

FARMING IN AN AGE OF INFLATION

2022 BADGER CROPS AND SOILS UPDATE MEETING

SMALL STEPS, BIG CHANGES:

ACHIEVING POSITIVE RETURNS IN A TIME OF HIGH INPUT COSTS

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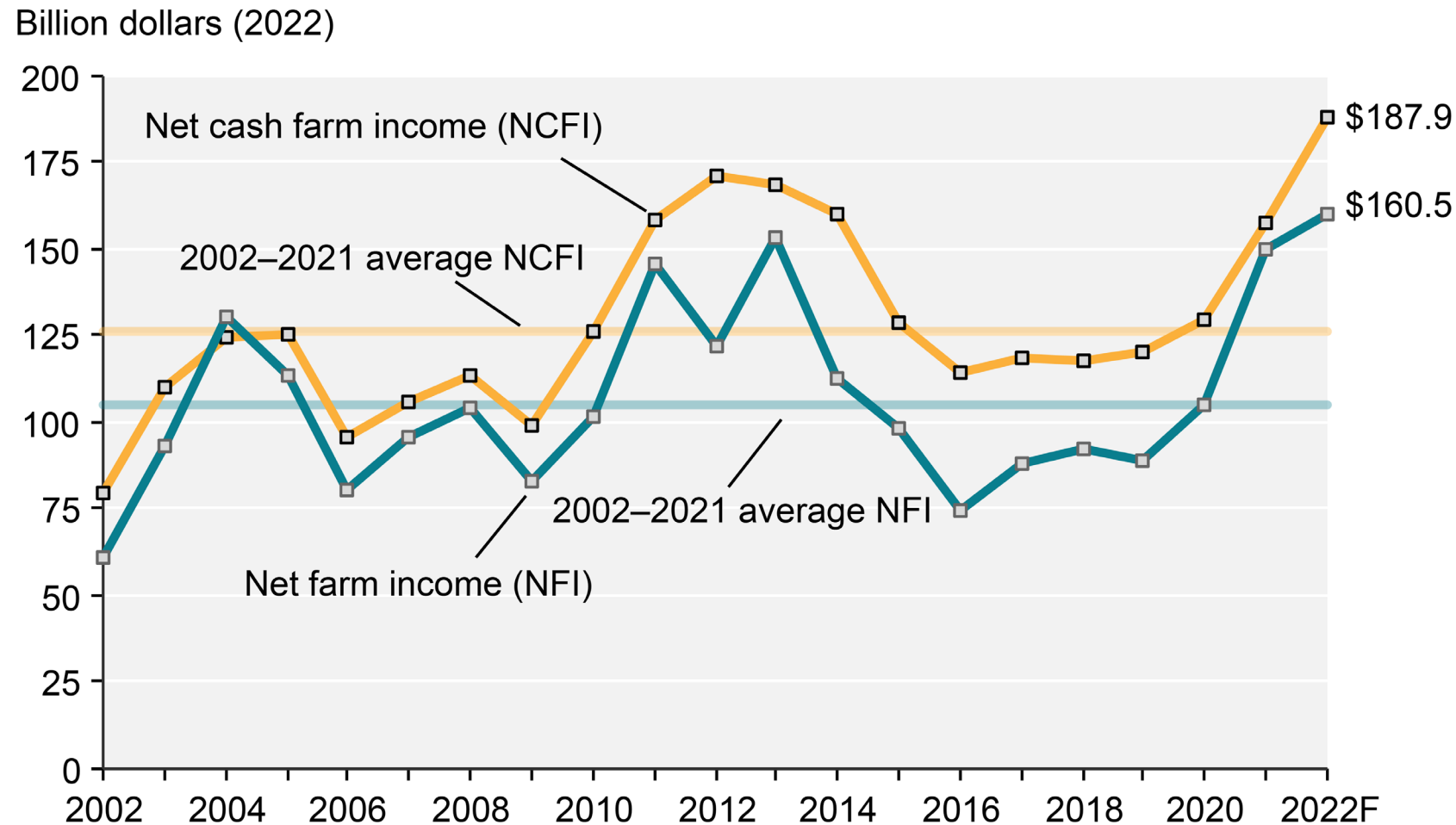
December 12-16, 2022 Madison, Green Bay, La Crosse

608-265-6514 pdmitchell@wisc.edu <https://aae.wisc.edu/pdmitchell/>

Overview

- Current Farm Income and Financial Situation
- Cost increases for 2023
- Economic recommendations for managing costs in 2023

U.S. net farm income and net cash farm income, inflation adjusted, 2002–2022F



Record Farm Income in 2022

+19% from 2021

+7% from 2021

49% above 20 Yr-Avg

53% above 20 Yr-Avg

Note: F = forecast. Values are adjusted for inflation using the U.S. Bureau of Economic Analysis Gross Domestic Product Price Index (BEA API series code: A191RG) rebased to 2022 by USDA, Economic Research Service.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of December 1, 2022.

