

Planning on Corn Belt Farms for 2023 Production

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Krista Swanson

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Gary Schnitkey

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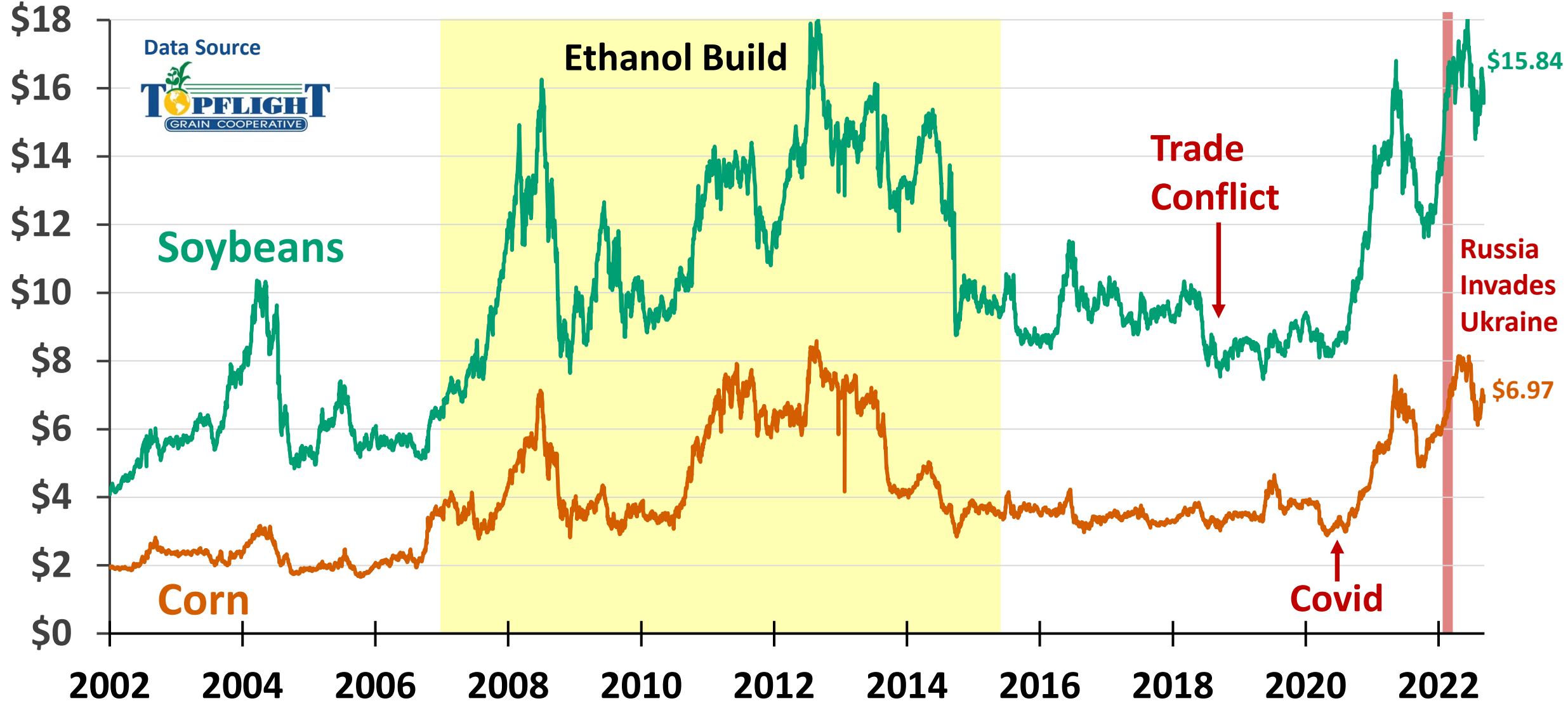
Gary Schnitkey

Topics

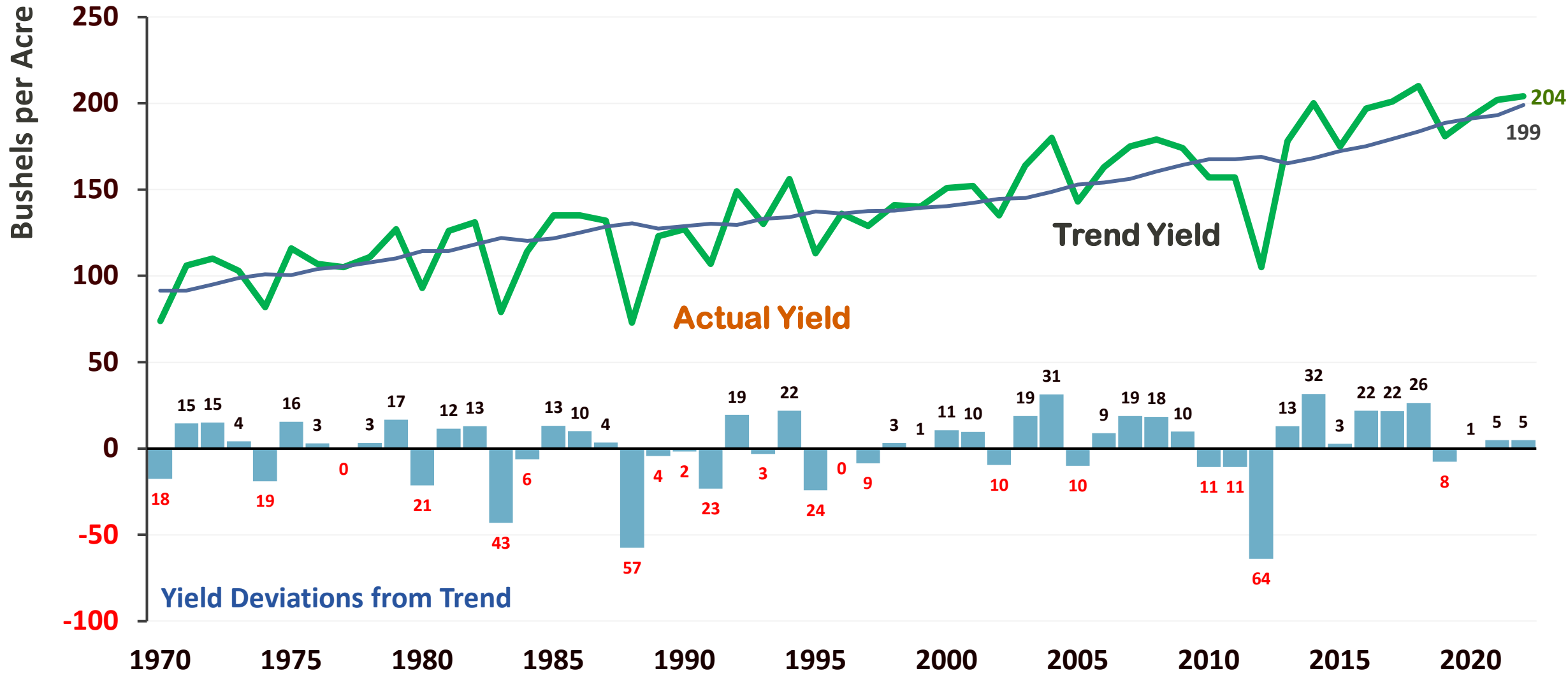
- Income Review & 2023 Farm Returns Outlook
- Decisions for 2022
 - View of Long-Run Outlook
 - Margin Protection
 - Cash Rents
 - Fertility
 - Crops
 - Marketing

