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farmdoc

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Topics

- Farm Bill program decision
 - ARC vs PLC
- Crop Insurance
 - 2024 Projected Prices and Volatilities
 - Impact on guarantees and premiums
 - Decision Tools
 - Thoughts on 2024 strategies



















Acronyms and Clarifications

Farm Bill Programs

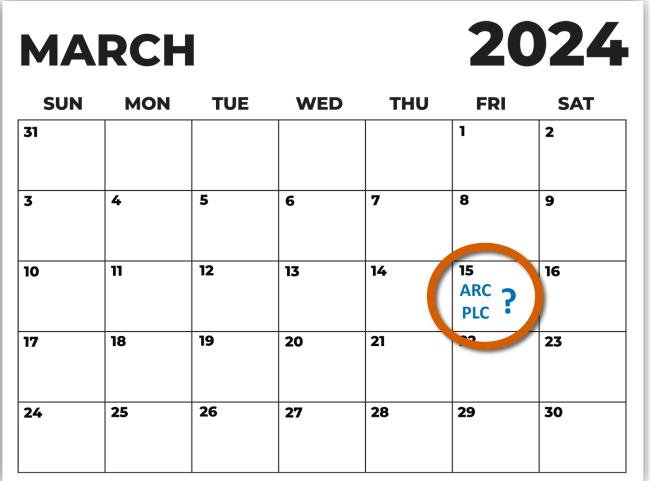
- Price Loss Coverage (PLC)
- Agricultural Risk Coverage (ARC)
 - County option (ARC-CO)
 - Individual farm option (ARC-IC)

Crop Insurance

- Individual plans (COMBO product)
 - Revenue protection (RP)
 - Revenue Protection with Harvest Price Exclusion (RP-HPE)
 - Yield Protection (YP)
- Area plans (ARPI)
- Supplemental Area Plans
 - Supplemental Coverage Option (SCO)
 - Enhanced Coverage Option (ECO)

2024 Commodity Title Choices ARC vs PLC MARCH 20

have until March 15th to make decision



but do not wait until the 15th



The Decision Have until March 15

Farm	Program Crop	Crop Choice			
FSA Farm	Corn	PLC/ARC-CO			
1	Soybeans	PLC/ARC-CO			
FSA Farm	Corn	PLC/ARC-CO			
2	Soybeans	PLC/ARC-CO			

The Decision Have until March 15

Farm	Program Crop	Crop Choice	OR	
FSA Farm	Corn	PLC/ARC-CO	ARC-IC	
1	Soybeans	PLC/ARC-CO	ARC-IC	
FSA Farm	Corn	PLC/ARC-CO	ARC-IC	
2	Soybeans	PLC/ARC-CO	ARC-IC	

Situations where ARC-IC might be considered:

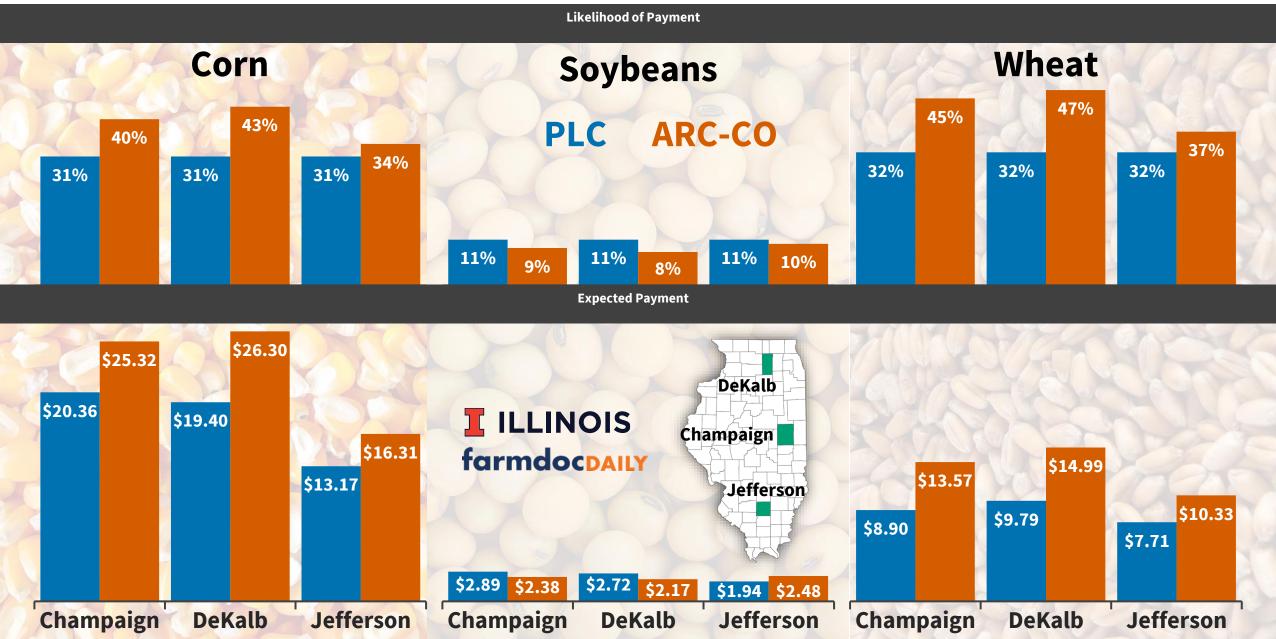
- Farms with significant production variability
- Highly productive farms (farm benchmark yield significantly higher than county benchmark yield)
- "High" share of FSA farm acreage planted to non-program crops

farmdocdaily.illinois.edu/2019/10/the-case-for-looking-at-the-arc-ic-arc-individual-program-option.html

Expectations for 2024 MYA prices

Soybeans Wheat Corn **Expected MYA** \$4.40 \$11.20 \$6.00 **Price PLC Effective** \$4.01 \$9.26 \$5.50 **Reference Price ARC Benchmark** \$4.85 \$11.12 \$6.21 **Price**

Likelihoods and Expected Payments for PLC and ARC-CO in 2024



Commodity Title Choice - Summary

Corn and wheat

 ARC-CO more likely to trigger and larger expected payments

Soybeans

 Relatively low chance of triggering payments and small expected payments for both programs

Wanting to use SCO?

farmdoc ARC/PLC Decision Tools

Farm Bill Online and Spreadsheet Tools

Gardner Program Payment Calculator (ARC/PLC)

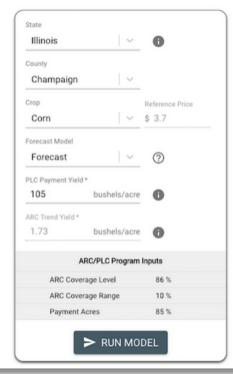
The Gardner Payment Calculator provides estimates of expected payments and likelihood of payments for ARC-CO and PLC. Payment estimates are provided for the program years from 2019 to 2023. Users can select the state, county, and crop combination that they wish to consider.