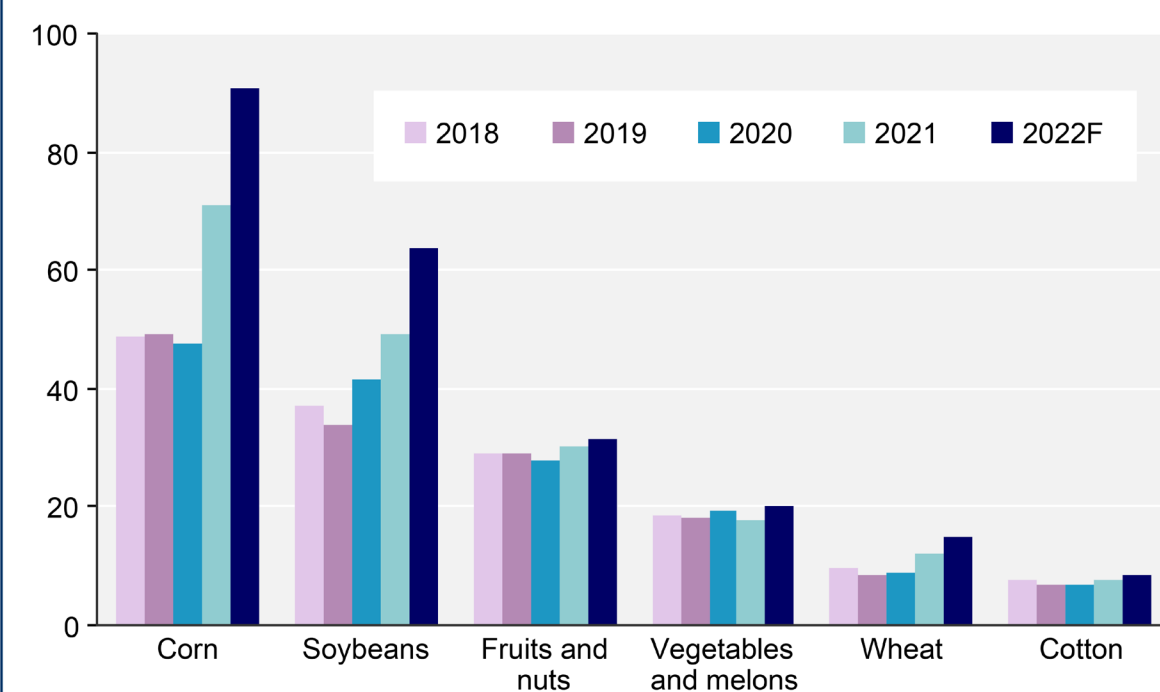
<https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-sector-income-forecast/>

% Change in Cash Receipts 2022 versus 2021 & 2020

Comparison	Corn	Soybean	Dairy	Cattle
2022 vs 2021	+28%	+30%	+38%	+19%
2022 vs 2020	+90%	+54%	+43%	+38%

U.S. cash receipts for selected crops, 2018–22F

Billion dollars (nominal)



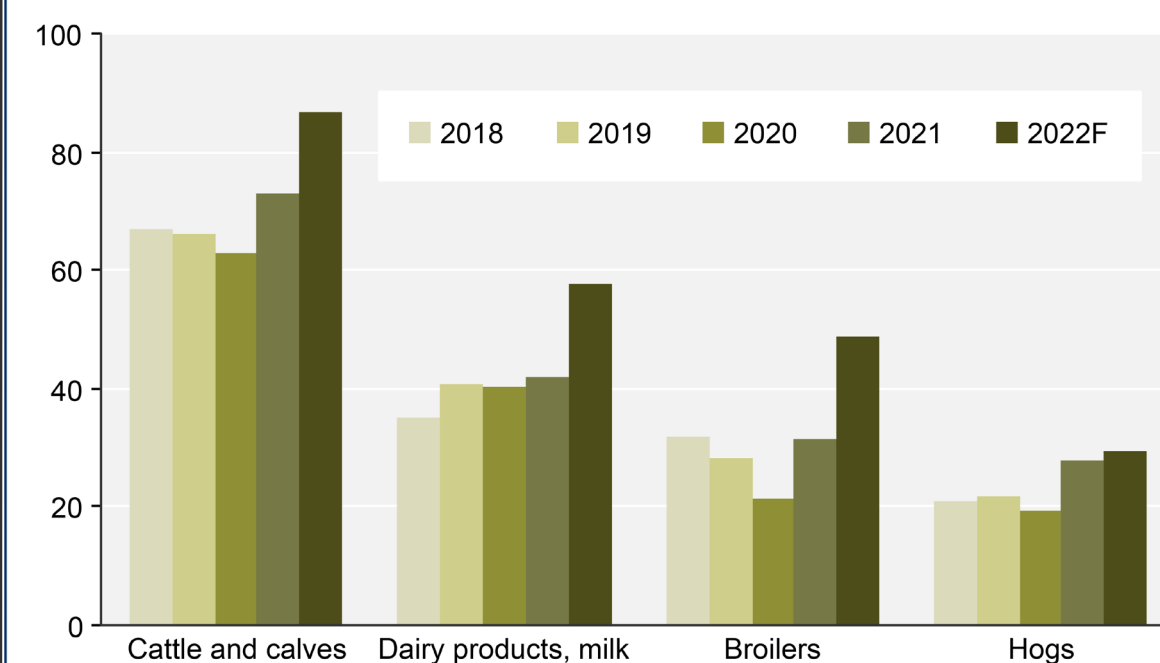
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U.S. cash receipts for selected animals/products, 2018–22F

Billion dollars (nominal)

