

Setting up for a Profitable 2021 for Illinois and Midwest Farms

Final Look at Commodity Title and Crop Insurance Decisions



Nick Paulson



Gary Schnitkey



ILLINOIS
Agricultural &
Consumer Economics
COLLEGE OF AGRICULTURAL, CONSUMER
& ENVIRONMENTAL SCIENCES



Bruce J. Sherrick, Ph.D.

Director, TIAA Center for Farmland Research
Fruin Professor of Farmland Economics

farmdocDAILY

Topics

- Market prices
- Commodity title decisions
- Crop insurance analysis
- Managing crop insurance premium

farmdoc Sponsors



Crop Insurance Acronyms

RP Revenue Protection	ARP Area Revenue Protection
RPhpe Revenue Protection with Harvest Price Exclusion	ARPhpe Area Revenue Protection with Harvest Price Exclusion
YP Yield Protection	AYP Area Yield Protection

ECO: Enhance Coverage Option

SCO: Supplemental Coverage Option

Commodity Title Acronyms

PLC: Price Loss Coverage

ARC: Agriculture Risk Coverage

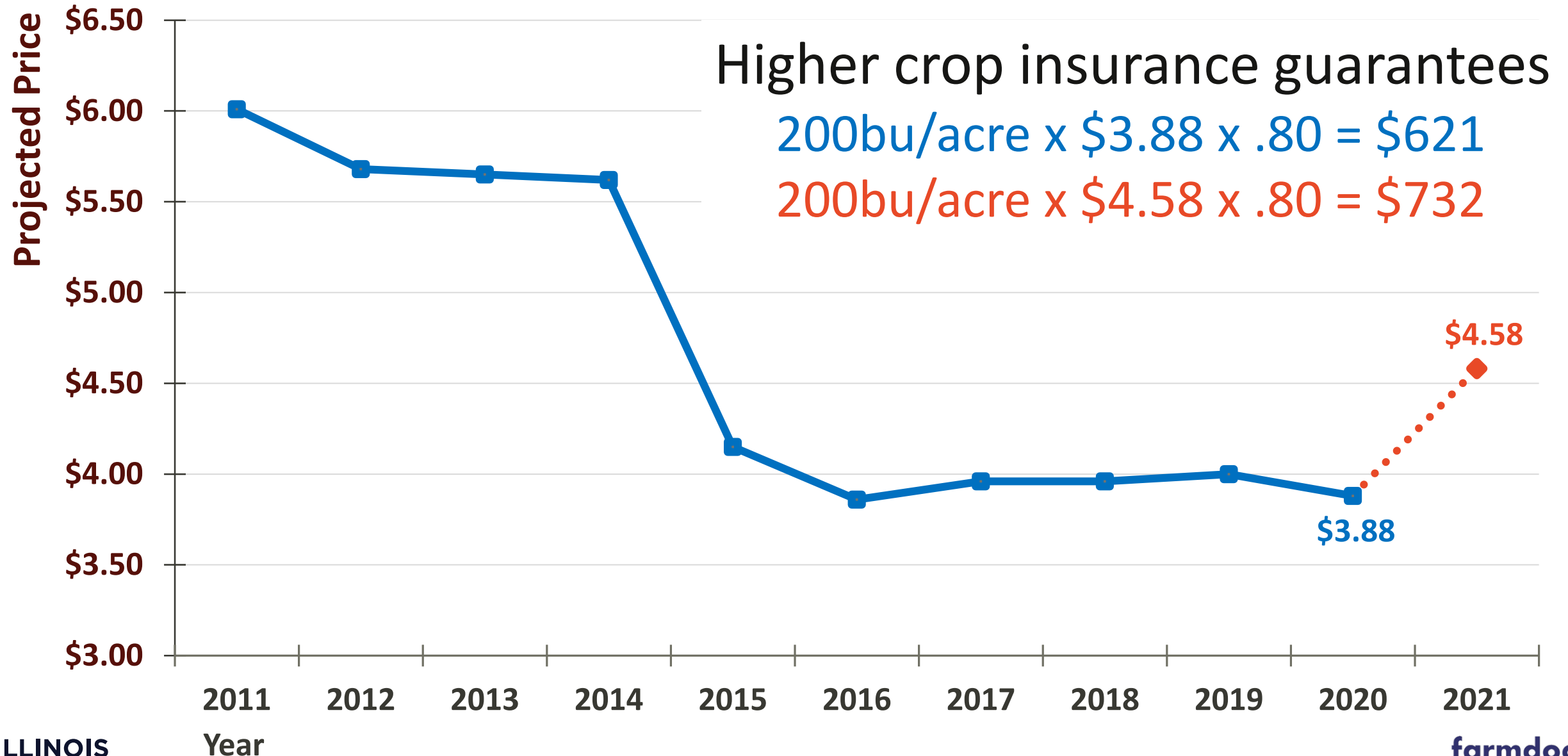
-CO: County

-IC: Individual Coverage

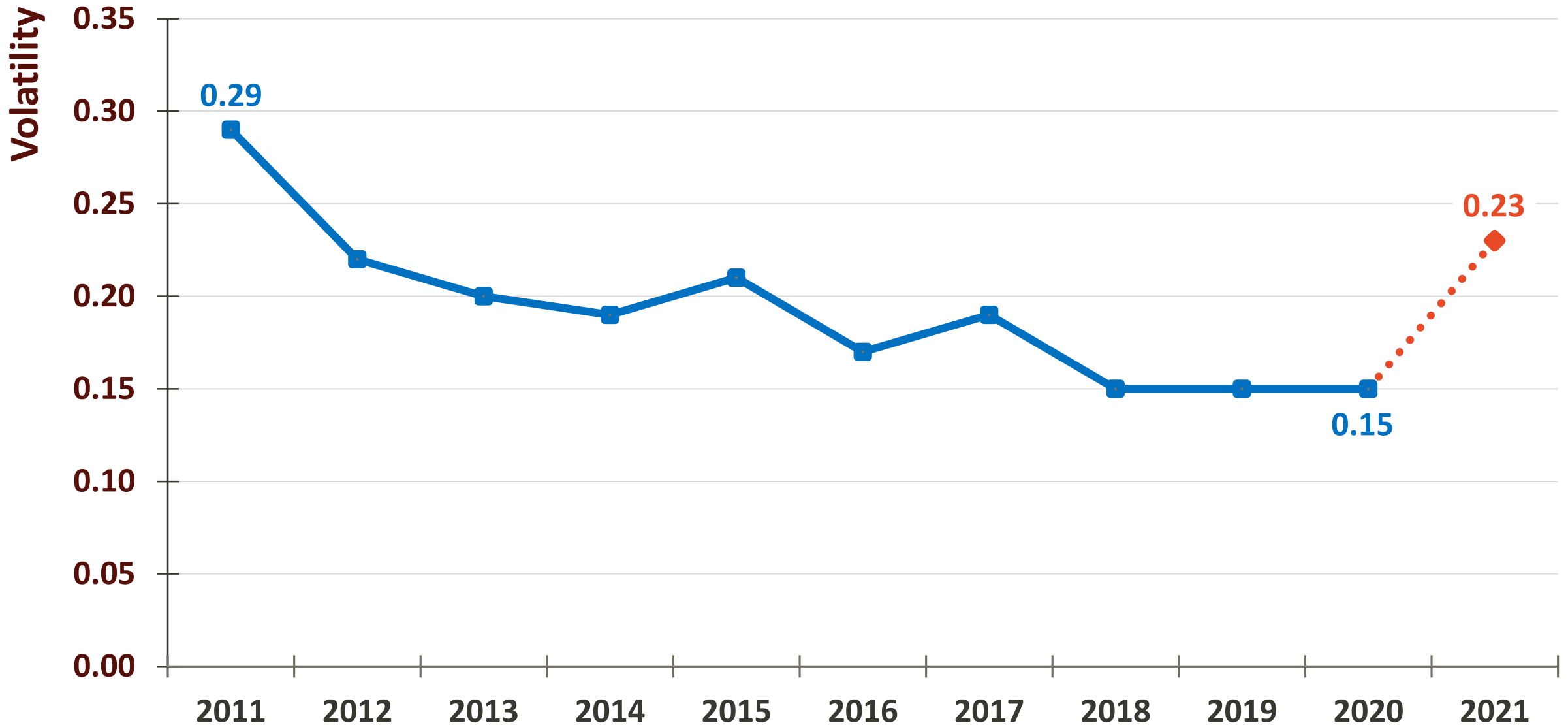


Market Prices

Projected Price for Corn

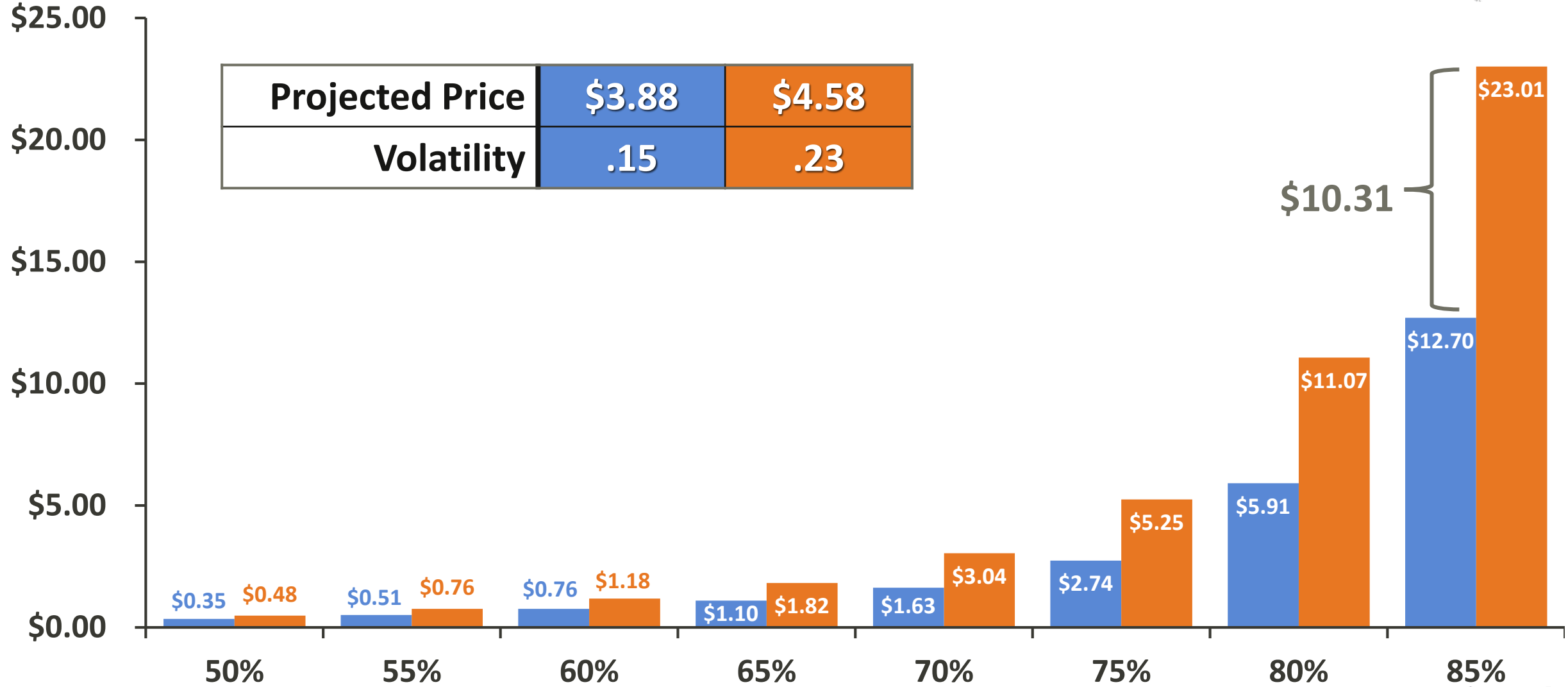


Volatility Adds Significant Costs to Insurance Premium



2021 Revenue Protection Premium in \$ per acre

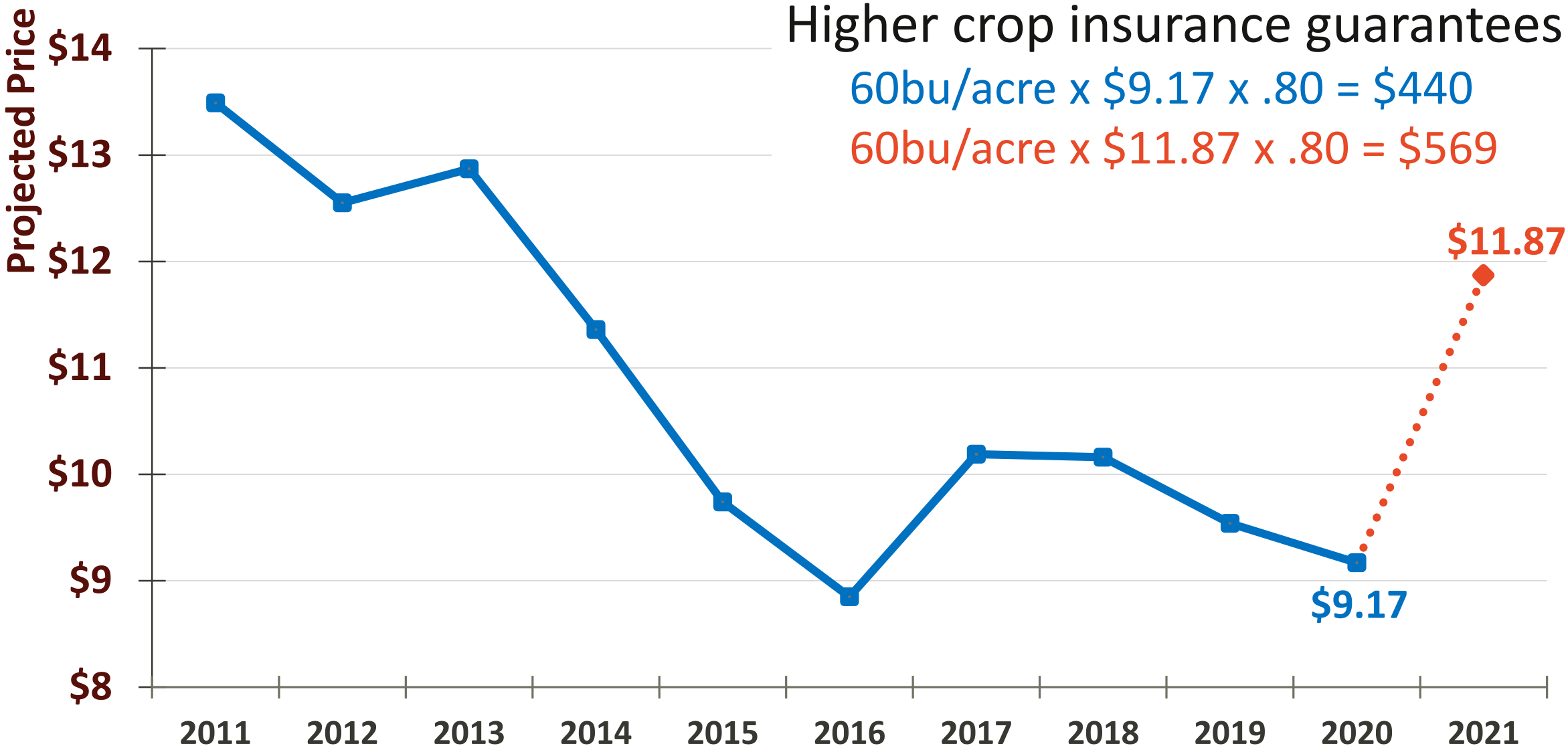
Enterprise Units, Corn, McLean County



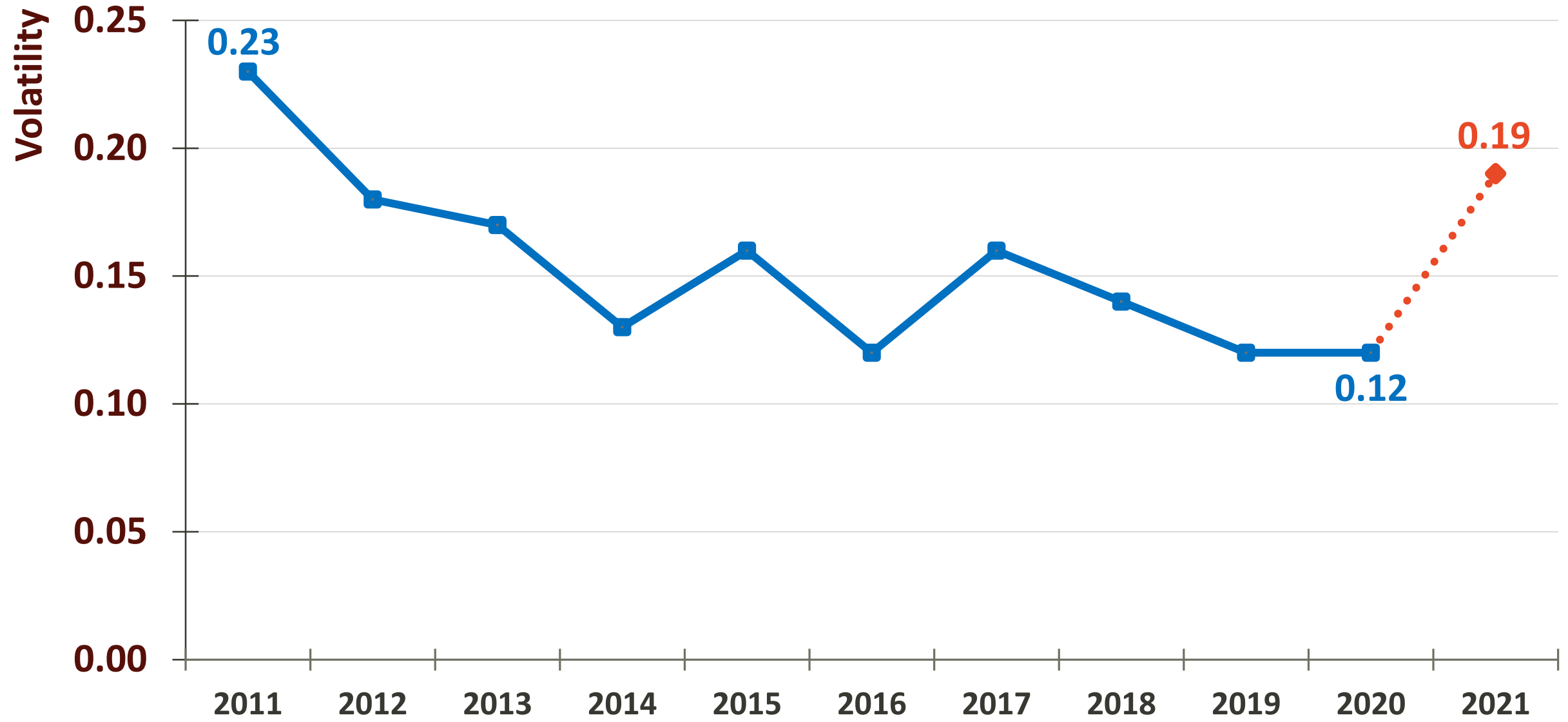
Projected Price	\$3.88	\$4.58
Volatility	.15	.23

\$10.31

Projected Price, Soybeans



Soybean Volatility Adds Significantly to Insurance Premium



Market Year Average Prices

	Market Year						
	2015	2016	2017	2018	2019	2020P	2021P
Corn	\$3.61	\$3.36	\$3.36	\$3.61	\$3.56	\$4.30	\$4.20
Soybeans	\$8.95	\$9.47	\$9.33	\$8.48	\$8.57	\$11.15	\$11.25
Wheat	\$4.89	\$3.89	\$4.72	\$5.16	\$4.58	\$5.00	\$5.50

Used in setting ARC/PLC payments

2021 estimates were released by USDA at Ag Outlook Conference, note that we expect little/no payments in 2020 and 2021

ARC/PLC



Have you made your 2021 commodity title decisions?

Yes

No

Choice by March 15, 2021

1. Agricultural Risk Coverage at county level (ARC-CO)
2. Price Loss Coverage (PLC)
3. ARC at the individual farm level by FSA Farm

By
program
crop

MARCH 2021						
SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Decisions by Program Crop

Program Crop	Effective Reference Price	ARC Benchmark Price	Forecast 2021 MYA Price	Suggested 2021 Choice
Corn	\$3.70	\$3.70	\$4.25	PLC
Soybeans	\$8.40	\$8.95	\$11.25	?
Wheat	\$5.50	\$5.50	\$5.50	PLC

Given 2021 ARC-CO benchmark yields, forecast price near or below the effective price results in PLC having higher expected returns than ARC-CO

For **corn** and **soybeans** could justify the other choices.

Remember PLC has to be chosen for SCO

PLC

PLC makes payments of