If you are having trouble registering please view the fag or watch the video below.

2024 Farm Bill What if Tool

This program calculates Agricultural Risk Coverage for County Coverage (ARC-CO), Price Loss Coverage (PLC) payments, and ARC at the Individual Level (ARC-IC). County yields and market year average (MYA) prices are brought in for a user-specified state-county-crop combination. Users then can change county yields and prices to see ARC-CO and PLC payments under those yields and prices.

Go to Payment Calculator



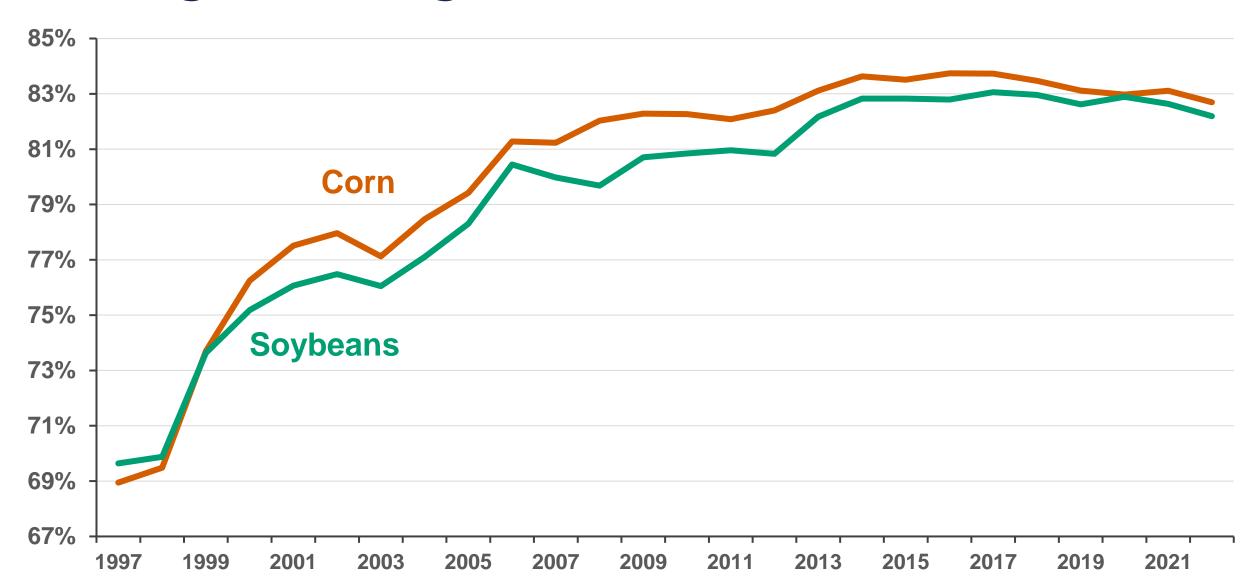
Download FAST Tool



Crop Insurance Projected prices, guarantees and premiums



Average Coverage Level on RP Policies, Illinois





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Base Contract: CBOT December Corn 2024 (ZCZ24)

Projected Price

Price Volatility

\$4.66

0.19

per Bushel

Status	Released	Released
Start Date	2/1/2024	2/1/2024
End Date	2/29/2024	2/29/2024

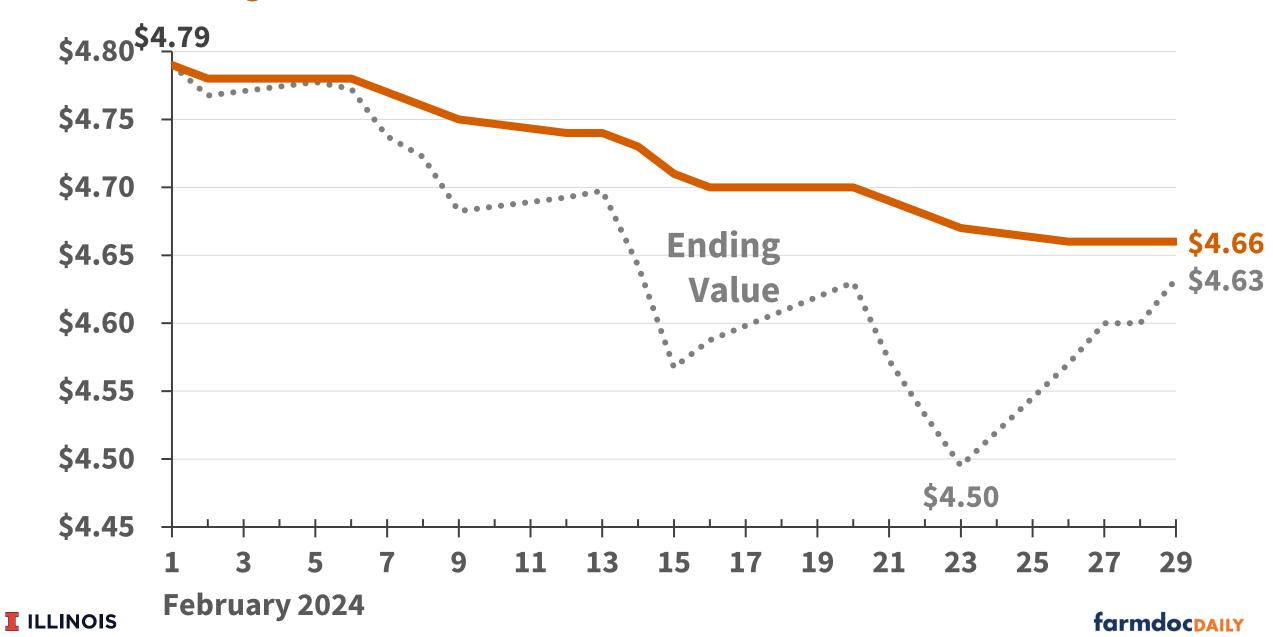
https://prodwebnlb.rma.usda.gov/apps/PriceDiscovery/



