustment Actual Production History (TA-APH) Yield Endorsement
- ✓ Yield Exclusion if available and increases the TA-APH yield

USE THIS: Unless have some characteristics of products listed below

Do not lower coverage level from last year

RP Premium Costs

Coverage Level	Revenue Protection			Minimum Revenue
	Enterprise	Basic	Optional	Guarantee
	\$ per Acre			\$/acre
50%	0.84	1.40	2.04	386
55%	1.23	2.32	3.16	425
60%	1.65	3.29	4.24	463
65%	2.39	5.55	6.83	502
70%	3.48	8.13	9.61	540
75%	5.76	12.92	14.59	579
80%	11.56	21.88	23.66	618
85%	22.47	33.93	35.54	656

From *2015 Crop Insurance Decision Tool* available on Farmdoc website in FAST or crop insurance sections

For a 186 TA-APH and a 176 APH yield, 100 acres, Sangamon County

Who Should Use RPwHPE

- ✓ One who does not pre-harvest hedge
- ✓ One who is very cost conscious
- ✓ Willing to take the drought year risk of getting no or low payments

Corn, Illinois, 2012, 85% Coverage Level

	Acre Insured	Farmer-Paid Premium \$/acre	Payment \$/acre
RP	2,708,000	\$29	\$326
RPwHPE	315,000	\$15	\$128

RP Premium Costs

Coverage Level	Revenue Protection			Minimum Revenue	Revenue Protection with Harvest Price Exclusion			Revenue
	Enterprise	Basic	Optional	Guarantee	Enterprise	Basic	Optional	Guarantee
	\$ per Acre			\$/acre	\$ per Acre			\$/acre
50%	0.84	1.40	2.04	386	0.61	1.01	1.41	386
55%	1.23	2.32	3.16	425	0.77	1.49	2.01	425
60%	1.65	3.29	4.24	463	0.90	1.94	2.61	463
65%	2.39	5.55	6.83	502	1.25	3.22	4.03	502
70%	3.48	8.13	9.61	540	1.81	4.71	5.56	540
75%	5.76	12.92	14.59	579	2.98	7.48	8.51	579
80%	11.56	21.88	23.66	618	6.11	13.02	14.12	618
85%	22.47	33.93	35.54	656	12.15	20.32	21.13	656

From Crop Insurance Decision Tool available on Farmdoc website in FAST or crop insurance sections
 For a 190 TA-APH yield, 178 APH yield,

Difference in Drought Year

What-If By Product (Insurance Payments Per Acre)

Harvest Price	\$5.50	Farm Yield	120	County Yield	120.0	Protection Factor	1.20
Coverage	Product						
Level	Yield Prot.	Rev Prot (with Exc)	Rev Prot	AYP	ARPwHPE	ARP	
50%	0	0	0				
55%	0	0	0				
60%	0	0	0				
65%	0	0	0				
70%	13	0	18	72	0	88	
75%	50	0	66	145	0	179	
80%	86	0	114	207	0	256	
85%	123	0	163	259	0	322	
90%				304	34	380	

From 2015 Crop Insurance Decision Tool available on Farmdoc website in FAST or crop insurance sections

Who Should Take ARP?

- ✓ 90% coverage level
- ✓ Vary protection factor (80% to 120%)

Characteristics

- ✓ More concerned about price risk protection
- ✓ Can only take basic units
- ✓ APH yield lower than expected yield

ARP Premium Costs

Coverage Level	Area Revenue Protection			Minimum
	Protection Factor			Revenue
	120%	95%	80%	Guarantee
	\$ per Acre			\$/acre
70%	3.09	2.45	2.06	529
75%	5.55	4.39	3.70	567
80%	11.02	8.72	7.35	605
85%	20.78	16.45	13.85	643

From *Crop Insurance Decision Tool* available on Farmdoc website in FAST or crop insurance sections
Macon County in 2014

Summary

- ✓ RP and ARP
 - Major Use
 - Good Place to be
- ✓ YE – use if available and increases yield
- ✓ SCO