Corn and Soybean Cash Prices, Central Illinois

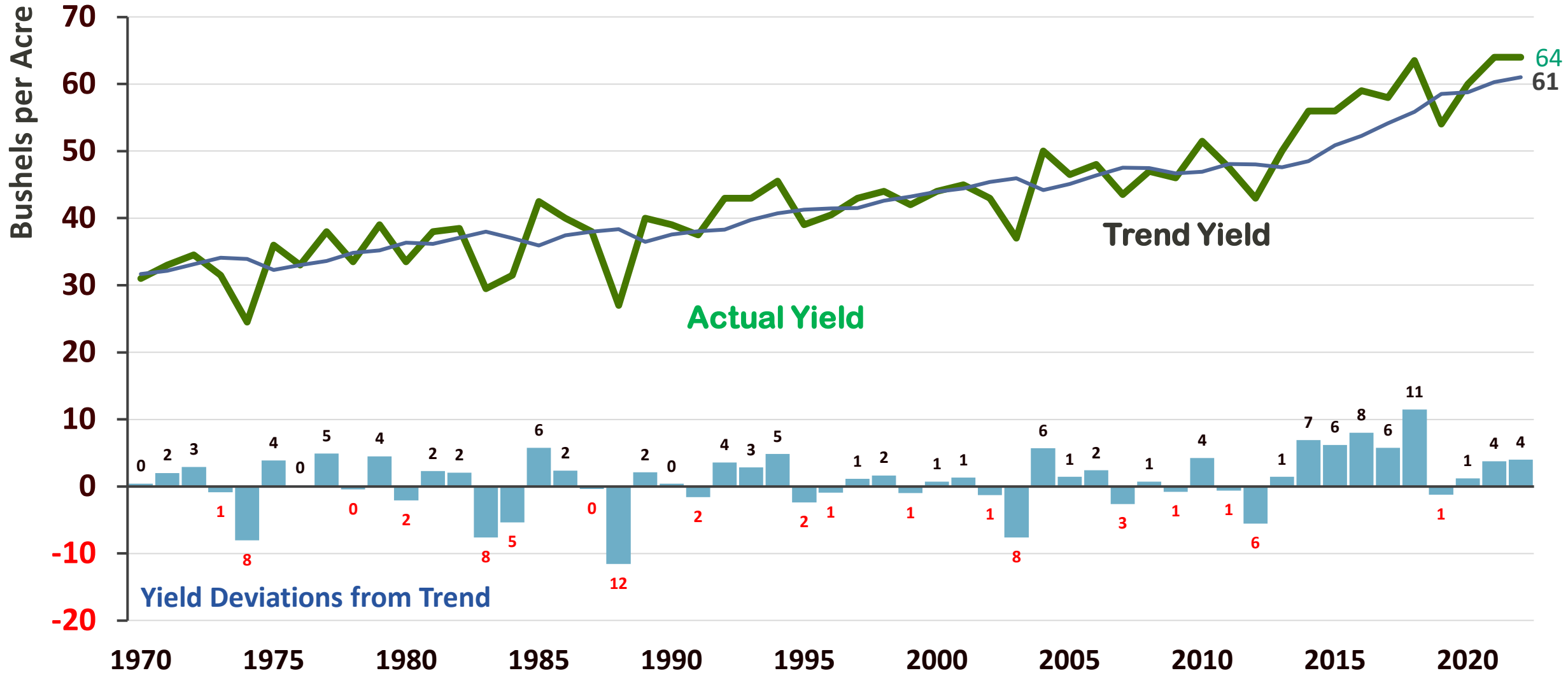
Last Updated September 9, 2022



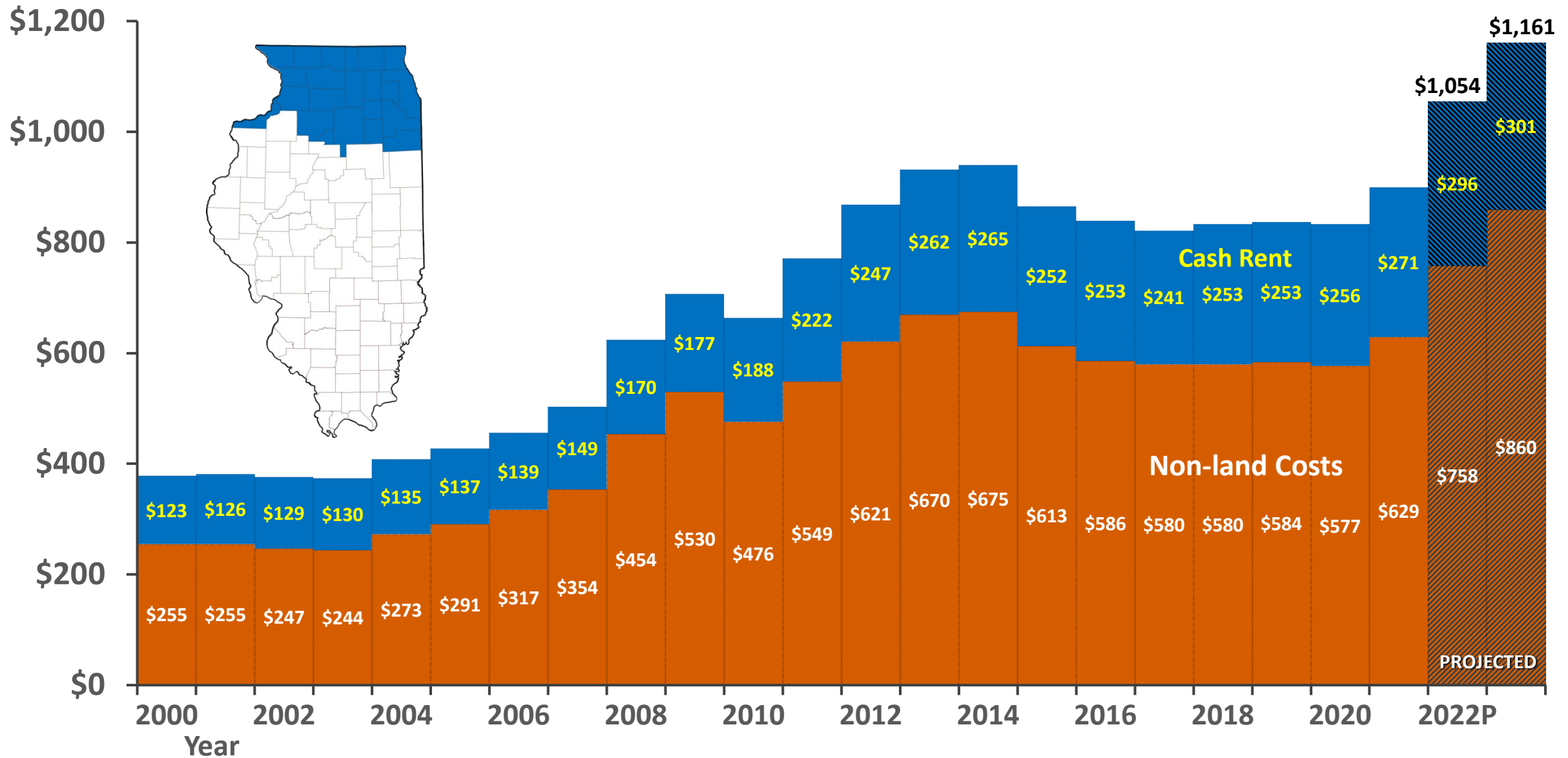
Illinois Corn Yields, 1970 to 2022P