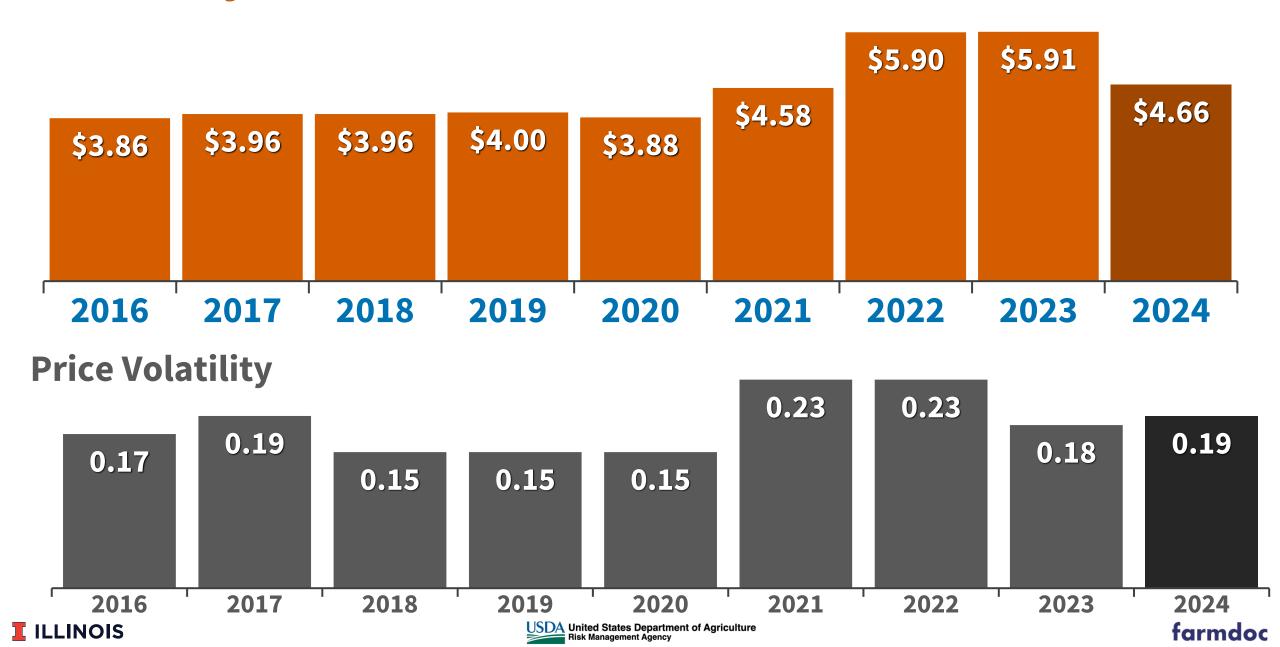
Date	Ending Value	Price	Volatility
02/01	\$4.79000	\$4.7900	
02/02	\$4.76750	\$4.7800	
02/05	\$4.77750	\$4.7800	
02/06	\$4.77250	\$4.7800	
02/07	\$4.73750	\$4.7700	
02/08	\$4.72250	\$4.7600	
02/09	\$4.68250	\$4.7500	
02/12	\$4.69250	\$4.7400	
02/13	\$4.69750	\$4.7400	
02/14	\$4.64250	\$4.7300	
02/15	\$4.56750	\$4.7100	
02/16	\$4.58750	\$4.7000	
02/20	\$4.63000	\$4.7000	
02/21	\$4.57250	\$4.6900	
02/22	\$4.53250	\$4.6800	
02/23	\$4.49500	\$4.6700	0.1905
02/26	\$4.57000	\$4.6600	0.1878
02/27	\$4.60000	\$4.6600	0.1886
02/28	\$4.63250	\$4.6600	0.1893
02/29	\$4.63250	\$4.6600	0.1867



Corn Projected Price for Illinois



Corn Projected Price for Illinois



Base Contract: CBOT November Soybeans 2024 (ZSX24)