$$0.85 \times \left(\begin{array}{c} \text{Effective} \\ \text{Reference} \\ \text{Price} \end{array} - \begin{array}{c} \text{Higher of} \\ \text{MYA price or Loan rate} \end{array} \right) \times \text{PLC yield}$$

MYA (market year average) price

This is a national price

- Sept to August for corn and soybeans
- June to May for wheat

National loan rate

- Corn \$2.20
- Soybeans \$6.20
- Wheat \$3.38

Eligible for Supplemental Coverage Option (SCO) insurance

Effective Reference Price

Higher of

- 85% of 5-year Olympic moving average
- Reference price

Reference Prices	
Corn	\$3.70
Soybeans	\$8.40
Wheat	\$5.50

Addition of 85% of 5-year Olympic average **not likely** come into play
5-year Olympic average **must be above**

- \$4.35 for corn
- \$9.88 for soybeans
- \$6.47 for wheat

ARC-CO Payments

ARC payments occur when county revenue is **below**

0.86 x Benchmark Revenue

Benchmark Revenue = benchmark yield x benchmark price

Not eligible for Supplemental Coverage Option (SCO) insurance

PLC, Corn, 2021

Payments per Base Acre, Macon County



Table 1. Payments per Base Acre at Different Yields and Prices

Program Selection		State = Illinois, County = Macon, Crop = Corn, Year = 2021										
Price Change		ARC-CO Benchmark Yield = 226.86, Benchmark Price = \$3.70, Guarantee \$721.87										
Yield Change		PLC Yield = 185, Effective Reference Price = \$3.70										
-2021		2021 Market Year Average Price										
County	Yield	\$2.75	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25	\$4.50	\$4.75	\$5.00	\$5.25
	302	149	110	71	31	0	0	0	0	0	0	0
	287	149	110	71	31	0	0	0	0	0	0	0
	272	149	110	71	31	0	0	0	0	0	0	0
	257	149	110	71	31	0	0	0	0	0	0	0
	242	149	110	71	31	0	0	0	0	0	0	0
	227	149	110	71	31	0	0	0	0	0	0	0
	212	149	110	71	31	0	0	0	0	0	0	0
	197	149	110	71	31	0	0	0	0	0	0	0
	182	149	110	71	31	0	0	0	0	0	0	0
	167	149	110	71	31	0	0	0	0	0	0	0
	152	149	110	71	31	0	0	0	0	0	0	0

ARC-CO, Corn, 2021

Payments per Base Acre, Macon County



Table 1. Payments per Base Acre at Different Yields and Prices

Program Selection		State = Illinois, County = Macon, Crop = Corn, Year = 2021										
Price Change		ARC-CO Benchmark Yield = 226.86, Benchmark Price = \$3.70, Guarantee \$721.87										
Yield Change		PLC Yield = 185, Effective Reference Price = \$3.70										
-2021												
County	2021 Market Year Average Price											
Yield	\$2.75	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25	\$4.50	\$4.75	\$5.00	\$5.25	
302	0	0	0	0	0	0	0	0	0	0	0	0
287	0	0	0	0	0	0	0	0	0	0	0	0
272	0	0	0	0	0	0	0	0	0	0	0	0
257	13	0	0	0	0	0	0	0	0	0	0	0
242	48	0	0	0	0	0	0	0	0	0	0	0
227	71	35	0	0	0	0	0	0	0	0	0	0
212	71	71	28	0	0	0	0	0	0	0	0	0
197	71	71	70	28	0	0	0	0	0	0	0	0
182	71	71	71	71	34	0	0	0	0	0	0	0
167	71	71	71	71	71	46	11	0	0	0	0	0
152	71	71	71	71	71	71	65	33	0	0	0	0