Illinois Soybean Yields, 1970 to 2022P

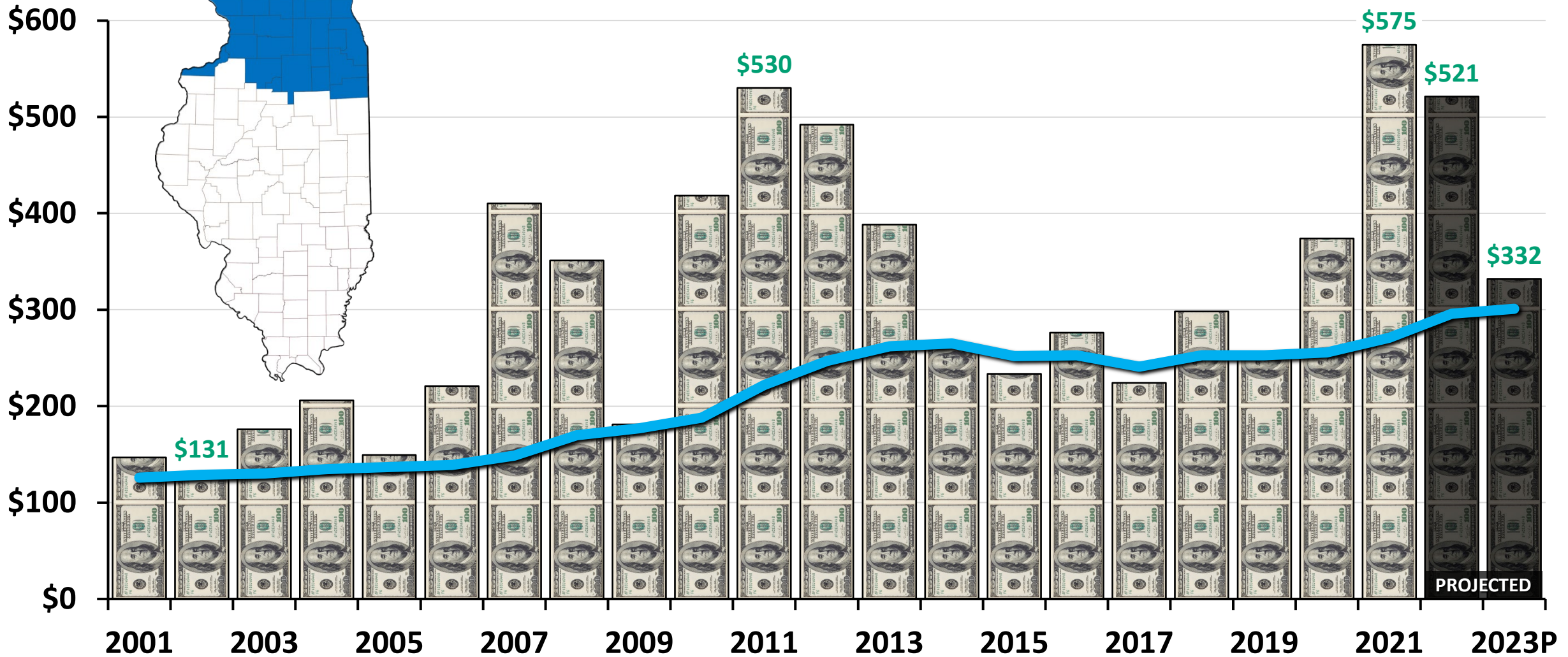


Total Costs of Producing Corn for Northern Illinois in \$ per acre



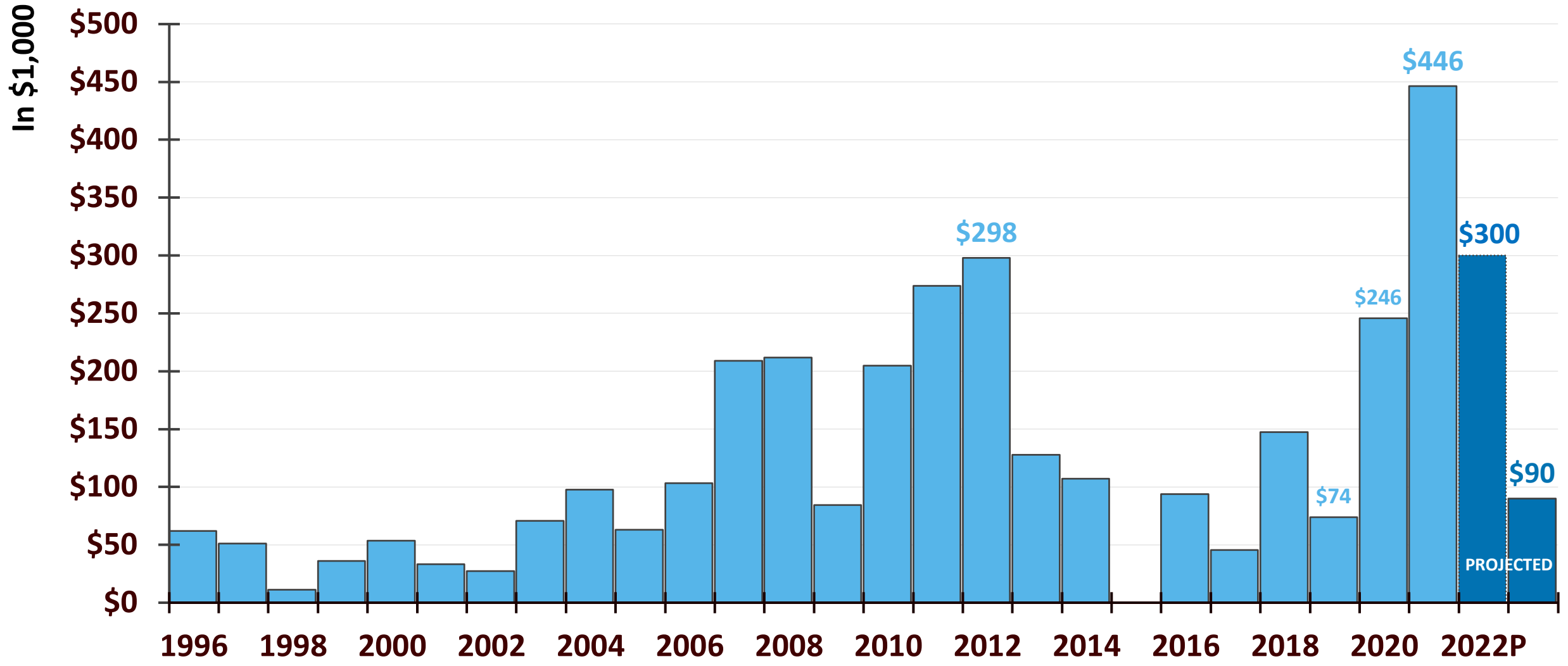
Source: Illinois Farm Business Farm Management