Projected Price

Price Volatility

\$11.55

0.15

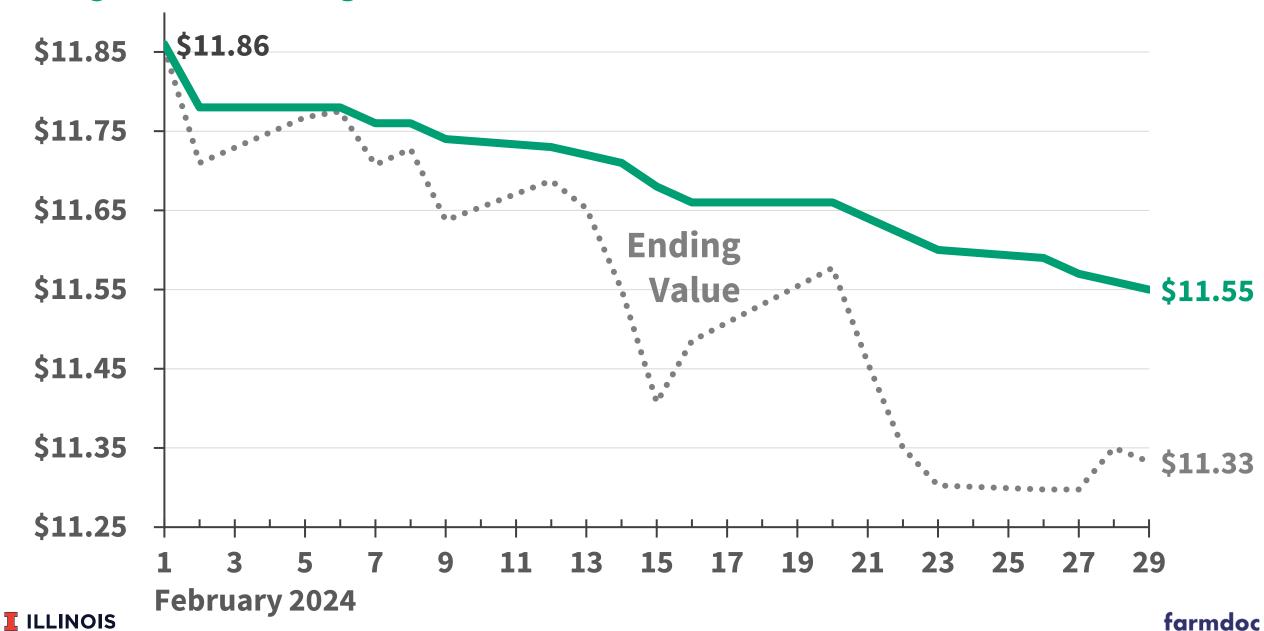
per Bushel

Status	Released	Released
Start Date	2/1/2024	2/1/2024
End Date	2/29/2024	2/29/2024

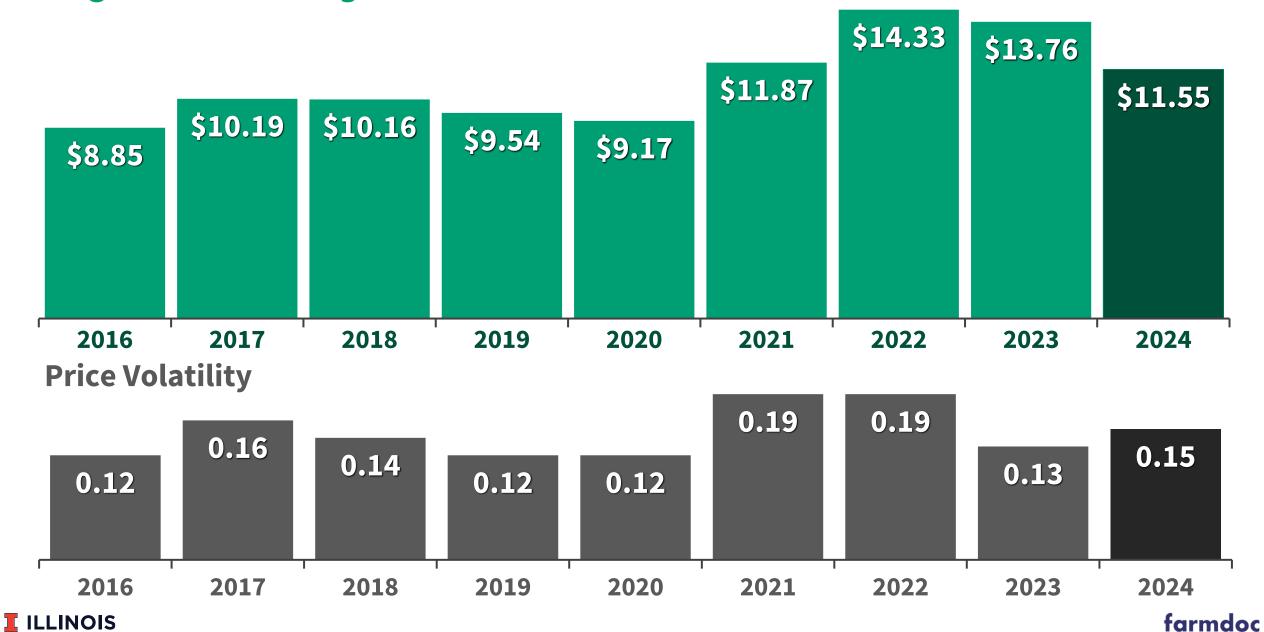
Date	Ending Value	Price	Volatility
02/01	\$11.86	\$11.86	
02/02	\$11.71	\$11.78	
02/05	\$11.77	\$11.78	
02/06	\$11.78	\$11.78	
02/07	\$11.71	\$11.76	
02/08	\$11.73	\$11.76	
02/09	\$11.64	\$11.74	
02/12	\$11.69	\$11.73	
02/13	\$11.65	\$11.72	
02/14	\$11.55	\$11.71	
02/15	\$11.41	\$11.68	
02/16	\$11.49	\$11.66	
02/20	\$11.58	\$11.66	
02/21	\$11.46	\$11.64	
02/22	\$11.35	\$11.62	
02/23	\$11.30	\$11.60	0.1524
02/26	\$11.30	\$11.59	0.1514
02/27	\$11.30	\$11.57	0.153
02/28	\$11.35	\$11.56	0.1539
02/29	\$11.33	\$11.55	0.1522



Soybean Projected Price for Illinois



Soybean Projected Price for Illinois



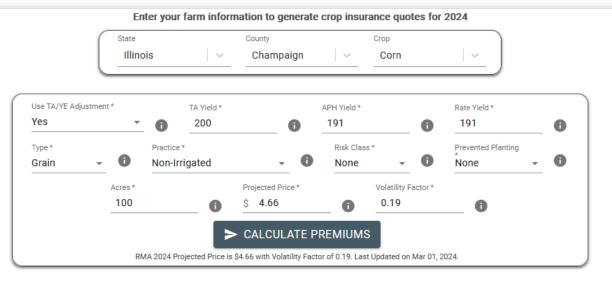
Good News, Bad News, Bad News

- Lower premiums in 2024 (compared with past two years)
- Lower guarantees on revenue products; yield losses compensated at lower price for yield products
- Production costs remain high

Champaign County, Illinois

\$4.66 x 200 bu TA-APH yield = \$932 /acre Avg Non-land Costs = \$800+ Avg Land Costs = \$350+

	RP minimum and RP-HPE guarantees (\$/acre)	YP guarantees (bu/acre)
0.85	\$792	170
0.80	\$746	160
0.75	\$699	150
0.70	\$652	140
0.65	\$606	130
0.60	\$559	120
0.55	\$513	110