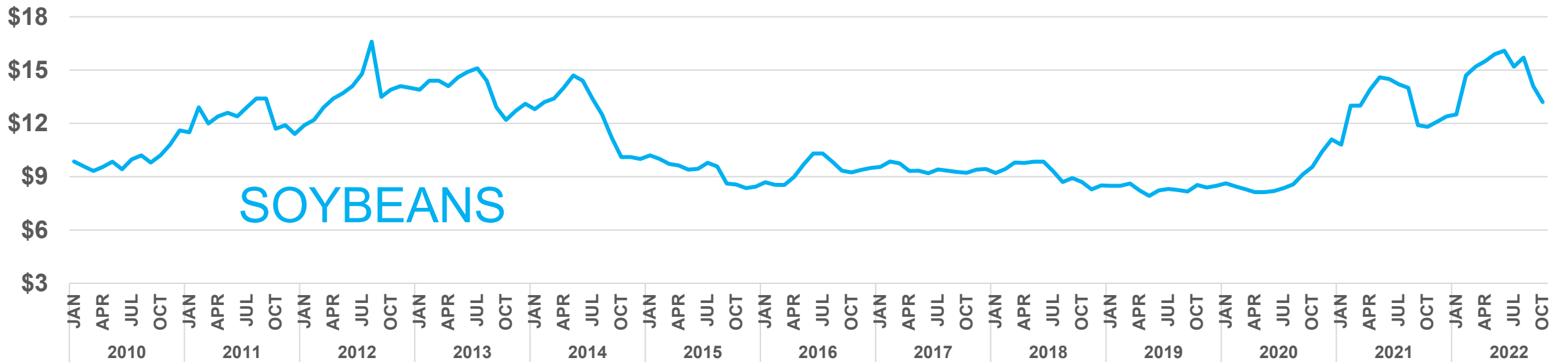
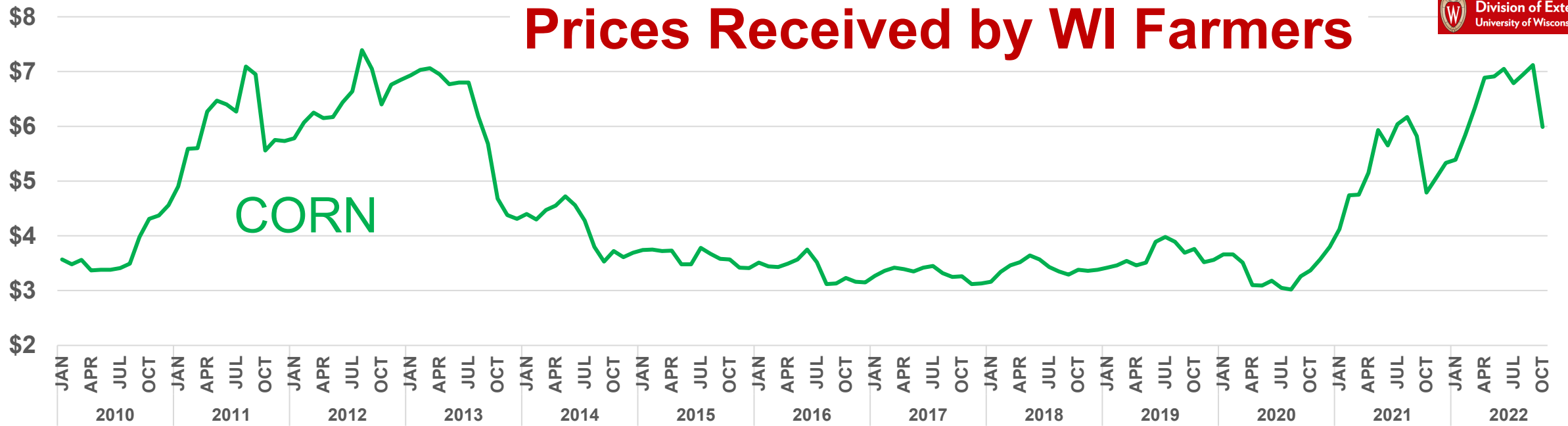