Operator and Land Return and Cash Rent in \$ per acre Northern Illinois





Average Net Incomes of Grain Farms Enrolled in Illinois Farm Business Farm Management (FBFM), 1996 to 2022





View on Long-Run Outlook

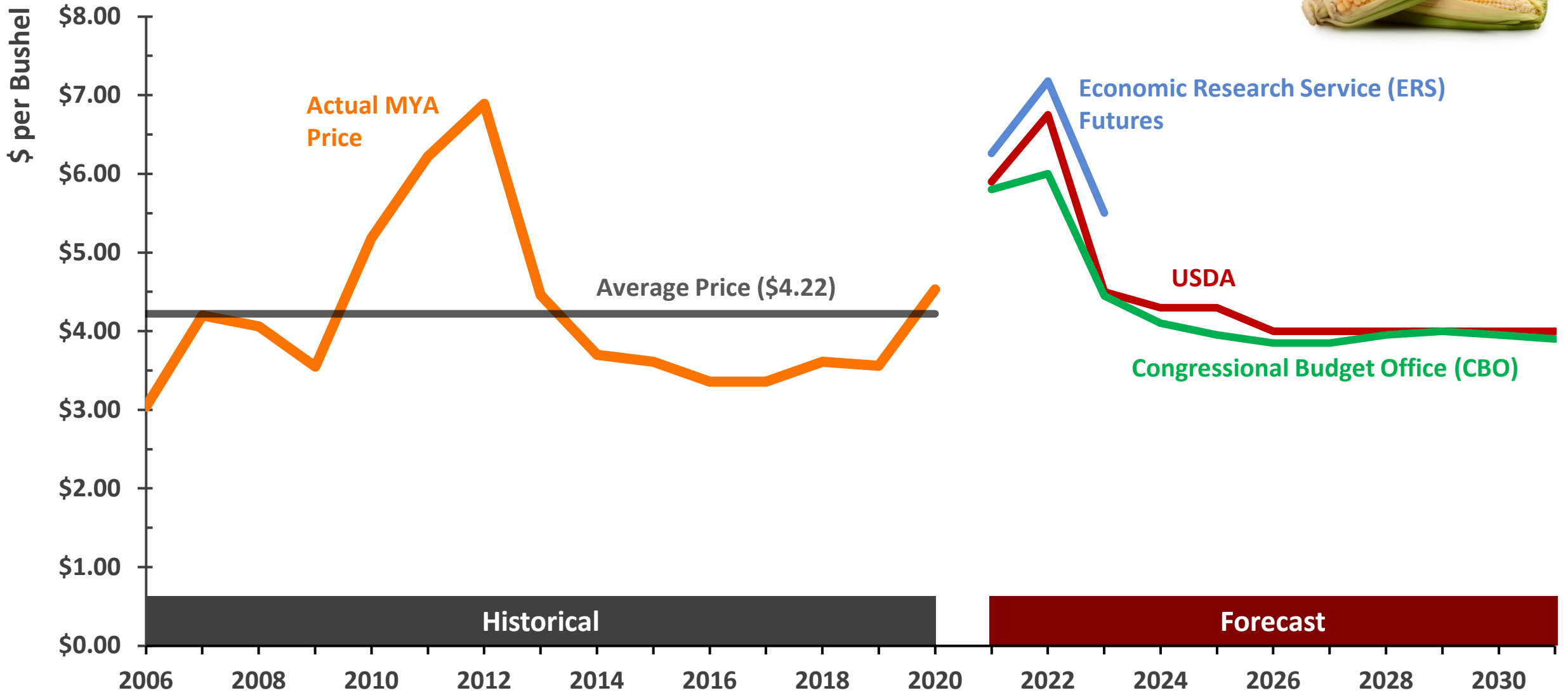
In five years, what will the corn price be:

- Below \$4.00
- Between \$4.00 and \$4.50
- Between \$4.50 and \$5.50
- Between \$5.50 and \$6.50
- Over \$6.50