Premiums Per Acre - Individual Farm Level Policies

	Revenue Protection			Revenue Protection With Harvest Price Exclusion			Yield Protection					
Coverage Level	Enterprise	Basic	Optional	Min. Revenue Guarantee	Enterprise	Basic	Optional	Revenue Guarantee	Enterprise	Basic	Optional	Yield Guarantee (bu/acre)
50%	0.71	1.17	1.78	466	0.57	0.94	1.34	466	0.57	0.95	1.46	100
55%	1.06	1.94	2.85	513	0.73	1.34	1.83	513	0.81	1.45	2.18	110
60%	1.50	2.84	4.00	559	0.86	1.69	2.39	559	1.11	1.99	2.94	120
65%	2.10	4.63	6.32	606	1.09	2.57	3.72	606	1.52	3.11	4.50	130
70%	3.04	6.76	8.98	652	1.56	3.72	5.17	652	2.08	4.29	6.10	140
75%	5.50	11.82	15.03	699	2.74	6.42	8.68	699	3.42	6.91	9.60	150
80%	11.00	19.80	24.28	746	5.60	11.02	14.50	746	6.40	10.99	15.01	160
85%	22.25	32.11	38.19	792	11.69	18.17	23.10	792	12.02	16.83	22.58	170

Supplemental and Enhanced Coverage Options (SCO and ECO)

 Requires an underlying individual plan (RP, RP-HPE, or YP)

 Provides area-based (county) coverage that mimics underlying policy

 Basis risk: farm and county losses don't always align **ECO Coverage = 90 or 95%**SCO Coverage = 86%

Individual Coverage Level

- Acres must be enrolled in PLC to be eligible for SCO
- No eligibility ties to ARC/PLC for ECO

ECO

SCO

Individual
Insurance Plan
(RP, RP-HPE,
or YP)

SCO and ECO

Champaign Co, IL

SCO					
Coverage					
Level	SCO				
	\$ per acre				
50% - 86%	10.87				
55% - 86%	10.83				
60% - 86%	10.80				
65% - 86%	10.15				
70% - 86%	9.31				
75% - 86%	7.86				
80% - 86%	5.36				
85% - 86%	1.16				

	ECO					
	ECO-90%	ECO-95%				
	\$ per acre					
ECO	9.42	25.64				

Example: 200 bu TA-APH	Guarantee (\$/acre)
RP 80%	\$746
RP 85%	\$792
RP 80%+SCO+ECO 90%	\$839*
RP 85%+SCO+ECO 90%	\$839*
RP 80%+SCO+ECO 95%	\$885*
RP 85%+SCO+ECO 95%	\$885*

Cor	nbined F	Policy Pren	niums	RP	RP		
Cov	/erage		RP	sco	sco	RP	RP
L	evel	RP	SCO	ECO-90%	ECO-95%	90%	EC0-95%
				\$ per a	cre		
	50%	0.71	11.58	21.00	37.22	10.13	26.35
	55%	1.06	11.89	21.31	37.53	10.48	26.70
	60%	1.50	12.30	21.72	37.94	10.92	27.14
	65%	2.10	12.25	21.67	37.89	11.52	27.74
	70%	3.04	12.35	21.77	37.99	12.46	28.68
	75%	5.50	13.36	22.78	39.00	14.92	31.14
	80%	11.00	16.36	25.78	42.00	20.42	36.64
	85%	22.25	23.41	32.83	49.05	31.67	47.89



Crop Insurance Decisions – 2024

Premium Calculato

The 2024 iFarm Crop insurance Premium Calculator

allows users to develop highly customized estimates

of their crop insurance premiums, and compare

Crop Insurance Premium

Last Updated: March 1, 2024

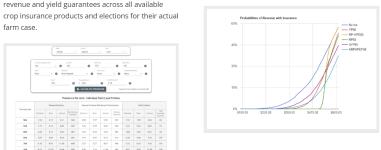
Calculator

\$ Payment Evaluator

Crop Insurance Payment Evaluator

The 2024 iFarm Crop Insurance Payment Evaluator provides helpful information to producers comparing costs and risk reductions across their available crop insurance alternatives.

Last Updated: March 2, 2024

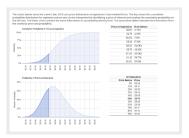


Price Distribution

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.

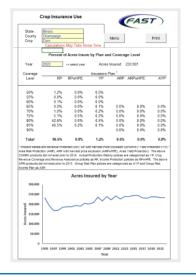


ce Summary of Business Tool

Crop Insurance Summary of Business Tool

Last Updated: April 17, 2023

This program calculates crop insurance historical use and performance back to 1996...



Crop Insurance Decision Tool

Last Updated: March 1, 2024

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. Learn more on the farmdoc Daily crop insurance archive.

Catch up with the farmdoc Daily Article

View our Youtube Guide here.



PACE IO

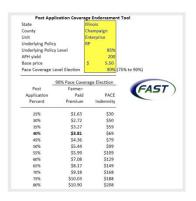
Post Application Coverage Endorsement Tool

Last Updated: January 31, 2024

This program calculates premiums for PACE: Post Application Coverage Endorsement Insurance.

Catch up with the farmdoc Daily Article

View our Youtube Guide here.



ECO/SCO Payment Estimator

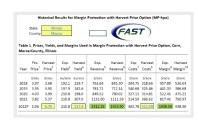
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Margin Protection Tool

Last Updated: September 25, 2023

With this program, a user can examine the performance of margin protection insurance.

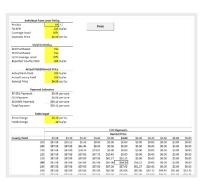
Catch up with the farmdoc Daily Article



ECO/SCO Payment Estimator

Last Updated: January 22, 2024

With this program, a user can estimate payments for individual farm level crop insurance products in addition to SCO and ECO.