PLC - ARC-CO, Corn, 2021

Payments per Base Acre, Macon County



Table 1. Payments per Base Acre at Different Yields and Prices

Program Selection		PLC minus ARC-CO		State = Illinois, County = Macon, Crop = Corn, Year = 2021									
Price Change		\$ 0.25		ARC-CO Benchmark Yield = 226.86, Benchmark Price = \$3.70, Guarantee \$721.87									
Yield Change		15		PLC Yield = 185, Effective Reference Price = \$3.70									
-2021		2021 Market Year Average Price											
County	Yield	\$2.75	\$3.00	\$3.25	\$3.50	\$3.75	\$4.00	\$4.25	\$4.50	\$4.75	\$5.00	\$5.25	
	302	149	110	71	31	0	0	0	0	0	0	0	
	287	149	110	71	31	0	0	0	0	0	0	0	
	272	149	110	71	31	0	0	0	0	0	0	0	
	257	136	110	71	31	0	0	0	0	0	0	0	
	242	101	110	71	31	0	0	0	0	0	0	0	
	227	78	75	71	31	0	0	0	0	0	0	0	
	212	78	39	42	31	0	0	0	0	0	0	0	
	197	78	39	1	4	0	0	0	0	0	0	0	
	182	78	39	-1	-40	-34	0	0	0	0	0	0	
	167	78	39	-1	-40	-71	-46	-11	0	0	0	0	
	152	78	39	-1	-40	-71	-71	-65	-33	0	0	0	

* A positive value indicates that PLC will pay more, a negative value indicates that ARC-CO will pay more.

State
 Illinois

County
 Macon

Crop
 Corn

Reference Price
 \$ 3.7

Forecast Model
 Forecast

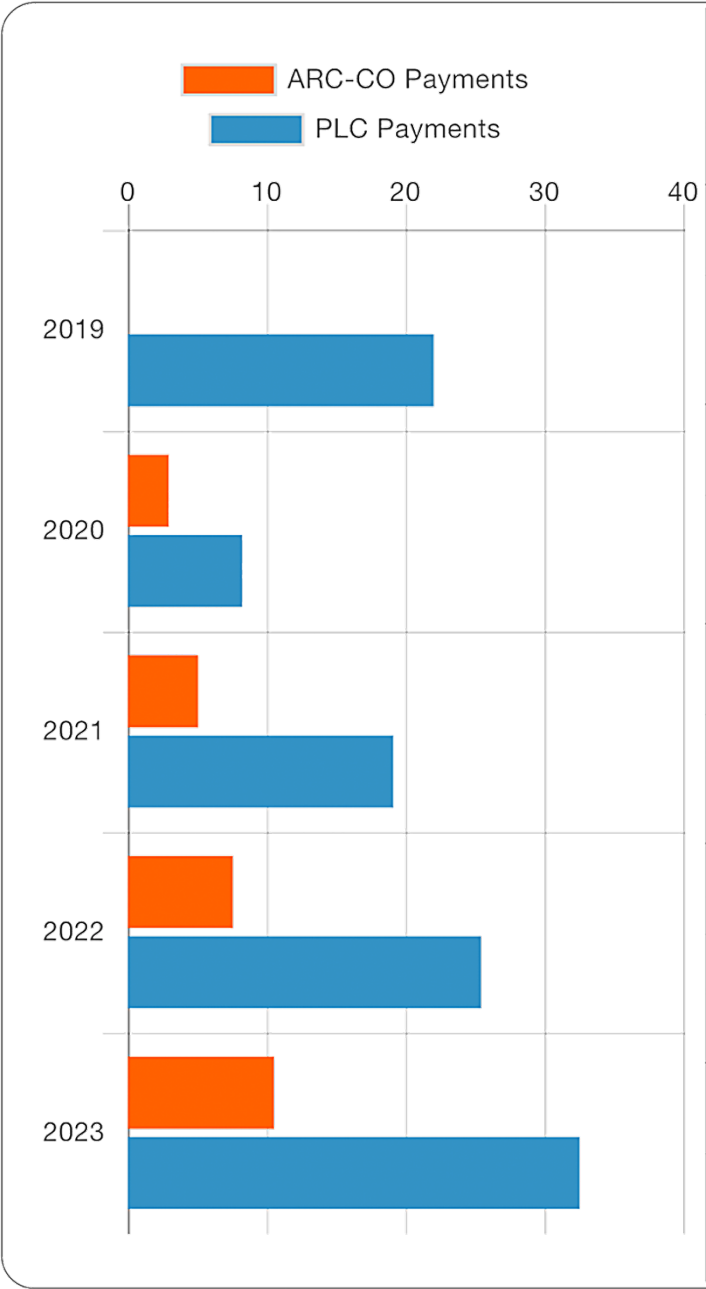
PLC Payment Yield *
 185 bu/acre

ARC Trend Yield *
 1.93 bu/acre

ARC/PLC Program Inputs

ARC Coverage Level	86 %
ARC Coverage Range	10 %
Payment Acres	85 %

▶ RUN MODEL



Expected Payment (\$)	Likelihood of Payment (avg)	Payment Distributions	MYA Price (\$)	Expected Yield (bushel/acre)
\$0.00	0%		\$3.56	207.1
\$22.02	100%			
\$2.96	8%		\$4.20	215.3
\$8.24	20%			
\$5.08	12%		\$4.00	217.2
\$19.13	33%			
\$7.57	17%		\$3.90	219.2
\$25.43	39%			
\$10.54	23%		\$3.80	221.1
\$32.55	47%			

Model data last updated: Jan 5, 2021

2019 numbers are actual values of ARC/PLC payments. All 2019 yields and prices are final.

PLC, Soybeans

2021 Payments per Base Acre, Macon County



Program Selection	PLC	State = Illinois, County = Macon, Crop = Soybeans, Year = 2021 ARC-CO Benchmark Yield = 71.04, Benchmark Price = \$8.95, Guarantee \$546.79 PLC Yield = 56, Effective Reference Price = \$8.40
Price Change	\$ 0.50	
Yield Change	10	

-2021 County Yield	2021 Market Year Average Price											
	\$8.50	\$9.00	\$9.50	\$10.00	\$10.50	\$11.00	\$11.50	\$12.00	\$12.50	\$13.00	\$13.50	
121	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0

ARC-CO, Soybeans

2021 Payments per Base Acre, Macon County



Program Selection	ARC-CO	State = Illinois, County = Macon, Crop = Soybeans, Year = 2021 ARC-CO Benchmark Yield = 71.04, Benchmark Price = \$8.95, Guarantee \$546.79 PLC Yield = 56, Effective Reference Price = \$8.40
Price Change	\$ 0.50	
Yield Change	10	

-2021 County Yield	2021 Market Year Average Price											
	\$8.50	\$9.00	\$9.50	\$10.00	\$10.50	\$11.00	\$11.50	\$12.00	\$12.50	\$13.00	\$13.50	
121	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0
61	24	0	0	0	0	0	0	0	0	0	0	0
51	54	54	53	31	9	0	0	0	0	0	0	0
41	54	54	54	54	54	54	54	54	46	29	11	0
31	54	54	54	54	54	54	54	54	54	54	54	54
21	54	54	54	54	54	54	54	54	54	54	54	54

State
 Illinois

County
 Macon

Crop
 Soybeans

Reference Price
 \$ 8.4

Practice Type *
 Irrigated Non-Irrigated

Forecast Model
 Forecast

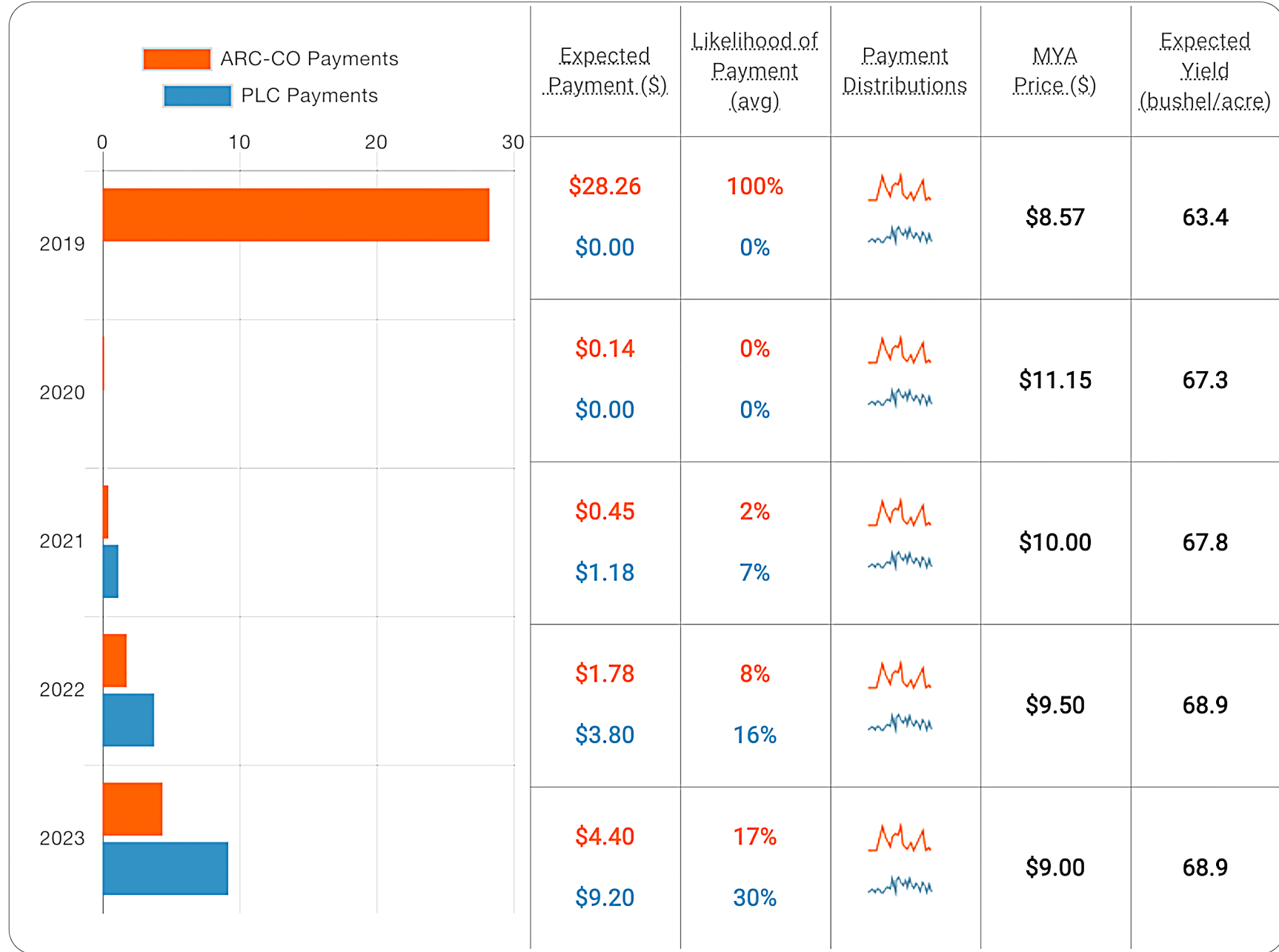
PLC Payment Yield *
 56 bu/acre

ARC Trend Yield *
 0.53 bu/acre

ARC/PLC Program Inputs

ARC Coverage Level	86 %
ARC Coverage Range	10 %
Payment Acres	85 %

RUN MODEL



Model data last updated: Jan 5, 2021

2019 numbers are actual values of ARC/PLC payments. All 2019 yields and prices are final.