Corn, Market Year Average (MYA) Prices

Historical to 2020, and Projections from 2021 to 2031



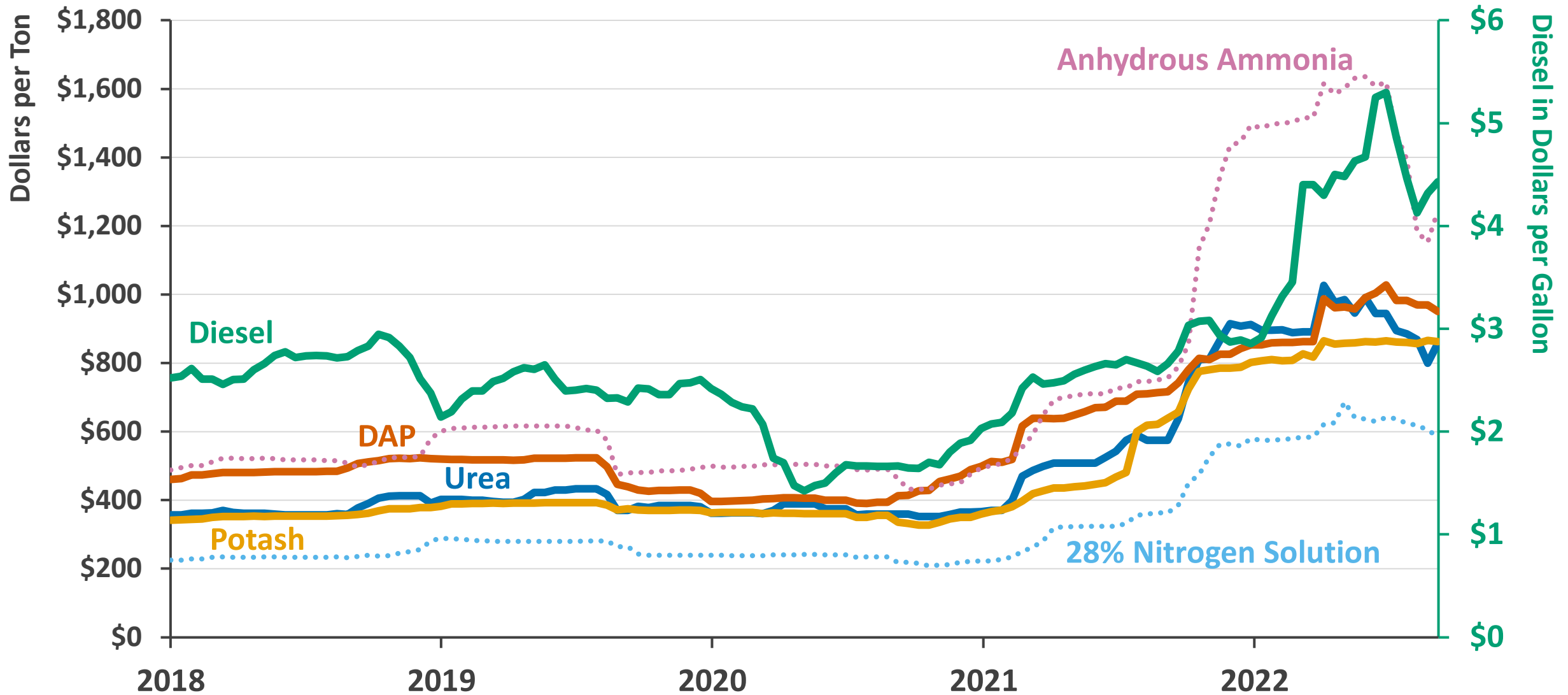
Outlook

- Suspect that long-run prices are higher than **\$4.00 for corn** and **\$10.00 for soybeans**
- How much higher is an open question
- We will have prices near or below **\$4.00 for corn** and **\$10.00 for soybeans** in the future
- **For 2023:**
Downside risks will be reduced when projected prices for crop insurance are set

Margin Protection Crop Insurance



Margin Protection Crop Insurance





Margin Protection Crop Insurance

September 30th Sales Closing Date

- Make decision now for 2023 Corn, Soybeans, and Wheat

Provides coverage against unexpected decrease in operating margin

- Payment based on change in margin, with expected margin and harvest margin based on revenue-minus-costs in specified periods
- Payment can be triggered by increase in input costs and/or decrease in revenue resulting from lower price and/or lower yield

Does not provide margin risk protection at individual farm level

- Area plan using county-level estimates of average revenue and input costs



Setting Revenue and Cost Components

Margin Protection Crop Insurance Revenue and Expense Sources and Periods

	<u>Pricing Source</u>	<u>Price Discovery Period</u>	
		<u>Expected Price</u>	<u>Harvest Price</u>
Revenue Components			
Yield	RMA County Yield	Published by Sept.	Published by June
Corn Price	CME Dec. Futures	Aug. 15 - Sept. 14	Oct. 1 - Oct. 31
Soybean Price	CME Nov. Futures	Aug. 15 - Sept. 14	Oct. 1 - Oct. 31
Expense Components - Inputs Subject to Change			
Diesel	CME May Futures	Aug. 15 - Sept. 14	Apr. 1 - Apr. 30
DAP	CME May Futures	Aug. 15 - Sept. 14	Apr. 1 - Apr. 30
Urea	CME May Futures	Aug. 15 - Sept. 14	Apr. 1 - Apr. 30
Interest	CME Nov. Futures	Aug. 15 - Sept. 14	Oct. 1 - Oct. 31
Potash	USDA AMS	Aug. 15 - Sept. 14	–



Benefits & Constraints

- **May want to consider because of early projected price period**
 - \$6.00 Corn
 - \$13.55 Soybeans
- **Margin Protection Constraints on Risk Management Usefulness:**
 - Futures contracts for corn and soybeans heavily traded; DAP and Urea thinly traded
 - Potash is an “input subject to price change” but price of potash does not change
 - Nitrogen component is urea, but corn and soybean farms buy more anhydrous ammonia and price variance differs between the two

Cash Rents



By spring 2023, will the Ukraine-Russian War:

- End, and reach a peace agreement
- Continue much as it is now
- Russia will gain the upper hand but still be fighting
- Ukraine will gain an upper hand

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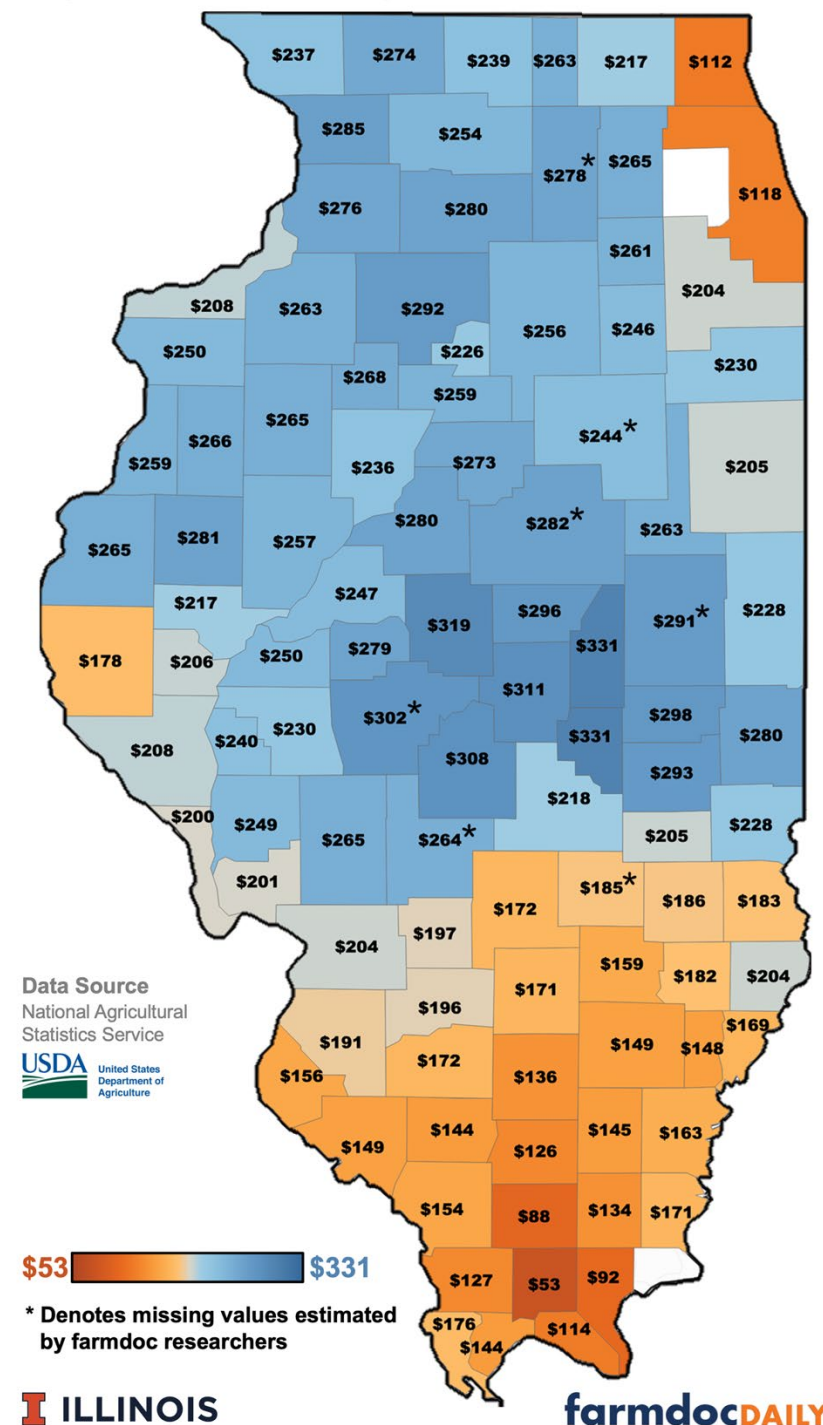
2022 Illinois County Cash Rents

Increase from 2021,

with many county cash rents

increasing by more than \$30 per acre

- \$331 in Piatt and Moultrie
- \$53 in Pope



Cash Rents in Illinois

Land Class	Soil Productivity Index	Average Corn Yield ¹ Bushels/Acre	Average Rent ² \$/Acre		Diff
			2021	2022	
Excellent	133 to 147	211	\$277	\$314	+\$37
Good	117 to 132	204	\$240	\$263	+\$23
Average	100 to 116	190	\$185	\$215	+\$30
Fair	<100	142	\$135	\$171	+\$36

¹ Average corn yields from 2017 to 2021 for counties with average SPIs in the various ranges.