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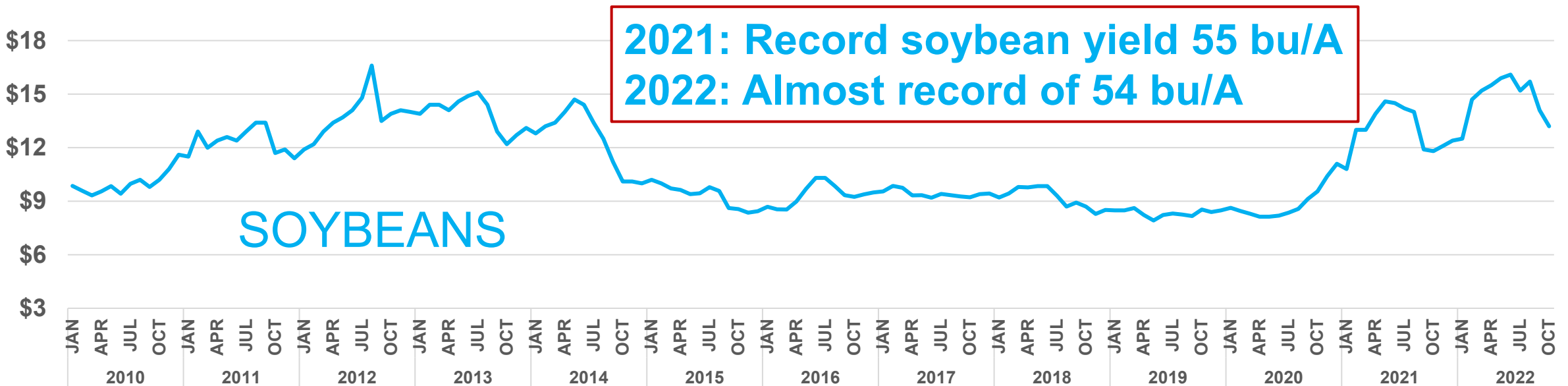
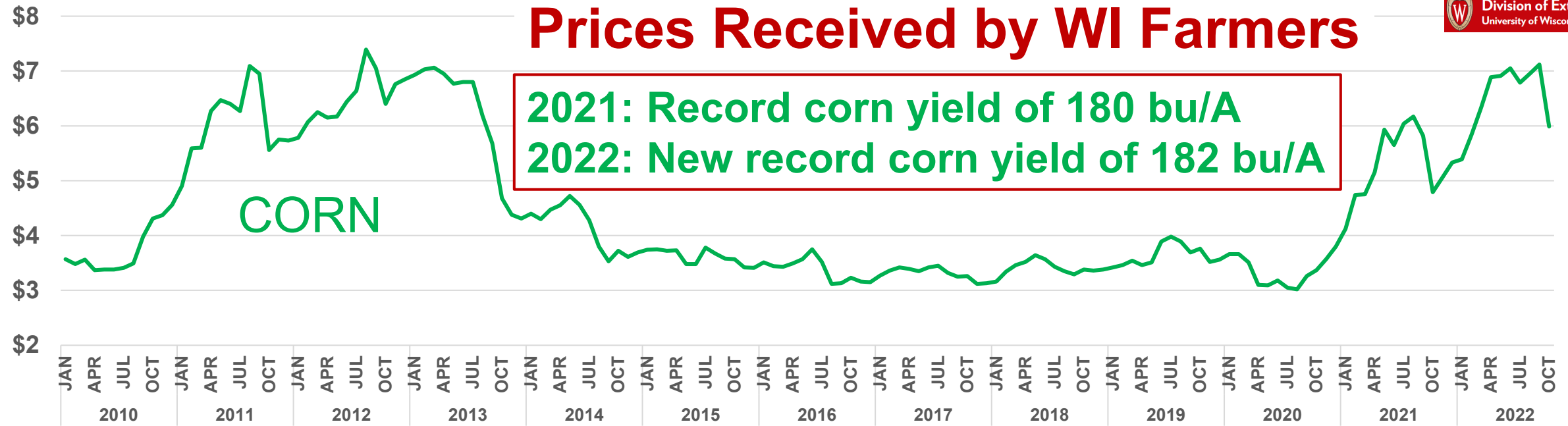