PLC - ARC-CO, Wheat

2021 Payments per Base Acre, Macon County



Table 1. Payments per Base Acre at Different Yields and Prices

Program Selection		PLC minus ARC-CO		State = Illinois, County = Macon, Crop = Wheat, Year = 2021								
Price Change		\$ 0.50		ARC-CO Benchmark Yield = 64.40, Benchmark Price = \$5.50, Guarantee \$304.61								
Yield Change		10		PLC Yield = 52, Effective Reference Price = \$5.50								
-2021 County	2021 Market Year Average Price											
Yield	\$2.20	\$2.70	\$3.20	\$3.70	\$4.20	\$4.70	\$5.20	\$5.70	\$6.20	\$6.70	\$7.20	
114	64	94	94	80	57	35	13	0	0	0	0	
104	64	74	94	80	57	35	13	0	0	0	0	
94	64	64	92	80	57	35	13	0	0	0	0	
84	64	64	64	80	57	35	13	0	0	0	0	
74	64	64	64	55	57	35	13	0	0	0	0	
64	64	64	64	49	28	34	13	0	0	0	0	
54	64	64	64	49	27	5	-5	0	0	0	0	
44	64	64	64	49	27	5	-17	-30	-25	-6	0	
34	64	64	64	49	27	5	-17	-30	-30	-30	-30	
24	64	64	64	49	27	5	-17	-30	-30	-30	-30	
14	64	64	64	49	27	5	-17	-30	-30	-30	-30	

* A positive value indicates that PLC will pay more, a negative value indicates that ARC-CO will pay more.

State
 Illinois

County
 Macon

Crop
 Wheat

Reference Price
 \$ 5.5

Forecast Model
 Forecast

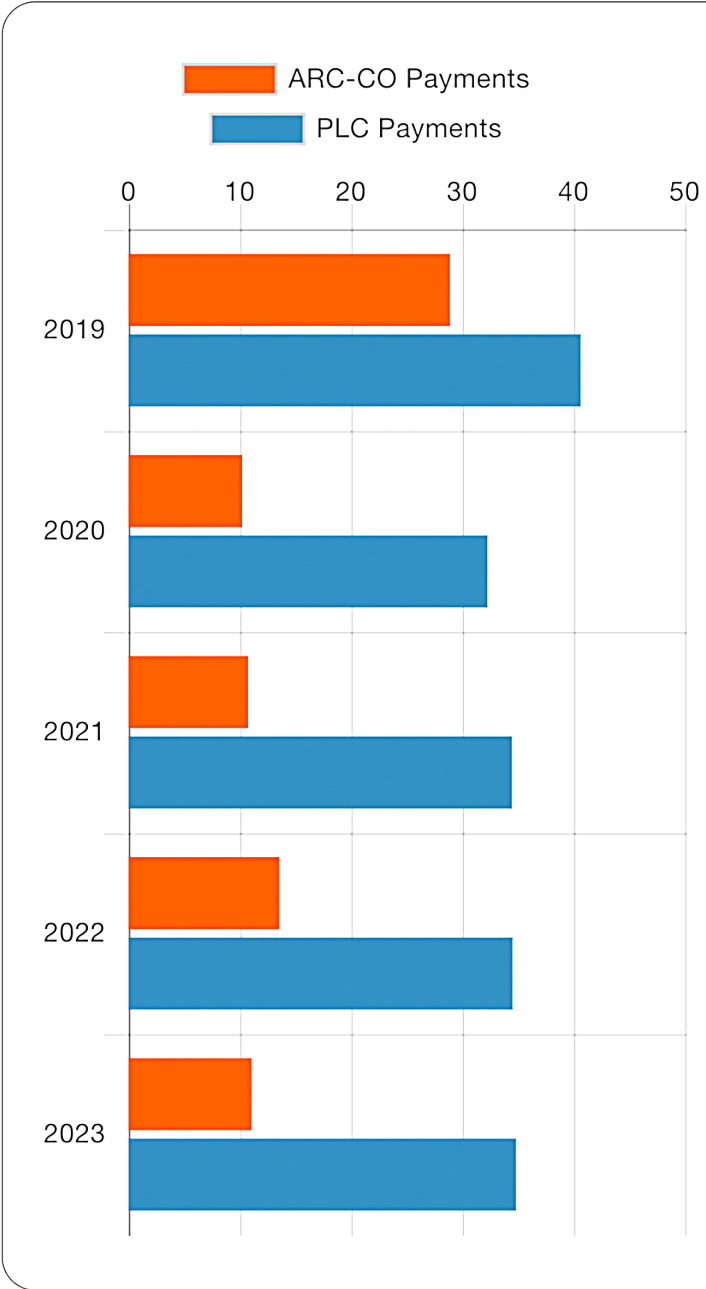
PLC Payment Yield *
 52 bu/acre

ARC Trend Yield *
 0.28 bu/acre

ARC/PLC Program Inputs

ARC Coverage Level	86 %
ARC Coverage Range	10 %
Payment Acres	85 %

RUN MODEL



Expected Payment (\$)	Likelihood of Payment (avg)	Payment Distributions	MYA Price (\$)	Expected Yield (bushel/acre)
\$28.91	100%		\$4.58	44.0
\$40.66	100%			
\$10.22	46%		\$4.85	59.8
\$32.27	82%			
\$10.76	48%		\$4.80	60.1
\$34.48	83%			
\$13.54	58%		\$4.80	60.4
\$34.54	83%			
\$11.07	48%		\$4.80	60.7
\$34.83	82%			

Model data last updated: Jan 5, 2021

ARC-IC

Used on farms with **total prevent plant** in 2019 for 2019 and 2020 signup

If use in 2021:

- Only use on one farm
- Pick farm with most variable yields
- A farm with a history of total prevent plant is a good choice

Will you revise your 2021 crop insurance decisions from 2020 levels?

- No
- Add ECO
- Lower coverage level of RP
- Raise coverage level of RP

Available at both
farmdoc and **farmdocDAILY**
websites in
Tools | Crop Insurance Tools
in the dropdown menu

I ILLINOIS

Our Sites: [farmdoc](#) [farmdocDAILY](#) [Farm Policy News](#) 

farmdocDAILY

[Market Prices](#) [Authors](#) [By Month](#) [Categories](#) [Series](#) [Tools](#) [Webinars/IFES](#) [Sponsors/Donate](#) [About Us](#)

- Crop Insurance Tools
- FAST Spreadsheet Tools
- Illinois Farm Management Handbook
- ARC/PLC Calculators

EDUCATIONAL PARTNERS:
[Dept of ACE](#) [FBFM](#) [EXTENSION](#)

Subscribe for Daily Email Updates

Connect on Social Media



[farmdoc's coverage of the Coronavirus and Ag](#)

Latest Article

Corporate Sponsor



Platinum Sponsor



Platinum Sponsor



Platinum Sponsor



Crop Insurance

Crop Insurance Tools

Premium Calculator

Crop Insurance Premium Calculator

Last Updated: February 8, 2021

The 2021 iFarm Crop insurance Premium Calculator allows users to develop highly customized estimates of their crop insurance premiums, and compare revenue and yield guarantees across all available crop insurance products and elections for their actual farm case.

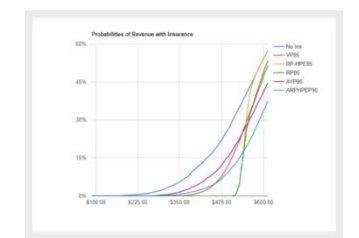


Payment Evaluator

Crop Insurance Payment Evaluator

Last Updated: February 8, 2021

The 2021 iFarm Crop Insurance Payment Evaluator provides helpful information to producers comparing costs and risk reductions across their available crop insurance alternatives.



Price Distribution

Price Distribution Tool

Last Updated: Always Live

The iFARM Price Distribution Tool uses current option market prices to derive estimates of the probability distribution of prices at the expiration of an underlying corn and soybean futures contracts.



Decision Tool

Crop Insurance Decision Tool

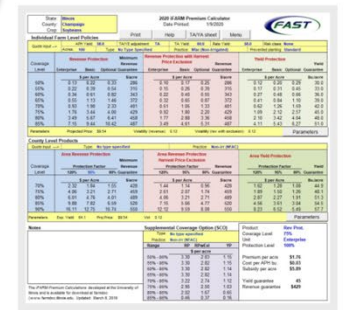
Last Updated: January 27, 2021

This program calculates premiums, evaluates insurance payments, and provides historical data useful when making crop insurance decisions for multiple crops. Estimates are for crops in midwest and southeast states that are harvested in 2020.

As an alternative to the executable tool you can download the zip file here.

Catch up with the farmdoc Daily Article

View our Youtube Guide here.



Price Distribution Tool

Online tool that allows near real-time evaluation of future price outcomes. Critical to crop insurance decisions to understand likelihood of payments.

User Choice:

Crop and Contract Month

Select crop and month of futures date

Crop: Soybeans | Contract Month: Nov 2021

- Retrieves current futures and options market data to create price information
- Futures prices ($\approx \$4.75$ and $\$12.25$) are above Projected Prices ($\$4.58$ and $\$11.87$) so effective coverage is a bit lower than elected coverage. Volatility is high and more than offsets premium impact.
- Harvest Price is more likely to be triggered.
- Allows test of any price being “in the money” throughout season as well.
- Drives the insurance outcomes throughout the season along with yield

The charts below show the corn price distribution at expiration in two related forms. The top shows the cumulative probability distribution for expiration prices and can be interpreted by identifying a price of interest and reading the associated probability on the left axis. The lower chart contains the same information in a probability density form. The associated tables tabulate the information from the charts by price and probability.



Price at Expiration	Probability Below
\$11.25	36.46%
\$11.50	40.89%
\$11.75	45.33%
\$12.00	49.74%
\$12.25	54.06%
\$12.50	58.25%
\$12.75	62.27%
\$13.00	66.09%
\$13.25	69.67%



Probability Below	Price at Expiration
5%	\$8.79
15%	\$9.87
25%	\$10.57
35%	\$11.17
45%	\$11.73
50%	\$12.01
55%	\$12.31
65%	\$12.93
75%	\$13.66
85%	\$14.63
95%	\$16.42

Enter Price to Evaluate: \$ 12.24

The implied distribution indicates that there is a 53.89% probability that the price will be below \$12.24 at expiration.

Accessed on March 3, 2021, 07:26 PM.
 Copyright © 2020. Futures: at least 10 minutes delayed. Information is provided 'as is' and solely for informational purposes, not for trading purposes or advice. To see all exchange delays and terms of use, please see [disclaimer](#).

Crop Insurance

Crop Insurance Tools

Premium Calculator

Crop Insurance Premium Calculator

Last Updated: February 8, 2021

The 2021 iFarm Crop insurance Premium Calculator allows users to develop highly customized estimates of their crop insurance premiums, and compare revenue and yield guarantees across all available crop insurance products and elections for their actual farm case.

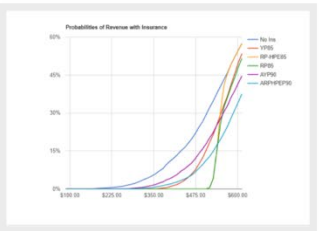


Payment Evaluator

Crop Insurance Payment Evaluator

Last Updated: February 8, 2021

The 2021 iFarm Crop Insurance Payment Evaluator provides helpful information to producers comparing costs and risk reductions across their available crop insurance alternatives.

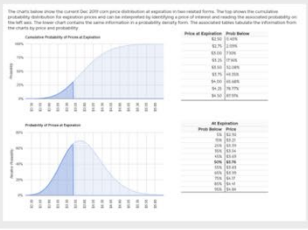


Price Distribution

Price Distribution Tool

Last Updated: Always Live

The iFARM Price Distribution Tool uses current option market prices to derive estimates of the probability distribution of prices at the expiration of an underlying corn and soybean futures contracts.



Decision Tool

Crop Insurance Decision Tool

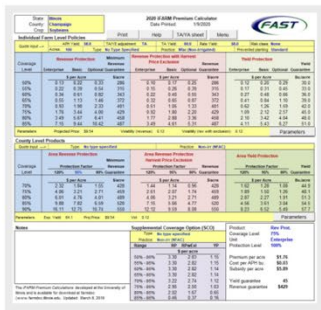
Last Updated: January 27, 2021

This program calculates premiums, evaluates insurance payments, and provides historical data useful when making crop insurance decisions for multiple crops. Estimates are for crops in midwest and southeast states that are harvested in 2020.