² Average of NASS cash rents for counties with average SPIs in the various ranges.

Data Sources:

National Agricultural Statistics Service, USDA, for corn yields and average rents

Illinois Society of Professional Farm Managers and Rural Appraisers (ISPFMRA) rents come from their land value effort available on the ISPFMRA.org website.



Cash Rents in Illinois

Land Class	Soil Productivity Index	Average Corn Yield ¹ Bushels/Acre	Average Rent ² \$/Acre		ISPFMRA Rents \$/Acre		
			2021	2022	2021	2022	Diff
Excellent	133 to 147	211	\$277	\$314	\$309	\$369	+\$69
Good	117 to 132	204	\$240	\$263	\$265	\$322	+\$57
Average	100 to 116	190	\$185	\$215	\$225	\$275	+\$50
Fair	<100	142	\$135	\$171	\$166	\$240	+\$74

¹ Average corn yields from 2017 to 2021 for counties with average SPIs in the various ranges.

² Average of NASS cash rents for counties with average SPIs in the various ranges.

Data Sources:

National Agricultural Statistics Service, USDA, for corn yields and average rents

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Excellent	133 to 147	211	\$277	\$314	\$309	\$369	\$386	+\$17
Good	117 to 132	204	\$240	\$263	\$265	\$322	\$336	+\$14
Average	100 to 116	190	\$185	\$215	\$225	\$275	\$284	+\$9
Fair	<100	142	\$135	\$171	\$166	\$240	\$248	+\$8

¹ Average corn yields from 2017 to 2021 for counties with average SPIs in the various ranges.

² Average of NASS cash rents for counties with average SPIs in the various ranges.

Data Sources:

National Agricultural Statistics Service, USDA, for corn yields and average rents

Illinois Society of Professional Farm Managers and Rural Appraisers (ISPFMRA) rents come from their land value effort available on the ISPFMRA.org website.



Suggestion

Come back next week for webinar on
Farmland Prices in an Interesting Time

Upward pressure on cash rents,
may increase depending on current rent level

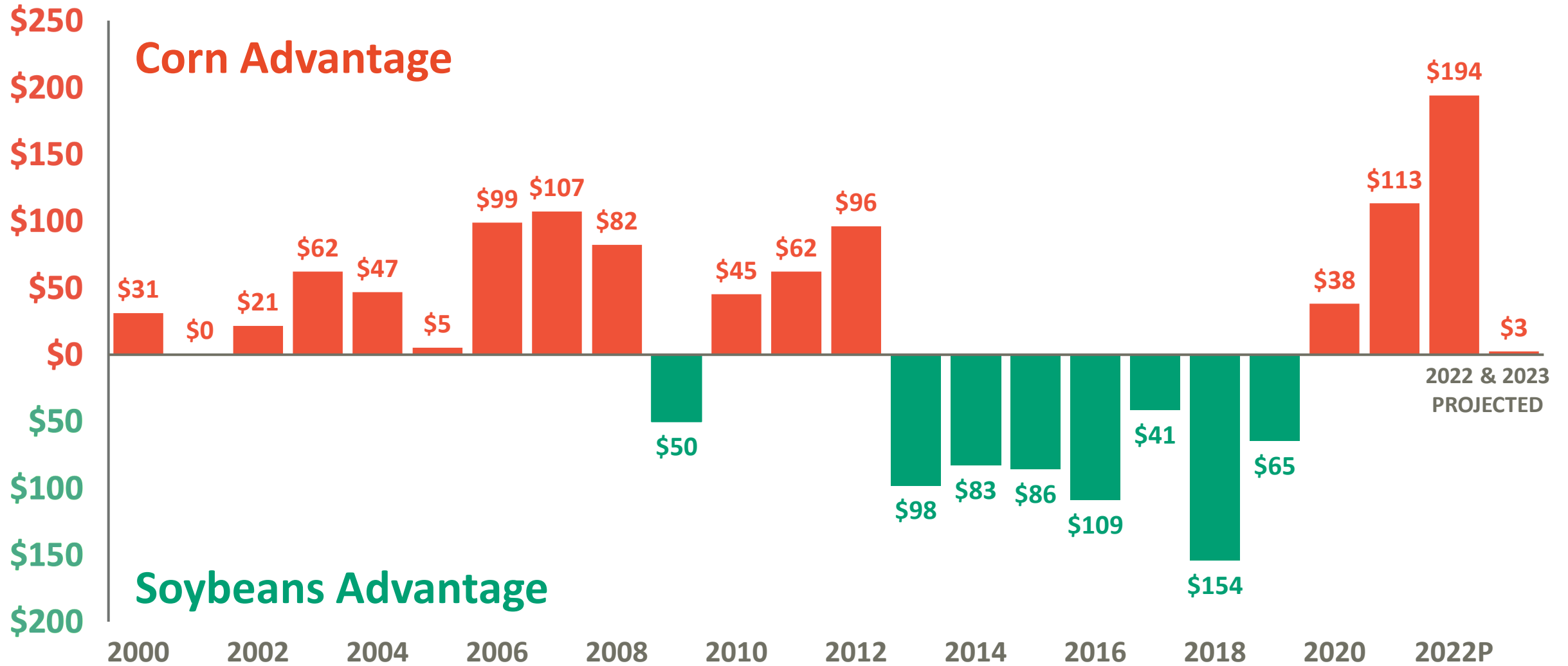
Remember we have not set projected prices

Crop Decisions

Corn and soybeans look to be a push



Corn Advantage Over Soybeans, Northern Illinois



Corn vs. Soybeans

- 2023 Projected Returns positive, but lower than 2020-22
- Costs higher in all categories in 2023
- Little room for profits on cash rented land if prices fall lower than current projections
- Currently, no clear “winner” for 2023 corn vs. soybean acres

	Com- after- Soybeans	Soybeans- after- Com
Yield per acre	219	65
Price per bu	\$5.50	\$13.00
Crop revenue	\$1,205	\$845
Total direct costs	\$555	\$275
Total power costs	\$201	\$157
Total overhead costs	\$104	\$82
Total non-land costs	\$860	\$514
Operator and land return	\$345	\$331
Land Cost	301	301
Farmer return	\$44	\$30
Breakeven price to cover:		
Non-land costs	\$3.93	\$7.91
Non-land and land costs	\$5.30	\$12.54



What About Wheat?