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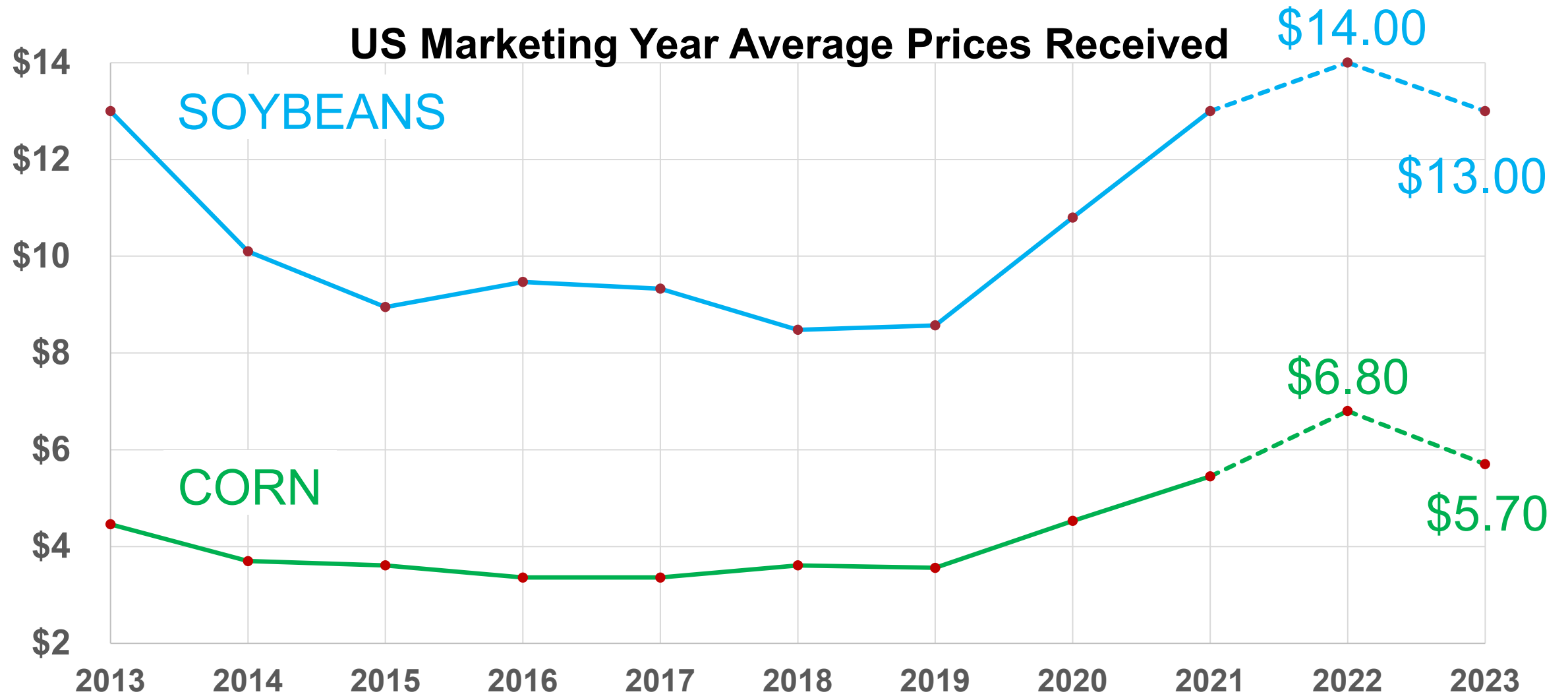
Prices Received by WI Farmers