As an alternative to the executable tool you can download the zip file here.

Catch up with the farmdoc Daily Article

View our Youtube Guide here.

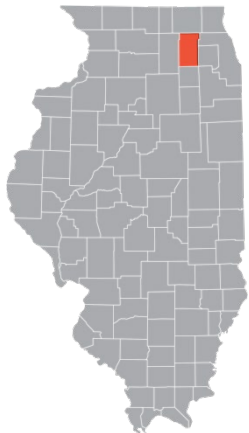


Crop Insurance Payment Evaluator

Online tool that allows overlay of actual market condition with crop insurance choices. Evaluator allows user to gauge probability and magnitude of payments, and risk reduction with alternative crop insurance policies and coverage. Most states in cornbelt, all counties, all products.

Choose: State, Co., Crop, enter Acres

- **Case Farm Info** provides example representative farm per county (600+ Midwest)
- Farm Yield, price distribution, and County relative yields provided.
- Futures prices, projected price, revenue, and farm and county yield risk measures.



The screenshot shows the 'farmdoc' web application interface. At the top, there is a navigation bar with a grid icon, the 'farmdoc' logo, and links for 'Insurance Evaluator', 'Documentation', and 'About'. A user profile icon is also visible. Below the navigation bar, the main heading reads 'Evaluator - Enter your farm information to evaluate crop insurance options for 2021'. The form contains four input fields: 'State' (set to 'Illinois'), 'County' (set to 'Kane'), 'Crop' (set to 'Corn'), and 'Acres *' (set to '100'). A large dark blue button with a white right-pointing arrow and the text 'RUN INSURANCE EVALUATOR' is positioned below the form fields. At the bottom of the page, a paragraph of text explains the tool's purpose: 'This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.'

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State	County	Crop	Acres *
Illinois v	Kane v	Corn v	100
<input type="button" value="➤ RUN INSURANCE EVALUATOR"/>			

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info

Insurance Evaluator

Revenue Risk Info



Farm Average Yield	198.03 bu/acre	Farm Yield (bu/acre)		County Yield (bu/acre)
Farm Std Dev of Yield	33.80 bu/acre	30% of years yields below	182.41	186.11
County Average Yield	198.03 bu/acre	20% of years yields below	170.40	176.39
County Std Dev of Yield	27.04 bu/acre	10% of years yields below	152.80	161.88
Current Futures Price	\$4.74 /bu	5% of years yields below	137.62	149.08
Std Dev of Price	1.22 /bu	Farm Trend-Adjusted APH	198.03 bu/acre	
Average Harvest Cash Basis	0.35 /bu	County TA Rate	1.82 bu/acre/year	
Average Gross Crop Rev	\$854 /acre	Farm APH (ref)	188.90 bu/acre	



RMA 2021 Projected Price is \$4.58 with Volatility Factor of 0.23. Last Updated on Mar 01, 2021.

Insurance Evaluator Information by Unit:

- Presented in Sections for RP, RP-HPE, YP and County Level Products (*lower section*)
- Premiums, Payment, Likelihood of payment, Net Cost, and Ave Gross with insurance; by coverage level

- Negative net cost pays back more than premium on average due to subsidy

Coverage	--Subsidy rate --	
	Optional	Enterprise
50%	0.67	0.80
55%	0.64	0.80
60%	0.64	0.80
65%	0.59	0.80
70%	0.59	0.80
75%	0.55	0.77
80%	0.48	0.68
85%	0.38	0.53


Insurance Evaluator Documentation About


Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State
Illinois
County
Kane
Crop
Corn
Acres *
100

▶ RUN INSURANCE EVALUATOR

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info
Insurance Evaluator
Revenue Risk Info

Individual Farm Level Policies




Unit: Basic

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	1.65	0.49	0.9%	1.16	852	1.29	0.21	0.6%	1.08	853	1.30	0.26	0.4%	1.04	853
55%	2.71	1.14	1.7%	1.57	852	1.82	0.60	1.2%	1.22	852	1.89	0.53	0.8%	1.36	852
60%	3.80	2.58	4.0%	1.22	852	2.26	1.53	2.9%	0.73	853	2.49	1.07	1.7%	1.42	852
65%	6.08	5.35	7.4%	0.73	853	3.46	3.40	5.7%	0.06	854	3.72	2.08	2.8%	1.64	852
70%	8.78	10.12	11.7%	-1.34	855	4.99	6.70	8.9%	-1.71	855	4.86	3.80	4.9%	1.06	853
75%	14.66	17.57	18.3%	-2.91	856	8.14	11.81	13.9%	-3.67	857	7.30	6.71	8.2%	0.59	853
80%	23.90	28.72	26.5%	-4.82	858	13.57	19.51	20.1%	-5.94	860	11.40	11.33	12.6%	0.07	854
85%	37.89	44.26	35.9%	-6.37	860	21.69	30.10	26.8%	-8.41	862	17.17	18.34	18.6%	-1.17	855

County Level Products

Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.00	10.81	5.1%	-1.81	851	4.65	6.28	7.1%	-1.63	860	5.84	3.47	2.3%	2.37	851
75%	14.13	19.99	9.3%	-5.86	852	7.71	12.36	12.5%	-4.65	866	7.86	6.17	4.2%	1.69	852
80%	20.00	33.89	15.0%	-13.89	855	13.11	21.76	20.1%	-8.65	874	10.99	10.55	7.3%	0.44	853
85%	32.23	53.67	22.4%	-21.44	856	23.87	35.04	30.4%	-11.17	883	14.36	17.39	12.1%	-3.03	857
90%	51.70	80.18	30.7%	-28.48	854	37.73	52.31	42.6%	-14.58	896	20.31	27.65	19.1%	-7.34	861

RMA 2021 Projected Price is \$4.58 with Volatility Factor of 0.23. Last Updated on Mar 01, 2021.

v1.5.0




State: Illinois | County: Kane | Crop: Corn | Acres*: 100

▶ RUN INSURANCE EVALUATOR



Case Farm Info | Insurance Evaluator | Revenue Risk Info

Individual Farm Level Policies

Unit: Basic ▼

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	1.65	0.49	0.9%	1.16	852	1.29	0.21	0.6%	1.08	853	1.30	0.26	0.4%	1.04	853
55%	2.71	1.14	1.7%	1.57	852	1.82	0.60	1.2%	1.22	852	1.89	0.53	0.8%	1.36	852
60%	3.80	2.58	4.0%	1.22	852	2.26	1.53	2.9%	0.73	853	2.49	1.07	1.7%	1.42	852
65%	6.08	5.35	7.4%	0.73	853	3.46	3.40	5.7%	0.06	854	3.72	2.08	2.8%	1.64	852
70%	8.78	10.12	11.7%	-1.34	855	4.99	6.70	8.9%	-1.71	855	4.86	3.80	4.9%	1.06	853
75%	14.66	17.57	18.3%	-2.91	856	8.14	11.81	13.9%	-3.67	857	7.30	6.71	8.2%	0.59	853
80%	23.90	28.72	26.5%	-4.82	858	13.57	19.51	20.1%	-5.94	860	11.40	11.33	12.6%	0.07	854
85%	37.89	44.26	35.9%	-6.37	860	21.69	30.10	26.8%	-8.41	862	17.17	18.34	18.6%	-1.17	855

State: Illinois | County: Kane | Crop: Corn | Acres*: 100

▶ RUN INSURANCE EVALUATOR



County Level Products

Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.00	10.81	5.1%	-1.81	851	4.65	6.28	7.1%	-1.63	860	5.84	3.47	2.3%	2.37	851
75%	14.13	19.99	9.3%	-5.86	852	7.71	12.36	12.5%	-4.65	866	7.86	6.17	4.2%	1.69	852
80%	20.00	33.89	15.0%	-13.89	855	13.11	21.76	20.1%	-8.65	874	10.99	10.55	7.3%	0.44	853
85%	32.23	53.67	22.4%	-21.44	856	23.87	35.04	30.4%	-11.17	883	14.36	17.39	12.1%	-3.03	857
90%	51.70	80.18	30.7%	-28.48	854	37.73	52.31	42.6%	-14.58	896	20.31	27.65	19.1%	-7.34	861

RMA 2021 Projected Price is \$4.58 with Volatility Factor of 0.23. Last Updated on Mar 01, 2021.

Insurance Evaluator Information by Unit:

- Presented in Sections for RP, RP-HPE, YP and County Level Products (*lower section*)
- Premiums, Payment, Likelihood of payment, Net Cost, and Ave Gross with insurance; by coverage level

- Negative net cost pays back more than premium on average due to subsidy

Coverage	--Subsidy rate --	
	Optional	Enterprise
50%	0.67	0.80
55%	0.64	0.80
60%	0.64	0.80
65%	0.59	0.80
70%	0.59	0.80
75%	0.55	0.77
80%	0.48	0.68
85%	0.38	0.53

State: Illinois | County: Kane | Crop: Corn | Acres*: 100

▶ RUN INSURANCE EVALUATOR



Individual Farm Level Policies

Unit: **Enterprise** ▼

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	1.00	0.55	1.0%	0.45	853	0.78	0.23	0.6%	0.55	853	0.79	0.30	0.4%	0.49	853
55%	1.51	1.26	1.9%	0.25	853	1.01	0.65	1.4%	0.36	853	1.05	0.60	0.8%	0.45	853
60%	2.11	2.80	4.2%	-0.69	854	1.26	1.64	3.1%	-0.38	854	1.38	1.21	1.7%	0.17	853
65%	2.96	5.72	7.5%	-2.76	856	1.69	3.58	5.8%	-1.89	855	1.81	2.29	2.8%	-0.48	854
70%	4.28	10.64	11.9%	-6.36	860	2.43	6.94	9.0%	-4.51	858	2.37	4.14	4.9%	-1.77	855
75%	7.36	18.27	18.5%	-10.91	864	4.02	12.14	13.9%	-8.12	861	3.70	7.24	8.2%	-3.54	857
80%	14.21	29.62	26.8%	-15.41	869	7.86	19.93	20.2%	-12.07	865	6.77	12.07	12.6%	-5.30	859
85%	28.01	45.36	36.2%	-17.35	871	15.73	30.59	26.9%	-14.86	868	12.49	19.32	18.6%	-6.83	860

State: Illinois | County: Kane | Crop: Corn | Acres*: 100

▶ RUN INSURANCE EVALUATOR



County Level Products

Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.00	10.81	5.1%	-1.81	851	4.65	6.28	7.1%	-1.63	860	5.84	3.47	2.3%	2.37	851
75%	14.13	19.99	9.3%	-5.86	852	7.71	12.36	12.5%	-4.65	866	7.86	6.17	4.2%	1.69	852
80%	20.00	33.89	15.0%	-13.89	855	13.11	21.76	20.1%	-8.65	874	10.99	10.55	7.3%	0.44	853
85%	32.23	53.67	22.4%	-21.44	856	23.87	35.04	30.4%	-11.17	883	14.36	17.39	12.1%	-3.03	857
90%	51.70	80.18	30.7%	-28.48	854	37.73	52.31	42.6%	-14.58	896	20.31	27.65	19.1%	-7.34	861

RMA 2021 Projected Price is \$4.58 with Volatility Factor of 0.23. Last Updated on Mar 01, 2021.

Insurance Evaluator: County Products

- County Products often have high premiums but pay back more than they cost, but not necessarily when needed.
- Can work well when APH information is less consistent with actual yield risk.
- County Yield variability is lower than single farm variability resulting in yield “basis risk”

State: Illinois | County: Kane | Crop: Corn | Acres*: 100
 > RUN INSURANCE EVALUATOR

County Level Products



Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.00	10.81	5.1%	-1.81	851	4.65	6.28	7.1%	-1.63	860	5.84	3.47	2.3%	2.37	851
75%	14.13	19.99	9.3%	-5.86	852	7.71	12.36	12.5%	-4.65	866	7.86	6.17	4.2%	1.69	852
80%	20.00	33.89	15.0%	-13.89	855	13.11	21.76	20.1%	-8.65	874	10.99	10.55	7.3%	0.44	853
85%	32.23	53.67	22.4%	-21.44	856	23.87	35.04	30.4%	-11.17	883	14.36	17.39	12.1%	-3.03	857
90%	51.70	80.18	30.7%	-28.48	854	37.73	52.31	42.6%	-14.58	896	20.31	27.65	19.1%	-7.34	861

Jefferson County Soybeans

- Higher relative risk and current Futures >>PP
- County yield risk also relatively higher
- Premium rates higher in areas with larger historic losses and greater yield risk



Insurance Evaluator Documentation About

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State	County	Crop	Acres *
Illinois	Jefferson	Soybeans	100

> RUN INSURANCE EVALUATOR

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.



Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State	County	Crop	Acres *
Illinois v	Jefferson v	Soybeans v	100
> RUN INSURANCE EVALUATOR			

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info

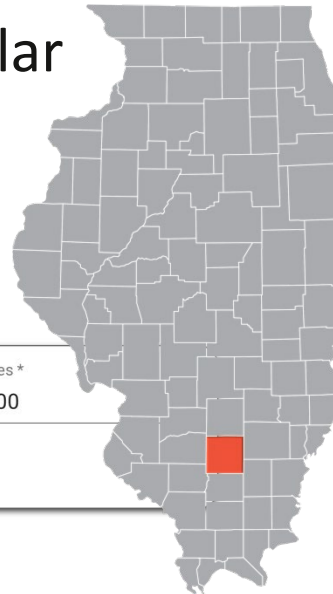
Insurance Evaluator

Revenue Risk Info

Farm Average Yield	42.75 bu/acre	Farm Yield (bu/acre)		County Yield (bu/acre)
Farm Std Dev of Yield	8.71 bu/acre	30% of years yields below	38.55	39.56
County Average Yield	42.75 bu/acre	20% of years yields below	35.50	37.08
County Std Dev of Yield	6.97 bu/acre	10% of years yields below	31.10	33.42
Current Futures Price	\$12.23 /bu	5% of years yields below	27.40	30.26
Std Dev of Price	2.32 /bu	Farm Trend-Adjusted APH	42.75 bu/acre	
Average Harvest Cash Basis	0.47 /bu	County TA Rate	0.43 bu/acre/year	
Average Gross Crop Rev	\$497 /acre	Farm APH (ref)	40.85 bu/acre	

Insurance Evaluator Information by Unit: Basic

- Basic Unit – note pattern in Average Gross Revenue and net cost of insurance
- Still heavily impactful for reducing very low revenue outcomes
- Can be large differences in county-to-county costs of insurance even if yields are relatively similar



State: Illinois | County: Jefferson | Crop: Soybeans | Acres*: 100

RUN INSURANCE EVALUATOR

farmdoc Insurance Evaluator Documentation About

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State: Illinois | County: Jefferson | Crop: Soybeans | Acres*: 100

RUN INSURANCE EVALUATOR

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info | **Insurance Evaluator** | Revenue Risk Info

Individual Farm Level Policies

Unit: Basic

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	2.43	0.57	1.5%	1.86	495	1.62	0.28	0.9%	1.34	495	1.85	0.40	1.2%	1.45	495
55%	3.65	1.16	2.6%	2.49	494	2.43	0.60	1.6%	1.83	495	2.68	0.79	2.0%	1.89	495
60%	4.99	2.21	4.9%	2.78	494	3.35	1.22	3.3%	2.13	494	3.61	1.43	3.2%	2.18	494
65%	7.64	4.00	7.6%	3.64	493	5.22	2.32	5.4%	2.90	494	5.57	2.49	5.2%	3.08	493
70%	10.57	6.81	12.1%	3.76	493	7.29	4.08	8.5%	3.21	493	7.77	4.22	8.2%	3.55	493
75%	15.09	10.93	17.3%	4.16	492	10.56	6.76	12.8%	3.80	493	11.08	6.78	12.0%	4.30	492
80%	22.25	16.79	24.2%	5.46	491	15.74	10.65	18.0%	5.09	491	16.23	10.48	17.0%	5.75	491
85%	32.95	24.81	33.2%	8.14	488	23.58	16.01	24.4%	7.57	489	23.71	15.59	23.4%	8.12	488

County Level Products

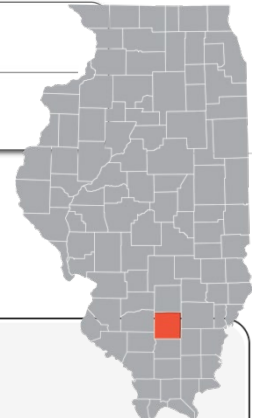
Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.07	5.10	3.0%	3.97	489	5.71	1.89	5.0%	3.82	496	6.43	3.38	3.5%	3.05	493
75%	12.59	8.63	5.5%	3.96	488	8.27	3.89	8.6%	4.38	497	7.90	5.41	5.7%	2.49	494
80%	16.36	13.85	9.3%	2.51	487	10.85	6.94	14.2%	3.91	500	10.98	8.38	8.9%	2.60	494
85%	23.56	21.57	15.1%	1.99	485	15.94	11.65	22.2%	4.29	502	13.57	12.60	13.5%	0.97	496
90%	32.52	32.32	22.7%	0.20	483	22.49	18.48	32.2%	4.01	506	18.33	18.42	19.7%	-0.09	497

RMA 2021 Projected Price is \$11.87 with Volatility Factor of 0.19. Last Updated on Mar 01, 2021.

v1.5.0 | **ILLINOIS** NCSA National Center for Supercomputing Applications | **fdi**

State: |
 County: |
 Crop: |
 Acres*:

[▶ RUN INSURANCE EVALUATOR](#)



Case Farm Info

Insurance Evaluator

Revenue Risk Info

Individual Farm Level Policies

Unit: **Basic** ▼

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	2.43	0.57	1.5%	1.86	495	1.62	0.28	0.9%	1.34	495	1.85	0.40	1.2%	1.45	495
55%	3.65	1.16	2.6%	2.49	494	2.43	0.60	1.6%	1.83	495	2.68	0.79	2.0%	1.89	495
60%	4.99	2.21	4.9%	2.78	494	3.35	1.22	3.3%	2.13	494	3.61	1.43	3.2%	2.18	494
65%	7.64	4.00	7.6%	3.64	493	5.22	2.32	5.4%	2.90	494	5.57	2.49	5.2%	3.08	493
70%	10.57	6.81	12.1%	3.76	493	7.29	4.08	8.5%	3.21	493	7.77	4.22	8.2%	3.55	493
75%	15.09	10.93	17.3%	4.16	492	10.56	6.76	12.8%	3.80	493	11.08	6.78	12.0%	4.30	492
80%	22.25	16.79	24.2%	5.46	491	15.74	10.65	18.0%	5.09	491	16.23	10.48	17.0%	5.75	491
85%	32.95	24.81	33.2%	8.14	488	23.58	16.01	24.4%	7.57	489	23.71	15.59	23.4%	8.12	488

Insurance Evaluator

Information by Unit: Enterprise

- Jefferson County Soybeans
- Enterprise Unit – again note pattern in Average Gross Revenue and net cost of insurance
- Impact of subsidy and difference in yield risk across units often results in similar patterns

farmdoc Insurance Evaluator Documentation About

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State: Illinois County: Jefferson Crop: Soybeans Acres*: 100

RUN INSURANCE EVALUATOR

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info **Insurance Evaluator** Revenue Risk Info

Individual Farm Level Policies

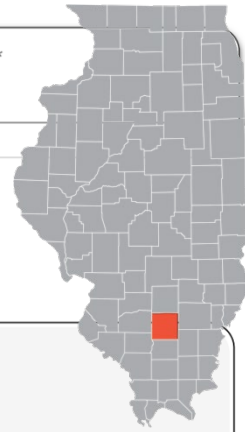
Unit: Enterprise

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	1.47	1.84	3.7%	-0.37	495	0.98	1.00	2.4%	-0.02	495	1.12	1.32	1.2%	-0.20	495
55%	2.03	3.22	6.0%	-1.19	496	1.35	1.82	4.2%	-0.47	495	1.49	2.26	2.0%	-0.77	495
60%	2.77	5.33	8.9%	-2.56	497	1.86	3.11	6.2%	-1.25	496	2.01	3.70	3.2%	-1.69	496
65%	3.73	8.38	12.7%	-4.65	499	2.55	5.05	9.4%	-2.50	497	2.72	5.80	5.2%	-3.08	498
70%	5.15	12.61	16.9%	-7.46	502	3.55	7.87	12.7%	-4.32	499	3.79	8.71	8.2%	-4.92	500
75%	7.70	18.24	22.3%	-10.54	505	5.38	11.65	16.6%	-6.27	501	5.65	12.65	12.0%	-7.00	502
80%	13.57	25.51	29.1%	-11.94	507	9.56	16.51	21.8%	-6.95	502	9.87	17.77	17.0%	-7.90	503
85%	24.89	34.81	37.1%	-9.92	505	17.79	22.89	28.6%	-5.10	500	17.71	24.32	23.4%	-6.61	501

County Level Products

Coverage Level	Area Revenue Protection (ARP)					Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)					Area Yield Protection (AYP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
70%	9.07	5.10	3.0%	3.97	489	5.71	1.89	5.0%	3.82	496	6.43	3.38	3.5%	3.05	493
75%	12.59	8.63	5.5%	3.96	488	8.27	3.89	8.6%	4.38	497	7.90	5.41	5.7%	2.49	494
80%	16.36	13.85	9.3%	2.51	487	10.85	6.94	14.2%	3.91	500	10.98	8.38	8.9%	2.60	494
85%	23.56	21.57	15.1%	1.99	485	15.94	11.65	22.2%	4.29	502	13.57	12.60	13.5%	0.97	496
90%	32.52	32.32	22.7%	0.20	483	22.49	18.48	32.2%	4.01	506	18.33	18.42	19.7%	-0.09	497

RMA 2021 Projected Price is \$11.87 with Volatility Factor of 0.19. Last Updated on Mar 01, 2021.



Individual Farm Level Policies

Unit: **Enterprise** ▾

Coverage Level	Revenue Protection (RP)					Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)				
	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Payment Frequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)
50%	1.47	1.84	3.7%	-0.37	495	0.98	1.00	2.4%	-0.02	495	1.12	1.32	1.2%	-0.20	495
55%	2.03	3.22	6.0%	-1.19	496	1.35	1.82	4.2%	-0.47	495	1.49	2.26	2.0%	-0.77	495
60%	2.77	5.33	8.9%	-2.56	497	1.86	3.11	6.2%	-1.25	496	2.01	3.70	3.2%	-1.69	496
65%	3.73	8.38	12.7%	-4.65	499	2.55	5.05	9.4%	-2.50	497	2.72	5.80	5.2%	-3.08	498
70%	5.15	12.61	16.9%	-7.46	502	3.55	7.87	12.7%	-4.32	499	3.79	8.71	8.2%	-4.92	500
75%	7.70	18.24	22.3%	-10.54	505	5.38	11.65	16.6%	-6.27	501	5.65	12.65	12.0%	-7.00	502
80%	13.57	25.51	29.1%	-11.94	507	9.56	16.51	21.8%	-6.95	502	9.87	17.77	17.0%	-7.90	503
85%	24.89	34.81	37.1%	-9.92	505	17.79	22.89	28.6%	-5.10	500	17.71	24.32	23.4%	-6.61	501

Revenue Risk Info:


Compare revenue levels by insurance choice

- RP products tend to limit downside risk most, County Products tend to pay most over time, but not necessarily when needed. Lower coverage can be beneficial for maximizing average revenue
- County products less correlated with crop revenue, but can increase average revenue over the long run.