- Market signaling wheat demand in 2023 prices
- Winter wheat followed by double-crop soybeans provides greater opportunity for positive returns than corn or soybeans in Southern IL
- Wheat uncommon in Central IL, but the combo also has higher projected returns on Central Illinois



2023 Crop Budgets, Southern Illinois.

	Corn- after- Soybeans	Soybeans- after- Corn	Wheat	Double- Crop Soybeans	Wheat and DC Soybeans
Yield per acre	189	58	75	46	
Price per bu	\$5.50	\$13.00	\$7.50	\$13.00	
Crop revenue	\$1,040	\$754	\$563	\$598	
ARC/PLC	0	0	0	0	
Other gov't payments	0	0	0	0	
Crop insurance proceeds	0	0	0	0	
Gross revenue	\$1,040	\$754	\$563	\$598	\$1,161
Total direct costs	\$511	\$280	\$259	\$203	\$462
Total power costs	\$197	\$174	\$171	\$128	\$299
Total overhead costs	\$115	\$113	\$73	\$41	\$114
Total non-land costs	\$823	\$567	\$503	\$372	\$875
Operator and land return	\$217	\$187	\$60	\$226	\$286

Fertility



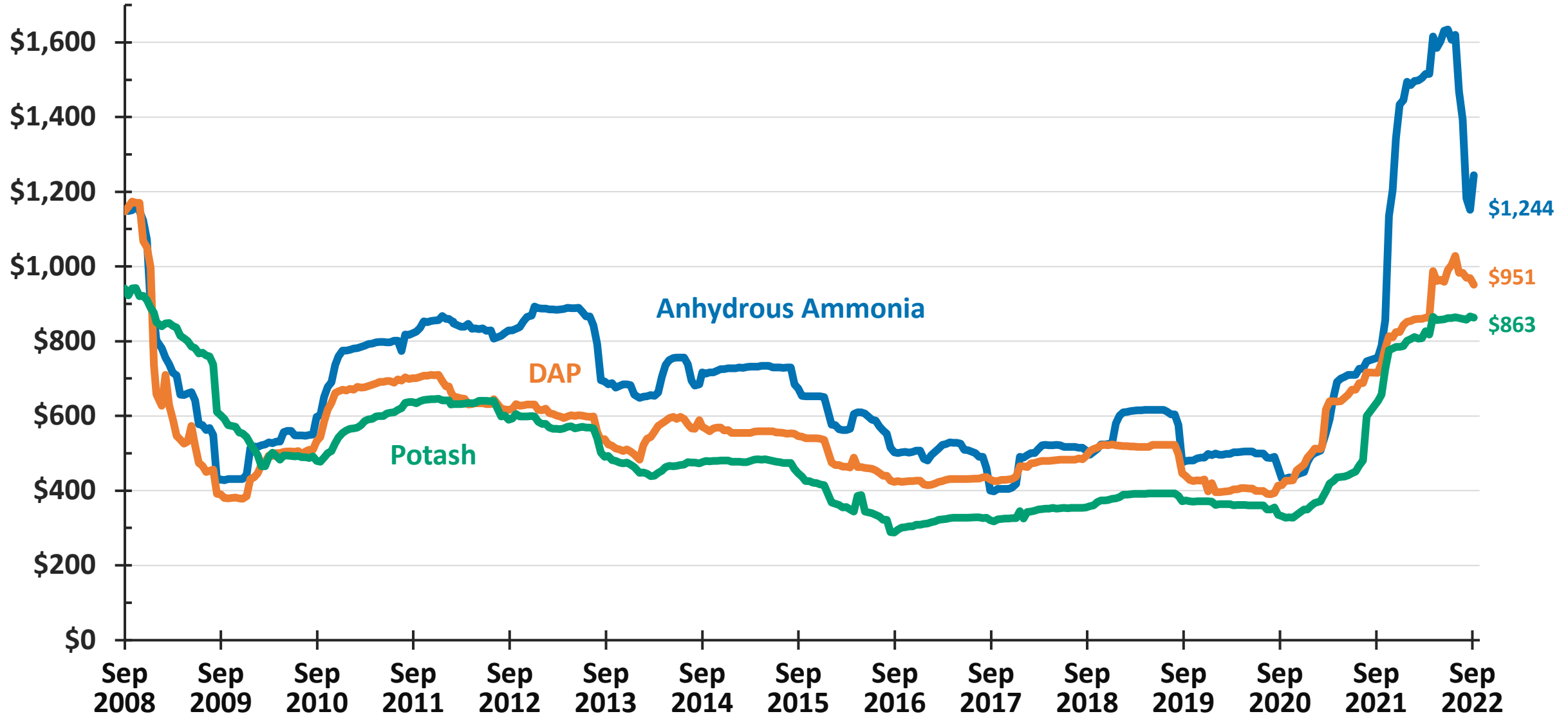
Anhydrous Ammonia price were \$1,250. In April 2023, ammonia prices will be:

- Over \$1,500 per ton
- Between \$1,250 and \$1,500 per ton
- Between \$1,000 and \$1,250 per ton
- Between \$750 and \$1,000 per ton
- Below \$750 per ton



Fertilizer Prices per Ton in Illinois From 2008 to 2022

Last update was September 9, 2022



Current P and K Situation

P and K, **check soil test levels**
and do not apply if above
suggested levels

Illinois Agronomy Handbook

- 40 to 50 pounds per acre on Bray-P
- 260 to 300 pounds of K per acre

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Illinois Agronomy Handbook

The chapters of the Illinois Agronomy Handbook are available for download in PDF format. You will need the free Adobe Reader software to view each PDF.

Chapter 1: Weather and Crops *Steven E. Hollinger, James R. Angel*
Chapter 2: Corn *Emerson Nafziger*
Chapter 3: Soybean *Emerson Nafziger*
Chapter 4: Small Grains and Grain Sorghum *Emerson Nafziger*
Chapter 5: Cropping Systems *Emerson Nafziger*
Chapter 6: Hay and Pasture *Jim Morrison*
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Chapter 8: Managing Soil pH and Crop Nutrients *Fabián G. Fernández, Robert G. Hoelt*
Chapter 9: Managing Nitrogen *Fabián G. Fernández, Emerson D. Nafziger, Stephen A. Ebelhar, Robert G. Hoelt*
Chapter 10: Soil Management and Tillage *F. William Simmons, Emerson D. Nafziger*
Chapter 11: Water Management *Richard Cooke*
Chapter 12: Weed Management *Aaron Hager*
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Chapter 14: Managing Diseases *Carl A. Bradley*
Chapter 15: Nematodes *Terry Niblack*