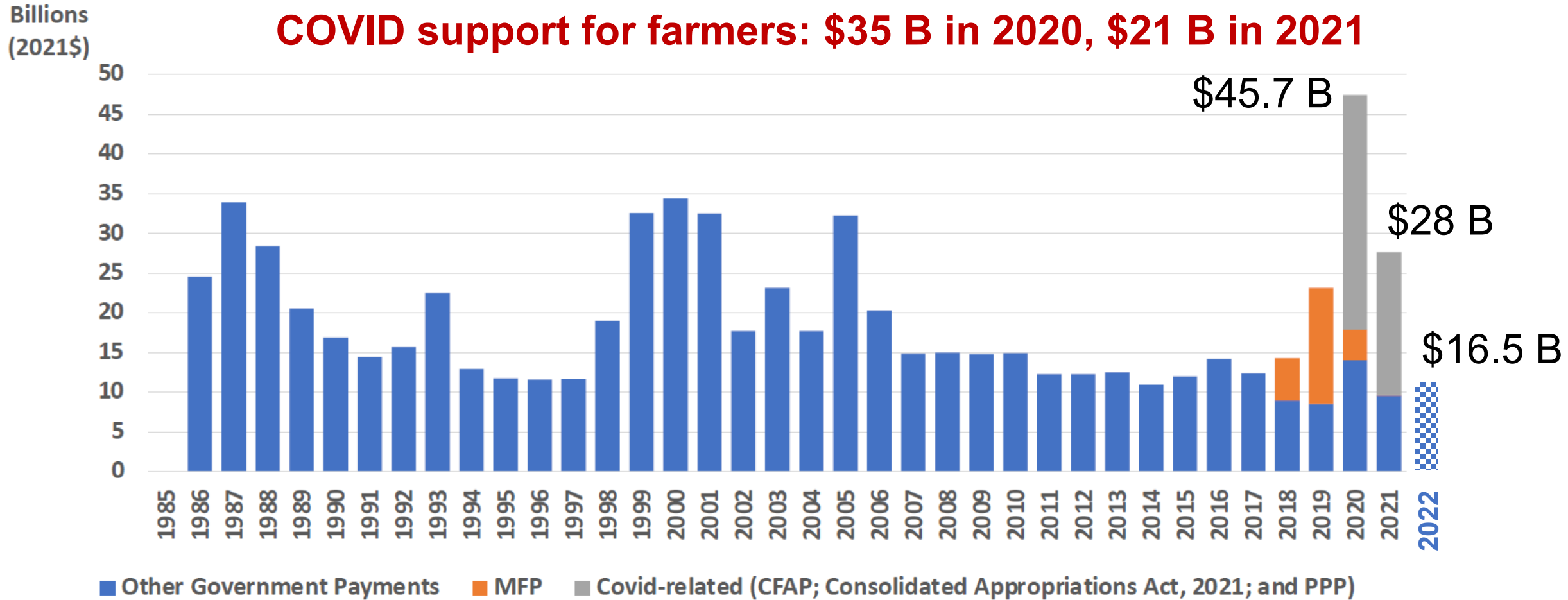
Prices Received by WI Farmers



High Corn and Soybean Prices for 2022 & 2023

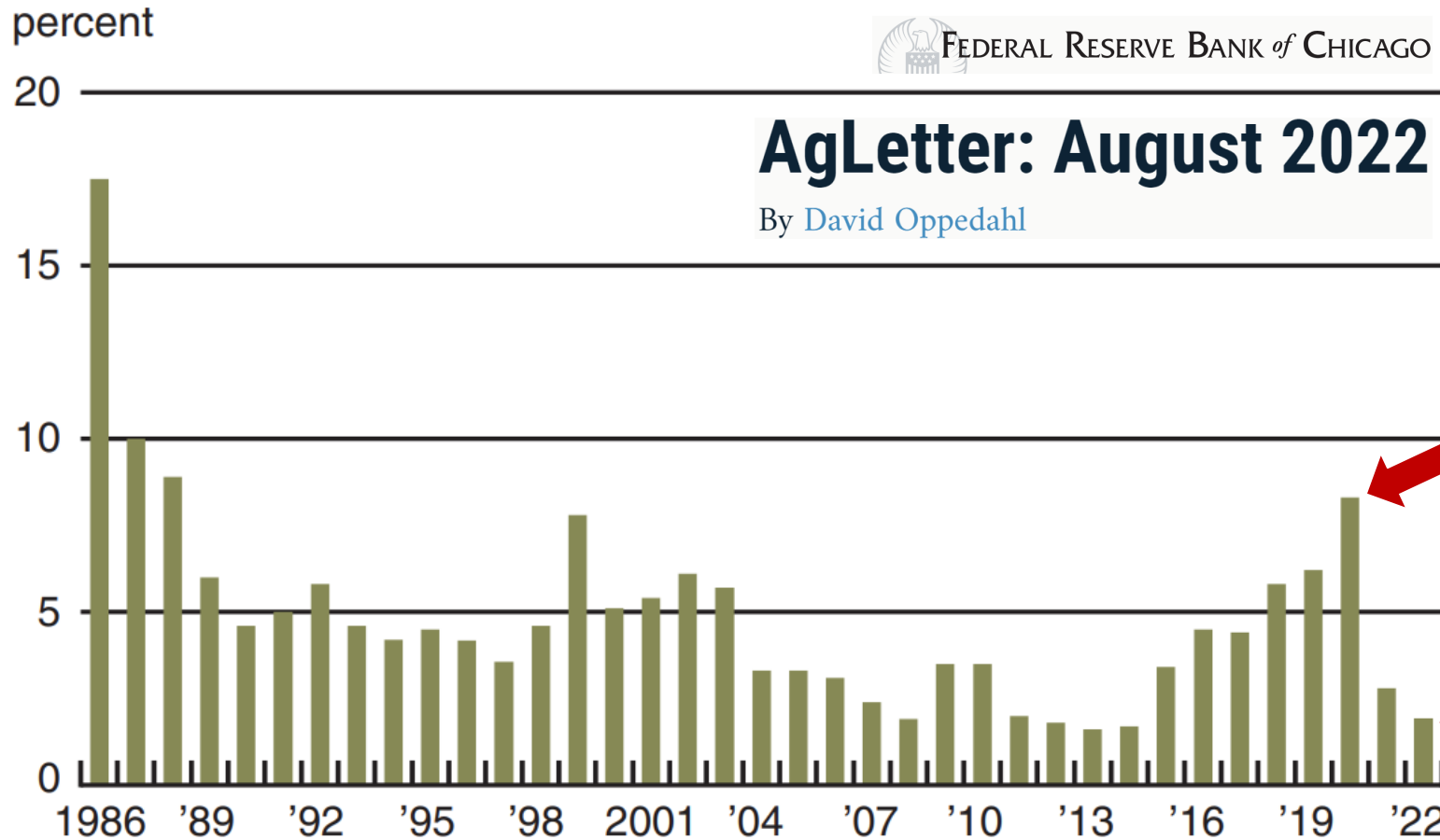


Total government payments increased as a result of adverse circumstances but are projected to fall in 2021