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State: County: Crop: Acres *:

[▶ RUN INSURANCE EVALUATOR](#)



Individual Farm Level Policies

Unit:

Coverage Level	Revenue Protection (RP)				Revenue Protection With Harvest Price Exclusion (RP-HPE)				Yield Protection (YP)			
	Value At Risk (VAR)				Value At Risk (VAR)				Value At Risk (VAR)			
	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)
50%	436	522	579	690	435	519	578	690	435	522	579	690
55%	451	521	580	690	452	519	578	690	436	522	580	690
60%	482	524	581	690	483	521	578	690	439	523	582	690
65%	517	539	584	690	518	540	578	689	439	525	583	691
70%	555	572	590	693	556	573	590	689	445	531	589	693
75%	591	605	617	696	595	609	620	687	448	536	592	698
80%	627	638	647	696	634	645	654	685	454	540	595	703
85%	658	667	673	694	670	679	686	704	455	544	599	704

Revenue Risk Info: Compare Revenue levels by insurance choice

- Prefer higher revenue with higher probability - no insurance line is the base for comparison (blue line) and impact of insurance to “shift” probability to higher revenue levels shown for each insurance product
- RP products tend to limit downside risk most, County Products tend to pay most over time, but not necessarily when needed.
- **Live target revenue calculation – example of \$670 in this example**

Evaluator - Enter your farm information to evaluate crop insurance options for 2021

State: Illinois | County: Kane | Crop: Corn | Acres*: 100

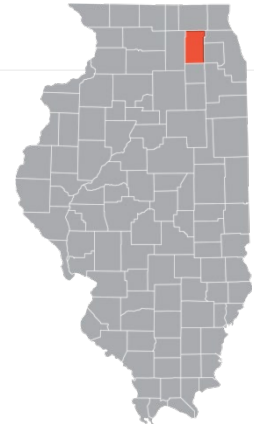
RUN INSURANCE EVALUATOR

This tool develops a case farm for most counties in the major corn and soybean production regions, and provides estimates of premiums for all available crop insurance products, along with the expected frequency of payments, average payment per acre, net cost per acre, and risk reductions associated with alternative crop insurance products.

Case Farm Info

Insurance Evaluator

Revenue Risk Info



Change Gross Target Revenue To Run Again: \$ 670 /acre

Probability of not reaching above target with no insurance: 22.4%

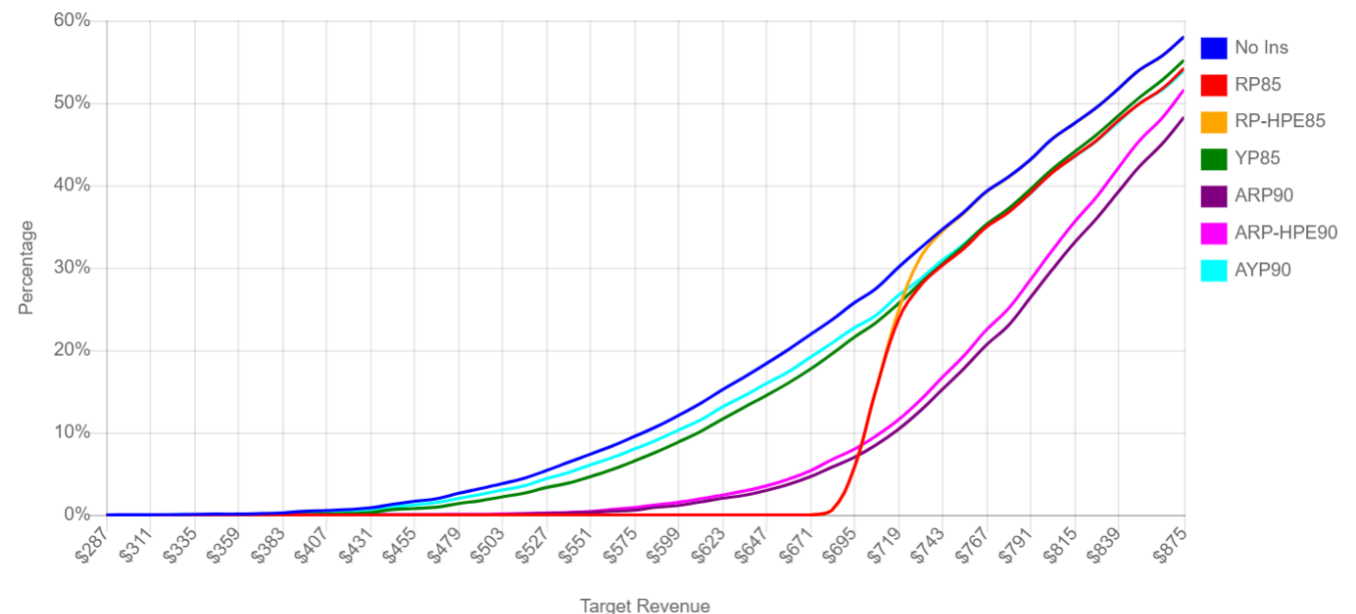
1% Value at risk with no insurance: \$437

5% Value at risk with no insurance: \$523

10% Value at risk with no insurance: \$579

25% Value at risk with no insurance: \$691

Probabilities of Revenue with Insurance



Change Gross Target Revenue To Run Again: \$ 670 /acre i

Probability of not reaching above target with no insurance: 21.7%

1% Value at risk with no insurance: \$437

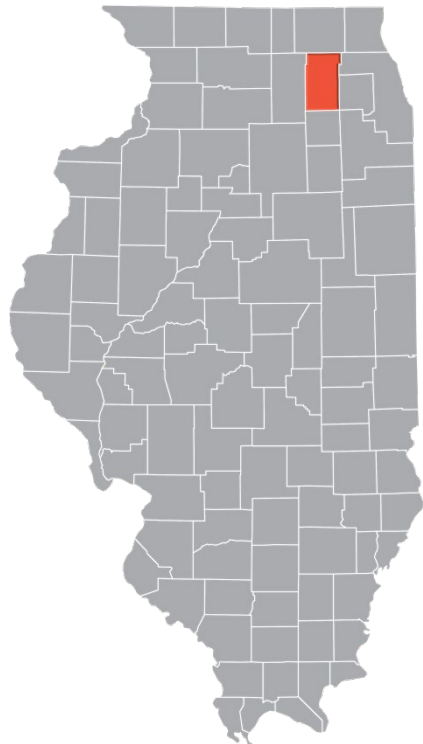
5% Value at risk with no insurance: \$523

10% Value at risk with no insurance: \$579

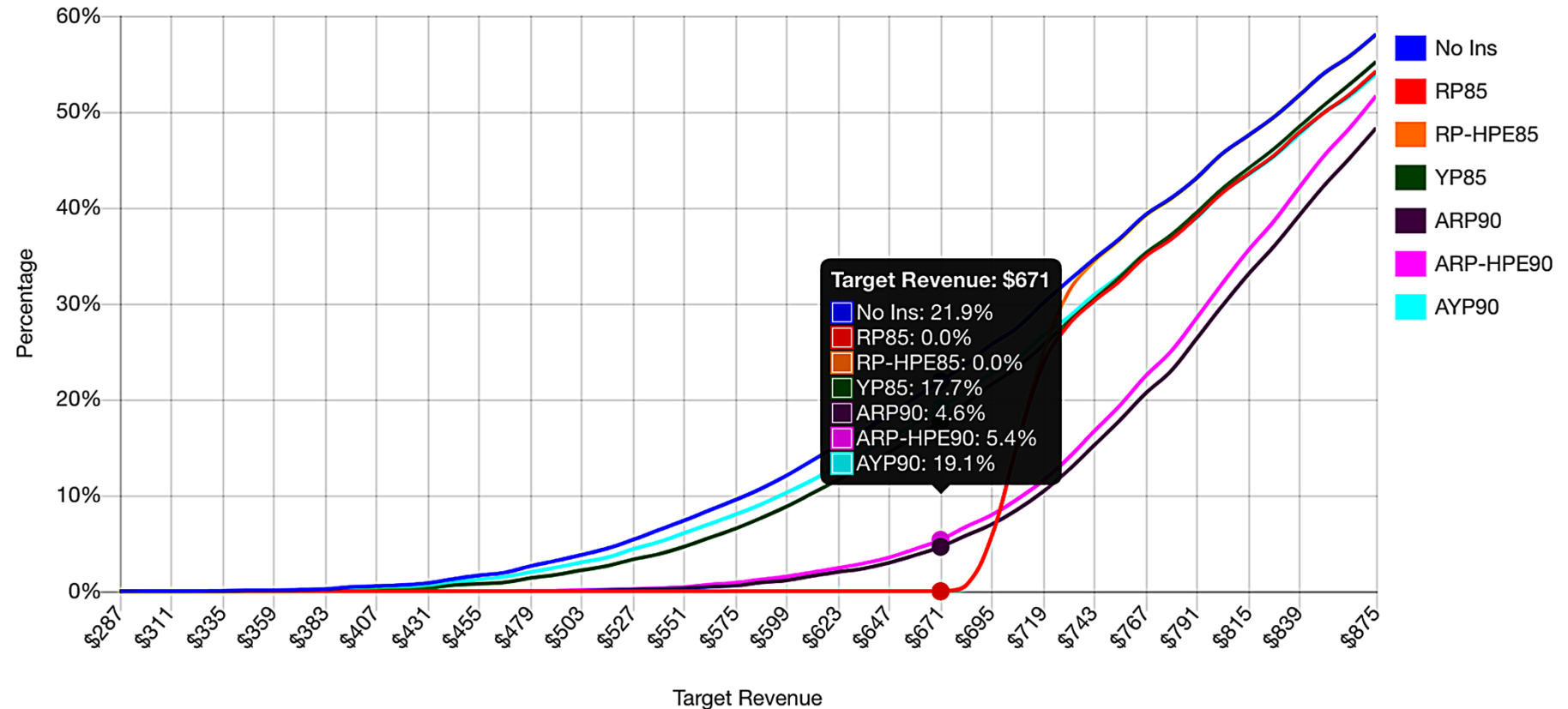
25% Value at risk with no insurance: \$691

State: Illinois | County: Kane | Crop: Corn | Acres*: 100

RUN INSURANCE EVALUATOR



Probabilities of Revenue with Insurance



Revenue Risk by likelihood provided:



- Coverage Level and probability grid by product returns \$/Acre
- Higher coverage levels virtually always reduce revenue gradient – best for limiting extreme downside.
- Lower coverage less expensive but provides less downside protection.
- County products less correlated with crop revenue, but can increase average revenue over the long run.

Individual Farm Level Policies

Unit: Enterprise ▾

(Kane County)

Coverage Level	Revenue Protection (RP)				Revenue Protection With Harvest Price Exclusion (RP-HPE)				Yield Protection (YP)			
	Value At Risk (VAR)				Value At Risk (VAR)				Value At Risk (VAR)			
	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)
50%	436	522	579	690	435	519	578	690	435	522	579	690
55%	451	521	580	690	452	519	578	690	436	522	580	690
60%	482	524	581	690	483	521	578	690	439	523	582	690
65%	517	539	584	690	518	540	578	689	439	525	583	691
70%	555	572	590	693	556	573	590	689	445	531	589	693
75%	591	605	617	696	595	609	620	687	448	536	592	698
80%	627	638	647	696	634	645	654	685	454	540	595	703
85%	658	667	673	694	670	679	686	704	455	544	599	704

County Level Products

Coverage Level	Area Revenue Protection (ARP)				Area Revenue Protection With Harvest Price Exclusion (ARP-HPE)				Area Yield Protection (AYP)			
	Value At Risk (VAR)				Value At Risk (VAR)				Value At Risk (VAR)			
	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)	1% (\$/acre)	5% (\$/acre)	10% (\$/acre)	25% (\$/acre)
70%	469	547	595	689	476	553	601	696	432	520	576	688
75%	486	565	609	695	497	576	619	704	431	519	578	688
80%	506	585	629	704	514	596	640	716	427	517	577	689
85%	523	601	645	716	539	615	658	730	428	518	579	692
90%	526	614	658	728	553	637	679	749	427	517	578	691

Summary and keys decisions

- Projected Prices are both historically fairly high, yet below current Futures Prices – leads to different marketing decisions as a portion of revenue guarantee is less valuable, and less likely to pay, but options exist to lock in higher values, and HP options increase in value, so valuable expected value of HP options
- Differences in subsidy rates by coverage level and Unit – local impacts also critical to evaluate
- Sales Closing Data March 15 for much of the cornbelt - watch prices closely until final decisions are made
- Talk with a qualified Agent for details specific to your situation

Managing Premium



How much will you pay for crop insurance on corn?