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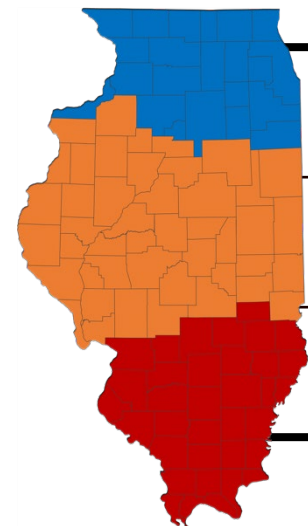
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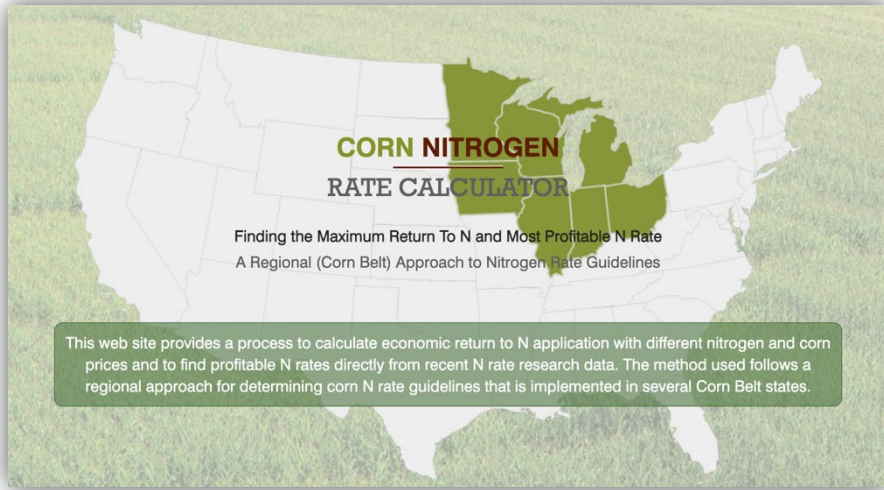


2023 MRTN Recommendation

in pounds of N applied per acre^{1,2}



	Corn Following Soybeans	Corn Following Corn
North	160	189
Central	169	186
South	188	182



¹Taken from Corn Nitrogen Rate Calculator (<http://cnrc.agron.iastate.edu/nRate.aspx>) on September 15, 2022

²MRTNs determined with a \$5.50 corn price and \$1,250 per ton anhydrous ammonia price.

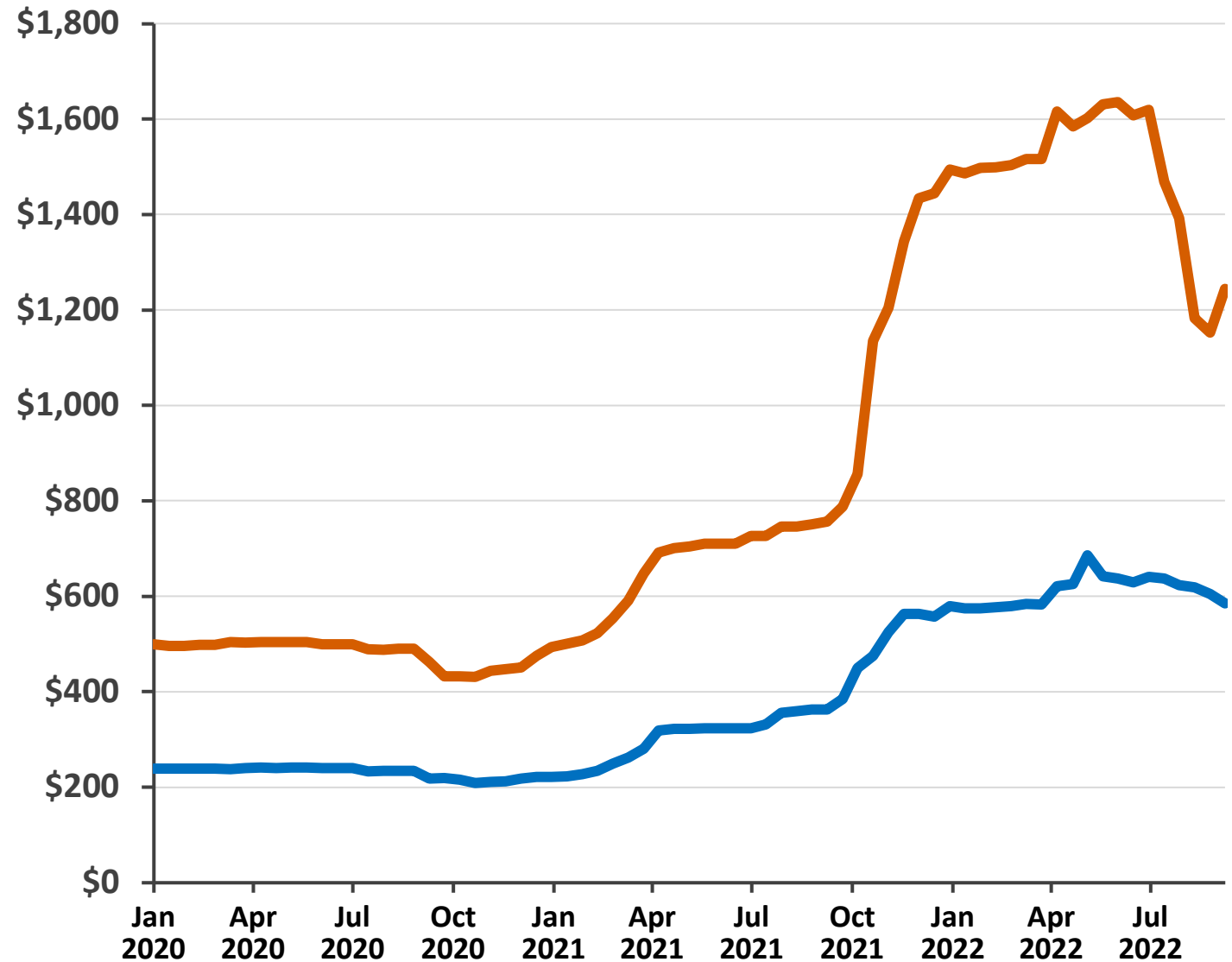
Current Nitrogen Situation

Bids of **\$1,250 per ton for anhydrous ammonia**
\$600 per ton for 28% Liquid Nitrogen

Outlook is cloudy

Pricing now:

We suggest pricing some of the corn



Marketing

- Risk of price declines is large until Projected prices are set in February
- Market crop as you make decisions



Summary

- 2023 looks like a good income year
- Where are long-run prices going? – MP
- Cash rents up, but risks
- Cropping decision equal
- Keep fertility rates at University recommendations

Upcoming Webinars from 11 am to Noon CT

Sept 22: Farmland Prices in a Most Interesting Time

Bruce Sherrick, Luke Worrell, and Gary Schnitkey

Farmland prices have increased at a phenomenal rate in the past year. Returns to farmland remain high, but interest rates could increase. Luke Worrell will present results of the mid-year survey of the Illinois Society of Farm Managers and Rural Appraisers. Bruce Sherrick will provide perspectives on farmland prices.

Sept 29: Update on Farm Policy After the Inflation Reduction Act

Jonathan Coppess and Krista Swanson

The recent Inflation Reduction Act includes several agricultural provisions including conservation, energy programs, and farm debt relief. Learn more about the impact on agriculture included in this legislation and explanation of what this means as the expiration of the current farm bill approaches.

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September 14, 2022
Carl Zulauf, Krista Swanson, Gary Schnitkey, and Nick Paulson
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