Farmers are Paying Down Debt

2. Percentage of Seventh District farm loan portfolio with “major” or “severe” repayment problems



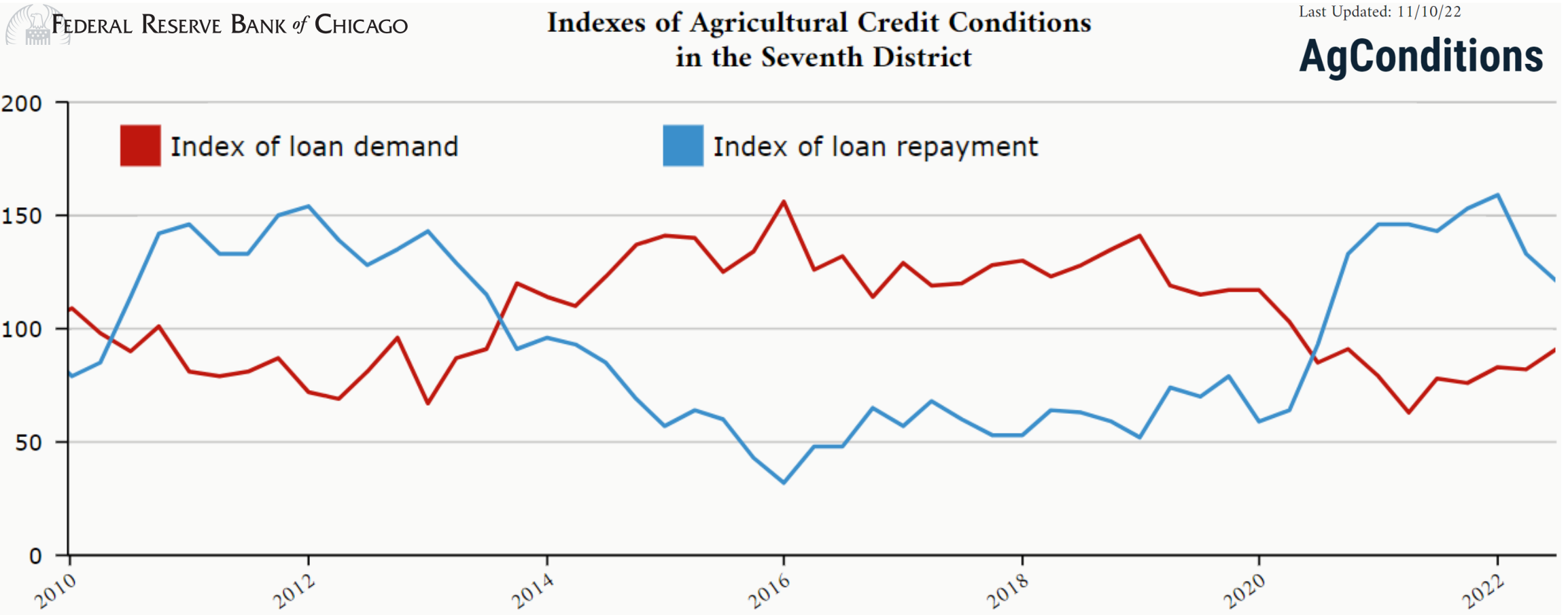
Seventh Federal Reserve District



2020: Highest rate of repayment problems since the 1980's

2022: Not since 2014 have repayment problems been so low

Trend Continues as of Oct 1, 2022



FEDERAL RESERVE BANK of CHICAGO

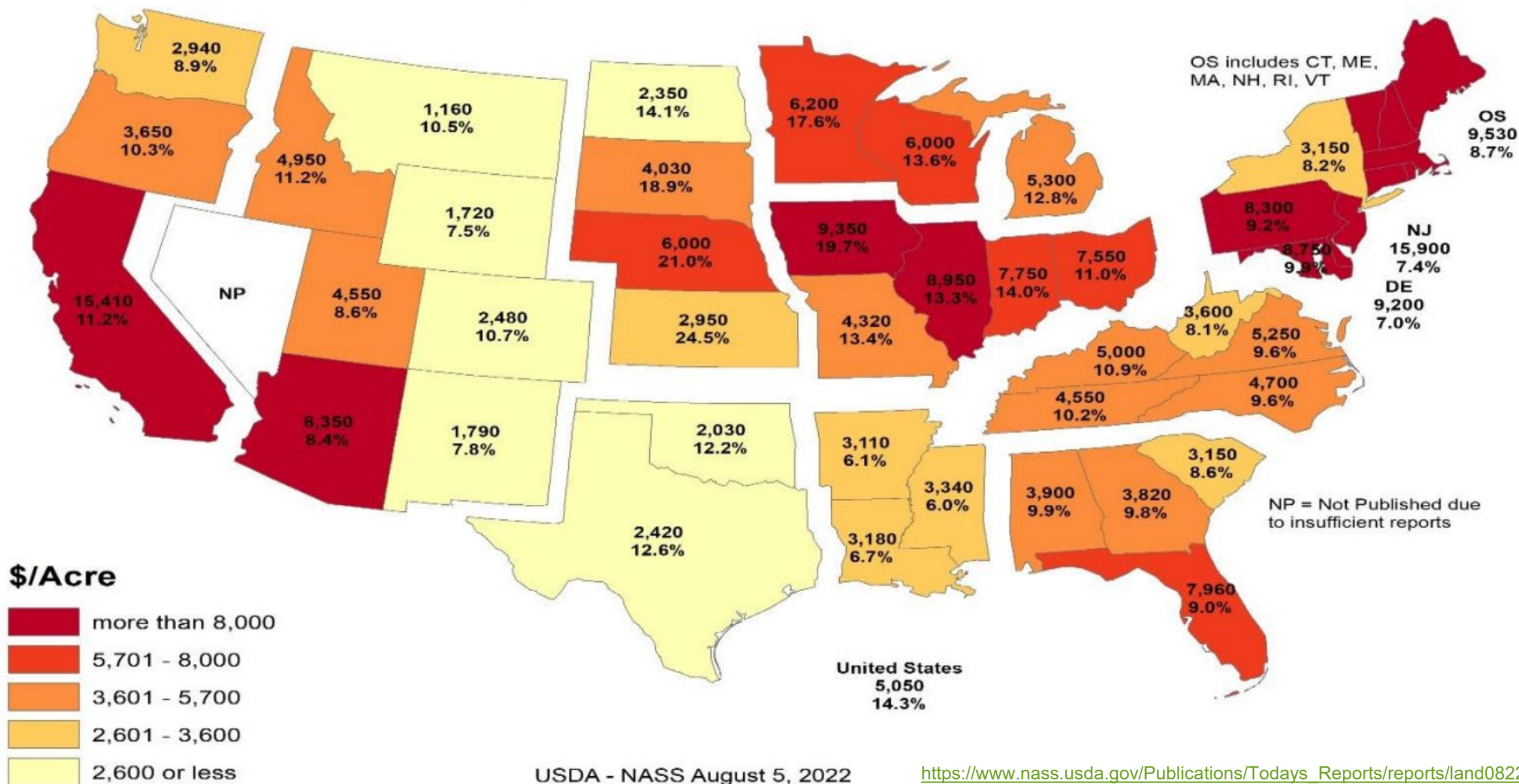
Indexes of Agricultural Credit Conditions
in the Seventh District