Suite of free tools at **farmdoc** and **farmdocDAILY** to allow users to calculate crop insurance premiums, probabilities of payment, degree of risk reduction, future price information, and policy decisions related to ECO/SCO, cover crops, PACE, and other crop-risk management information.

farmdoc.illinois.edu/crop-insurance



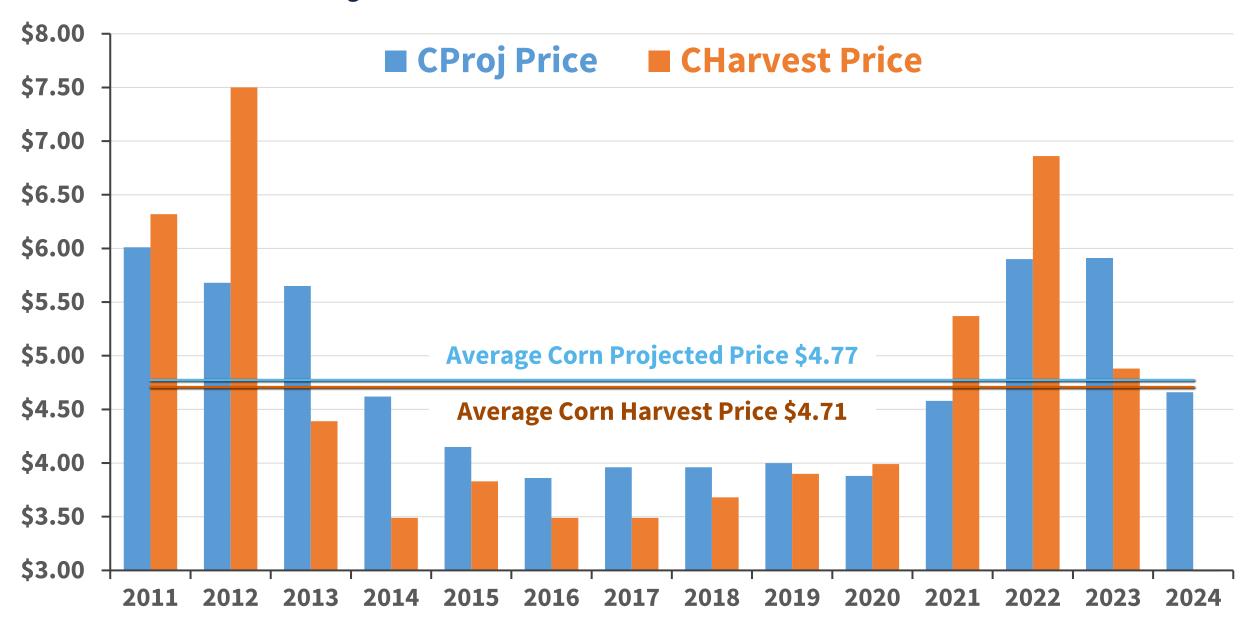
Projected and Harvest Price Histories2011 to present

Projected Prices, Harvest Prices, and Volatilies, Corn and Soybeans, SCD 3/15 (RMA)

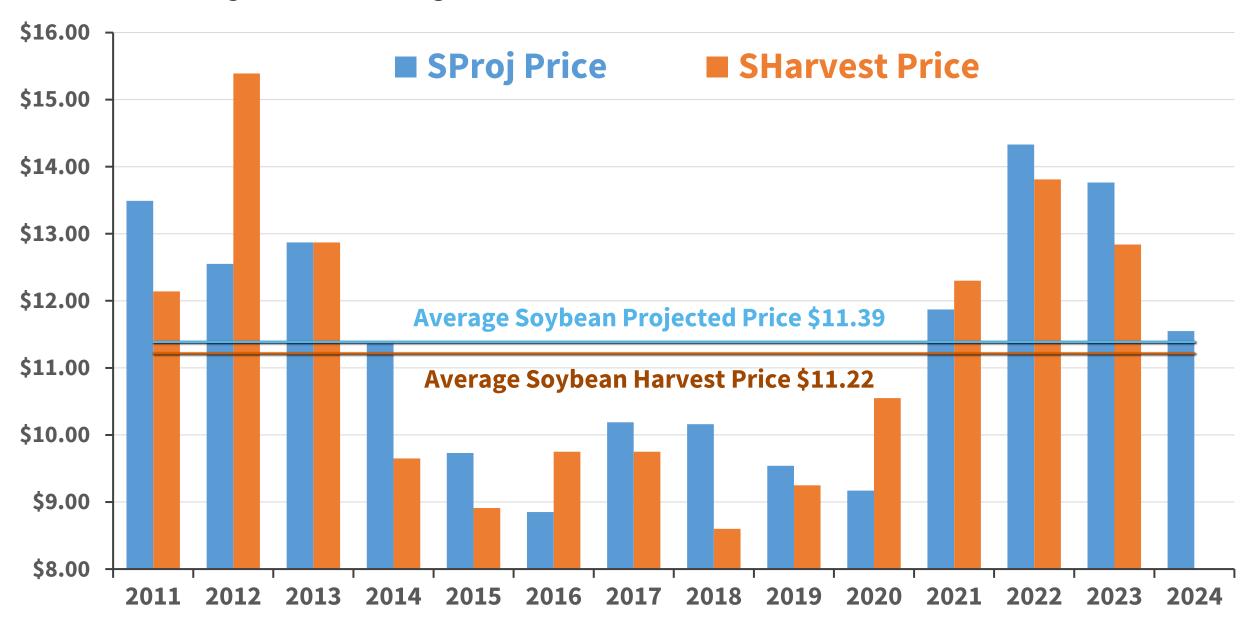
Corn	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Proj Price	6.01	5.68	5.65	4.62	4.15	3.86	3.96	3.96	4.00	3.88	4.58	5.90	5.91	4.66
Harvest Price	6.32	7.50	4.39	3.49	3.83	3.49	3.49	3.68	3.90	3.99	5.37	6.86	4.88	
Volatility	0.29	0.22	0.20	0.19	0.21	0.17	0.19	0.15	0.15	0.15	0.23	0.23	0.18	0.19
Soybeans														
Proj Price	13.49	12.55	12.87	11.36	9.73	8.85	10.19	10.16	9.54	9.17	11.87	14.33	13.76	11.55
Harvest Price	12.14	15.39	12.87	9.65	8.91	9.75	9.75	8.60	9.25	10.55	12.30	13.81	12.84	
Volatility	0.23	0.18	0.17	0.13	0.16	0.12	0.16	0.14	0.12	0.12	0.19	0.19	0.13	0.15



Historic Corn Projected Prices & Harvest Prices 2011-24



Historic Soybean Projected Prices & Harvest Prices 2011-24



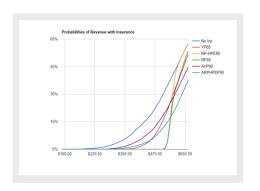
2024 Crop Insurance Payment Evaluator

\$ Payment Evaluator

Crop Insurance Payment Evaluator

Last Updated: March 2, 2024

The 2024 *iFarm* Crop Insurance Payment Evaluator provides helpful information to producers comparing costs and risk reductions across their available crop insurance alternatives.