- Over \$30 per acre
- \$25ish per acre
- \$15ish per acre
- Less than \$10 per acre



Percent Acres Insured, Illinois, Corn, 2020

Coverage Level	RP	RPhpe	YP	ARP	ARPhpe	AYP
50	0%	0%	1%			
55	0%	0%	0%			
60	0%	0%	0%			
65	0%	0%	0%			0%
70	3%	0%	0%	0%		0%
75	15%	0%	0%	0%		0%
80	33%	1%	0%	0%	1%	0%
85	41%	1%	0%	0%	1%	0%
90				1%	0%	0%
Total	93%	2%	2%	2%	2%	0%

1% of acres with Margin Protection

11% of acres in Supplemental Coverage Option

RMA Insurance Products (deadline is March 15)

Acronym	Name	Yields used	Insures	Guarantee Increase
RP	Revenue Protection	Farm (unit)	Revenue	Yes
RPhpe	RP with harvest price exclusion		Revenue	No
YP	Yield Protection		Yield	No
ARP	Area Revenue Protection	County	Revenue	Yes
ARPhpe	ARP with harvest price exclusion		Revenue	No
AYP	Area Yield Plan		Yield	No

Add-ons to Farm Level

(provides revenue/yield or guarantee increase like underlying RP, RPhpe, YP):

SCO (Supplemental Coverage Option): county coverage from 86% to coverage of underlying RP, RPhpe, YP

ECO (Enhanced Coverage Option): county coverage from [90% or 95%] to 86%

Options for keeping premium in ranges

\$25ish per acre farmer-paid premium

1. RP-85% at enterprise levels
2. RP-85%, SCO (86% to 85%)
3. RP-80%, SCO (86% to 80%), ECO-90%

\$15ish per acre farmer-paid premium

1. RP-80% at enterprise levels
2. Add SCO (86% to 80%)

Unlimited premium

- Do it all -- RP-85%, SCO (86% to 85%), and ECO-95%

2021 Revenue Protection Premium in \$ per acre

Enterprise Units, Corn, McLean County



Coverage Level	RP	SCO	Total \$ per acre
	Enterprise	County	
50%	0.48	11.69	12.17
55%	0.73	11.69	12.42
60%	1.19	11.43	12.62
65%	1.85	11.23	13.08
70%	2.89	10.76	13.65
75%	5.02	9.38	14.40
80%	10.32	6.51	17.83
85%	22.54	1.35	24.92

ECO 90% to 86%: \$10.93 per acre
 ECO 95% to 86%: \$29.20 per acre

25ish Premium

- RP-85% (Minimum guarantee: $.85 \times 4.58 \times 200 = \779)
- Potential for \$428 per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen

Option 1

Premium: \$23.54
(RP-85%)

Option 2

Add SCO coverage from 86% to 85%
Premium: \$24.92
(\$23.54 RP + \$1.38 SCO)

Supplemental Coverage Option (SCO)

County coverage available from
86% to RP, RPhpe, YP coverage level

Have to select PLC

Eligible for RP, RPhpe, YP
(**not** ARP, ARPhpe, AYP)

Coverage of SCO mimics that of
the underlying RP, RPhpe, YP

SCO Payment, \$ per acre (86% to 85%, McLean County, Corn)

County Yield	Harvest Price										
	\$3.50	\$3.70	\$3.90	\$4.10	\$4.30	\$4.50	\$4.70	\$4.90	\$5.10	\$5.30	\$5.50
250	0	0	0	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0
230	9	0	0	0	0	0	0	0	0	0	0
220	9	9	0	0	0	0	0	0	0	0	0
210	9	9	9	0	0	0	0	0	0	0	0
200	9	9	9	9	0	0	0	0	0	0	0
190	9	9	9	9	9	0	0	0	0	0	0
180	9	9	9	9	9	9	9	10	10	11	11
170	9	9	9	9	9	9	9	10	10	11	11
160	9	9	9	9	9	9	9	10	10	11	11
150	9	9	9	9	9	9	9	10	10	11	11

Notes

- When harvest price is below projected price (\$4.58) highest payment is **\$9 per acre**
- Payments can go up when harvest price is above projected price
- About **40% of time** this trigger payment (see farmdoc daily, December 10, 2020)
- **\$1.38 farmer-paid premium** (65% premium support), Expect an **average payment of \$3.47**



25ish Premium

Option 1

(RP-85%)

- RP-85%: Minimum guarantee
 $.85 \times 4.58 \times 200 = \778
- Potential for **\$428** per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen
- Premium: \$23.54 (RP-85%)

Option 3

(RP-80%) + SCO(86% to 80%) + ECO-90%

- RP-80%: Minimum guarantee
 $.80 \times 4.58 \times 200 = \733
- Potential for **\$403** per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen
- County coverage from 90% to 80%
- Premium: \$28.76
(\$11.32 RP + \$6.51 SCO + \$10.93 ECO-90%)

SCO Payment, \$ per acre (86% to 80%, McLean County, Corn)

County Yield	Harvest Price										
	\$3.50	\$3.70	\$3.90	\$4.10	\$4.30	\$4.50	\$4.70	\$4.90	\$5.10	\$5.30	\$5.50
250	0	0	0	0	0	0	0	0	0	0	0
240	0	0	0	0	0	0	0	0	0	0	0
230	28	0	0	0	0	0	0	0	0	0	0
220	55	20	0	0	0	0	0	0	0	0	0
210	55	55	15	0	0	0	0	0	0	0	0
200	55	55	52	14	0	0	0	0	0	0	0
190	55	55	55	53	17	0	0	0	0	0	0
180	55	55	55	55	55	24	10	11	11	12	12
170	55	55	55	55	55	55	55	57	59	62	64
160	55	55	55	55	55	55	56	59	61	64	66
150	55	55	55	55	55	55	56	59	61	64	66

Notes

- When harvest price is below projected price (\$4.58) highest payment is **\$55 per acre**
- Payments can go up when harvest price is above projected price
- About **40% of time** this trigger payment (see farmdoc daily, December 10, 2020)
- **\$6.51 farmer-paid premium** (65% premium support), Expect an **average payment of \$16.37**



ECO Payment, \$ per acre (90%, McLean County, Corn)

County Yield	Harvest Price										
	\$3.50	\$3.70	\$3.90	\$4.10	\$4.30	\$4.50	\$4.70	\$4.90	\$5.10	\$5.30	\$5.50
250	0	0	0	0	0	0	0	0	0	0	0
240	32	0	0	0	0	0	0	0	0	0	0
230	37	22	0	0	0	0	0	0	0	0	0
220	37	37	15	0	0	0	0	0	0	0	0
210	37	37	37	12	0	0	0	0	0	0	0
200	37	37	37	37	13	0	0	0	0	0	0
190	37	37	37	37	37	18	4	4	4	4	4
180	37	37	37	37	37	37	38	39	41	42	44
170	37	37	37	37	37	37	38	39	41	42	44
160	37	37	37	37	37	37	38	39	41	42	44
150	37	37	37	37	37	37	38	39	41	42	44

Notes

- When harvest price is below projected price (\$4.59) highest payment is **\$37 per acre**
- Payments can go up when harvest price is above projected price
- About **50% of time** this trigger payment (see farmdoc daily, December 10, 2020)
- **\$10.93 farmer-paid premium** (44% premium support), Expect an **average payment of \$17.18**



15ish guarantee

Option 1: RP-80%

- RP-80%: Minimum guarantee
 $0.85 \times 4.58 \times 200 = \778
- Potential for **\$428** per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen
- **Premium: \$11.32**

Option 2: Add SCO

- RP-80%: Minimum guarantee:
 $0.85 \times 4.58 \times 200 = \778
- Potential for **\$403** per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen
- **County-coverage from 86% to 80%**
- **Premium: \$17.83** (\$11.32 RP + \$6.51 SCO)

Unlimited budget (RP-85%, SCO, and ECO-95%)

- RP-85% (Minimum guarantee: $.85 \times 4.58 \times 200 = \778)
- Potential for \$428 per acre prevent plant payment
- Over time, premiums will exceed farmer-paid premium, need drought years to make that happen
- County coverage from 95% to 80%
- Premium: \$54.12 (\$23.54 RP-85%, \$1.38 SCO, \$29.20 ECO-95)

ECO Payment, \$ per acre (95%, McLean County, Corn)

County Yield	Harvest Price										
	\$3.50	\$3.70	\$3.90	\$4.10	\$4.30	\$4.50	\$4.70	\$4.90	\$5.10	\$5.30	\$5.50
250	45	0	0	0	0	0	0	0	0	0	0
240	78	32	0	0	0	0	0	0	0	0	0
230	82	67	24	0	0	0	0	0	0	0	0
220	82	82	61	19	0	0	0	0	0	0	0
210	82	82	82	58	18	0	0	0	0	0	0
200	82	82	82	82	59	21	6	6	7	7	7
190	82	82	82	82	82	64	51	53	55	57	59
180	82	82	82	82	82	82	85	88	92	95	99
170	82	82	82	82	82	82	85	88	92	95	99
160	82	82	82	82	82	82	85	88	92	95	99
150	82	82	82	82	82	82	85	88	92	95	99

Notes

- When harvest price is below projected price (\$4.58) highest payment is **82 per acre**
- Payments can go up when harvest price is above projected price
- About **63% of time** this trigger payment (see farmdoc daily, December 10, 2020)
- **\$29.20 farmer-paid premium** (44% premium support), Expect an **average payment of \$45.88**



RP, ECO, SCO

- Comes down to a large extent to how much you want to pay in premium
- 25ish
 - RP-85% (with SCO)
 - Rp-80%, SCO, and ECO-90%

We would like to thank all of our farmdoc sponsors



farmdoc



farmdocDAILY

Upcoming Webinars

FAST Tools and Financial Planning

11:00 to noon CT, Thursday March 11th

FAST is a set of Microsoft Excel spreadsheets that can be used to evaluate management decisions on farm. We will demonstrate use of the Farm Projections Tool.

Thank You for joining us!

Please submit your questions



ILLINOIS Our Sites: [farmdoc](#) [farmdocDAILY](#) [Farm Policy News](#)

farmdocDAILY

[Market Prices](#) [Authors](#) [By Month](#) [Categories](#) [Series](#) [Tools](#) [Webinars/IFES](#) [Sponsors/Donate](#) [About Us](#)

EDUCATIONAL PARTNERS:
[Dept of ACE](#) [FBFM](#) [EXTENSION](#)

Subscribe for Daily Email Updates

Connect on Social Media [Twitter](#) [Facebook](#) [Instagram](#) [YouTube](#) [LinkedIn](#)

Visit us at

farmdocDAILY

.Illinois.edu

Subscribe for Latest News Updates

[farmdoc's coverage of the Coronavirus and Ag](#)

Latest Article

Was the Final USDA Estimate of the 2020 U.S. Corn Yield an Outlier?
March 3, 2021
Scott Irwin
The USDA released final estimates of yield, acreage, and production for the 2020 corn crop on January 12th in its Crop Production Annual Summary report. The final estimate of yield was only 172 bushels per acre, which was a substantial...

[Read the Article](#)

Corporate Sponsor TIAA Center for Farmland Research	Platinum Sponsor COMPEER FINANCIAL
Platinum Sponsor FARM CREDIT ILLINOIS Helping Farm Families Succeed	Platinum Sponsor FS GROWMARK
Platinum Sponsor www.ilcorn.org	Platinum Sponsor ILLINOIS SOYBEAN ASSOCIATION

[See all sponsors](#)

ILLINOIS

Agricultural & Consumer Economics

COLLEGE OF AGRICULTURAL, CONSUMER & ENVIRONMENTAL SCIENCES

[See the Latest News on Social Media](#)

Recent Articles

Weekly Farm Economics RP, ECO, and SCO Tradeoffs March 2, 2021	Gardner Policy Series Food Insecurity on College Campuses: FAQs February 25, 2021	Weekly Farm Economics Potential Payouts from Enhanced Coverage Option
--	---	--



For the webinar archives and **5-minute farmdoc**
Subscribe to our channel [YouTube.com/farmdocVideo](https://www.youtube.com/farmdocVideo)