- Expected payments
- Frequency of payments
- net cost of insurance
- Risk reduction
- Likelihood of revenue for corn & soybean producers under current conditions

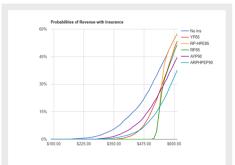
2024 Crop Insurance Payment Evaluator

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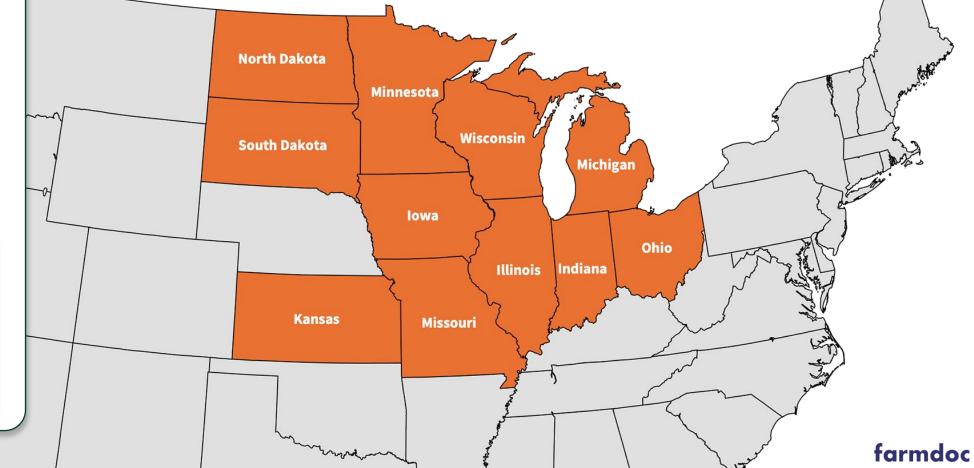
Last Updated: March 2, 2024

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I ILLINOIS

11 States, all counties, representative case farm by county



2024 Crop Insurance Payment Evaluator

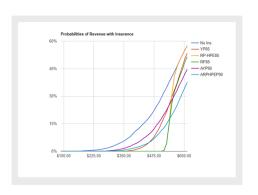
\$

Payment Evaluator

Crop Insurance Payment Evaluator

Last Updated: March 2, 2024

The 2024 *iFarm* Crop Insurance Payment Evaluator provides helpful information to producers comparing costs and risk reductions across their available crop insurance alternatives.



Example county used to demonstrate
- note that insurance offering rates
can vary widely within a small
geographic region – important to
consult qualified insurance agent

Evaluator - Enter your farm information to evaluate crop insurance options for 2024



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 Evaluat	or Reve	enue Risl	(Info		
Farm Average Yield	1 204.44 bu/acre			Farm Yield (b	u/acre) County	Yield (bu/acre)
Farm Std Dev of Yield	39.64 bu/acre	30% of years yie	lds below	185.57		190.09
County Average Yield	204.44 bu/acre	20% of years yie	lds below	171.60		178.75
County Std Dev of Yield	1 31.71 bu/acre	10% of years yie	lds below	151.42		162.01
Current Futures Price	\$4.59 /bu	5% of years yie	lds below	134.29		147.42
Std Dev of Price	e 0.94/bu	Fa	arm Trend-A	djusted APH	204.44 bu/acre	
Average Harvest Cash Basis	3 0.35/bu		Со	unty TA Rate	1.92 bu/acre/year	
Average Gross Crop Rev	\$852 /acre		Fa	rm APH (ref)	194.40 bu/acre	

Farm TA Yield (bu/acre): 204.44 Dec. 24 Futures Price: \$4.59

RMA 2024 Projected Price: \$4.66

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.

RMA 2024 Projected Price is \$4.66 with Volatility Factor of 0.19. Last Updated on Mar 01, 2024.



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Farm TA Yield (bu/acre): 204.44 Dec. 24 Futures Price: \$4.59 RMA 2024 Projected Price: \$4.66

Individual Farm Level Policies (Basic Unit)

Coverage		Reve	nue Protection	n (RP)		Revenue Protection With Harvest Price Exclusion (RP-HPE)					Yield Protection (YP)					
Level	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%	1.19	0.84	1.1%	0.35	852	0.96	0.43	0.8%	0.53	852	0.96	0.55	0.8%	0.41	852	
55%	1.96	1.77	2.3%	0.19	852	1.35	0.99	1.6%	0.36	852	1.47	1.08	1.5%	0.39	852	
60%	2.88	3.65	4.8%	-0.77	853	1.72	2.24	3.5%	-0.52	853	2.02	2.06	2.6%	-0.04	852	
65%	4.69	6.92	7.9%	-2.23	855	2.60	4.46	6.0%	-1.86	854	3.14	3.66	4.3%	-0.52	853	
70%	6.85	12.22	12.7%	-5.37	858	3.77	8.19	9.7%	-4.42	857	4.35	6.28	7.0%	-1.93	854	
75%	11.99	20.24	18.9%	-8.25	861	6.51	13.99	15.1%	-7.48	860	6.99	10.37	10.4%	-3.38	856	
80%	20.09	31.91	27.1%	-11.82	864	11.17	22.64	21.8%	-11.47	864	11.12	16.45	15.2%	-5.33	858	
85%	32.61	48.22	37.1%	-15.61	868	18.41	34.79	29.8%	-16.38	869	17.03	25.06	21.2%	-8.03	860	

Farm TA Yield (bu/acre): 204.44 Dec. 24 Futures Price: \$4.59 RMA 2024 Projected Price: \$4.66

County Level Products

Coverage		Area Rev	venue Protecti	on (ARP)		Area Revenu	ue Protection	With Harvest F	Price Exclusio	n (ARP-HPE)	Area Yield Protection (AYP)					
Level	Est. Premium (\$/acre)	Avg. Payment (\$/acre)	Rayment Erequency .(%)	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)	Axg. Payment (\$/acre)	Payment Erequency (%)	Net Cost (\$/acre)	Avg. Gross Rev (\$/acre)	
70%	4.85	38.62	14.7%	-33.77	871	4.65	23.73	19.4%	-19.08	886	3.97	18.03	8.9%	-14.06	866	
75%	9.28	65.61	24.2%	-56.33	886	7.96	43.11	31.4%	-35.15	910	5.38	29.35	14.6%	-23.97	876	
80%	16.33	102.50	35.4%	-86.17	906	13.58	69.92	45.4%	-56.34	941	8.37	45.90	22.7%	-37.53	890	
85%	29.22	148.93	47.7%	-119.71	928	22.92	104.31	60.3%	-81.39	978	11.00	69.01	33.6%	-58.01	910	
90%	48.48	203.04	60.2%	-154.56	949	35.65	144.93	74.7%	-109.28	1020	16.35	99.64	46.9%	-83.29	936	

RMA 2024 Projected Price is \$4.66 with Volatility Factor of 0.19. Last Updated on Mar 01, 2024.



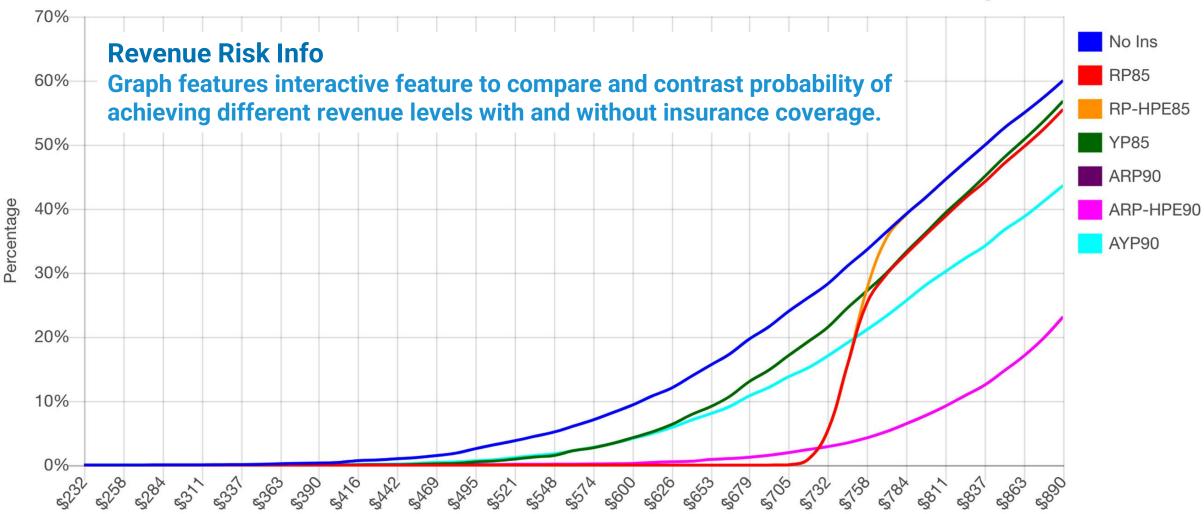


State County Crop Acres *

Illinois Champaign Crop Acres *

Farm TA Yield (bu/acre): 204.44 Dec. 24 Futures Price: \$4.59 RMA 2024 Projected Price: \$4.66

Probabilities of Corn Revenue (per acre) with Insurance - Champaign, Illinois



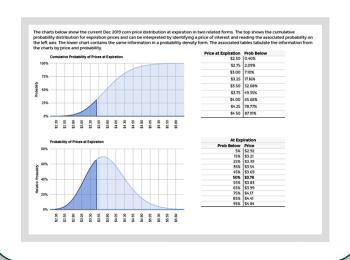


Price Distribution

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.



Price Distribution Tool

- Near real-time tool using current option market trade data to assess the probabilities of price movements from current date to expiration of the underlying contract
- Corn & Soybeans
- Nearby and major traded contract months with volume
- Allows testing of target price levels



Select Crop and Contract Month Returns Market's Current Implied Price Probabilities



Probability Below	Price at Expiration
5%	\$3.22
15%	\$3.64
25%	\$3.92
35%	\$4.15
45%	\$4.38
50%	\$4.49
55%	\$4.61
65%	\$4.86
75%	\$5.15
85%	\$5.54
95%	\$6.27

Enter Price to Evaluate: \$4.66

The implied distribution indicates that there is a 58% probability that the price will be below \$5.91 at expiration.





Select Crop and Contract Month Returns Market's Current Implied Price Probabilities



Probability Below	Price at Expiration
5%	\$8.70
15%	\$9.57
25%	\$10.12
35%	\$10.59
45%	\$11.03
50%	\$11.25
55%	\$11.48
65%	\$11.96
75%	\$12.51
85%	\$13.24
95%	\$14.57

Enter Price to Evaluate: \$4.66

The implied distribution indicates that there is a 58% probability that the price will be below \$5.91 at expiration.



Crop Insurance Dates and Guarantee

Final planting date

- Date after which you can claim prevented planting

Late planting period

- 20 day after final planting period for corn, 25 days for soybeans
- Can plant, but crop insurance guarantee goes down 1% per day

After late planting period

- Insurance guarantee is 60% of original
- Can plant another crop for harvest,
 but prevented planting payment is 35% of original amount

IILLINOIS

Corn Final Planting Date June 15 **May 31 I**ILLINOIS

Prevented
Planting Details

Final Planting Dates

- Date you can take a prevented planting payment for crop
- Can plant after, but guarantee is reduced
 - 1% per day during late planting period
 - 60% of initial guarantee
 after late planting period



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