Last Updated: 11/10/22

AgConditions

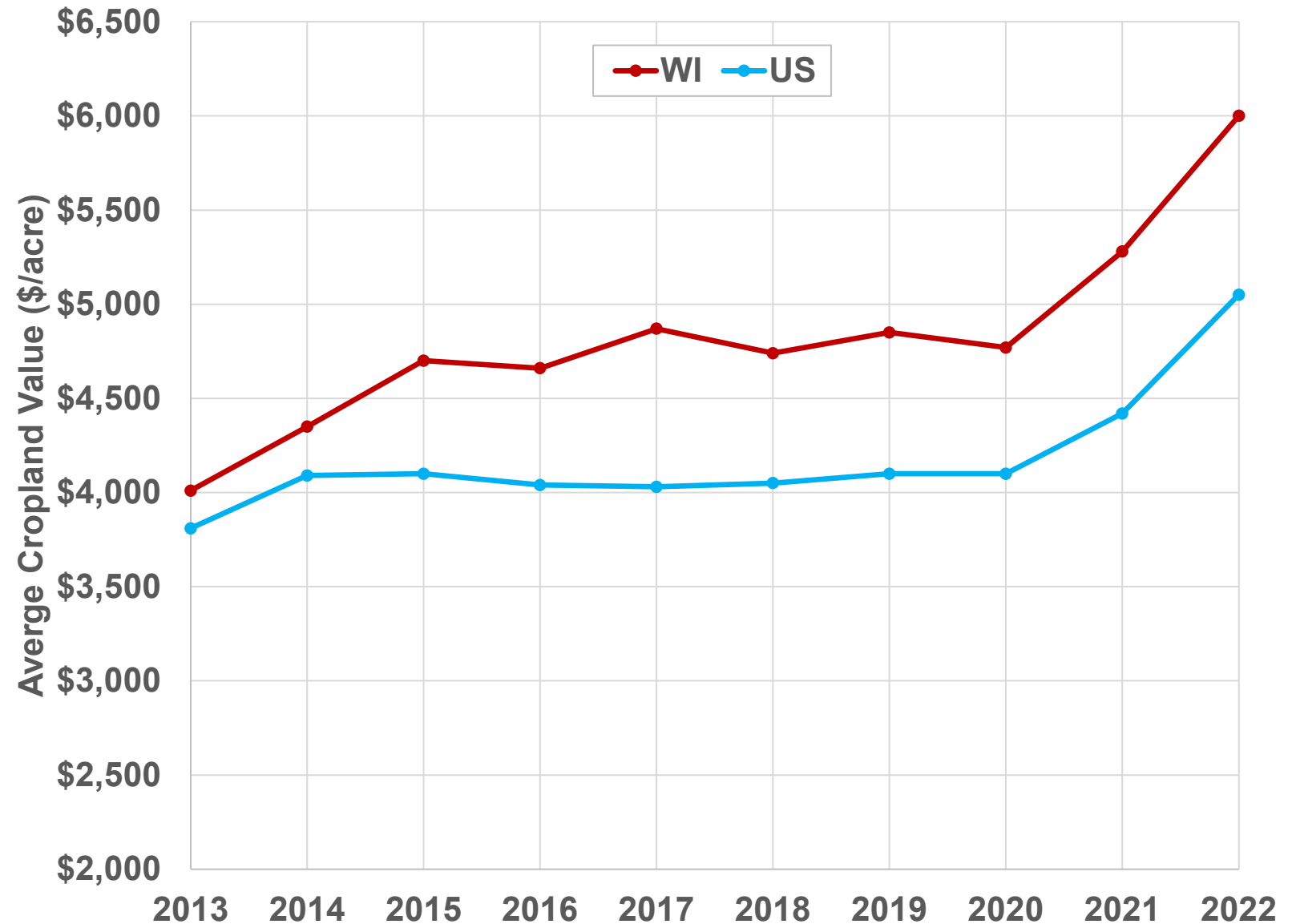
2022 Cropland Value by State

Dollars per Acre and Percent Change from 2021

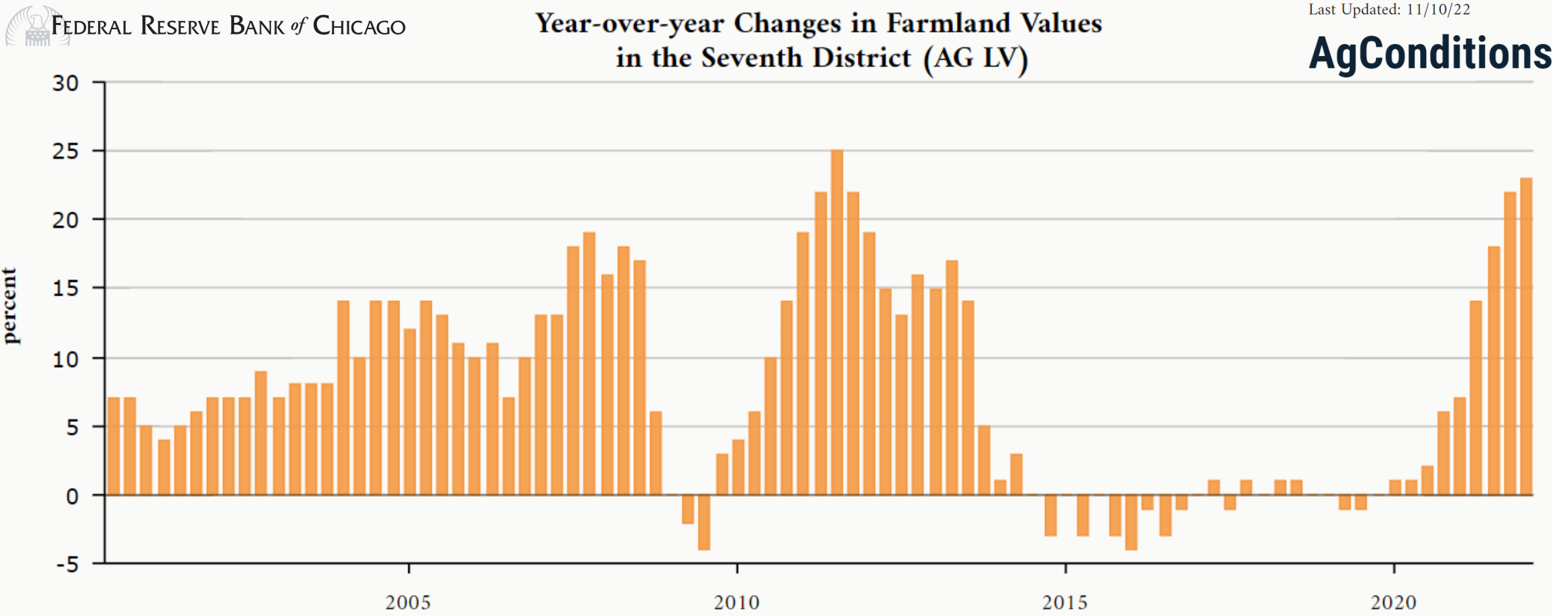


Average Cropland Values 2013-2022

- After several years of steady land values, rapid rise in 2021-2022
- Combination of strong ag markets and cash from MFP, CFAP, PPP



Farmland Value Changes as of Jul 1, 2022





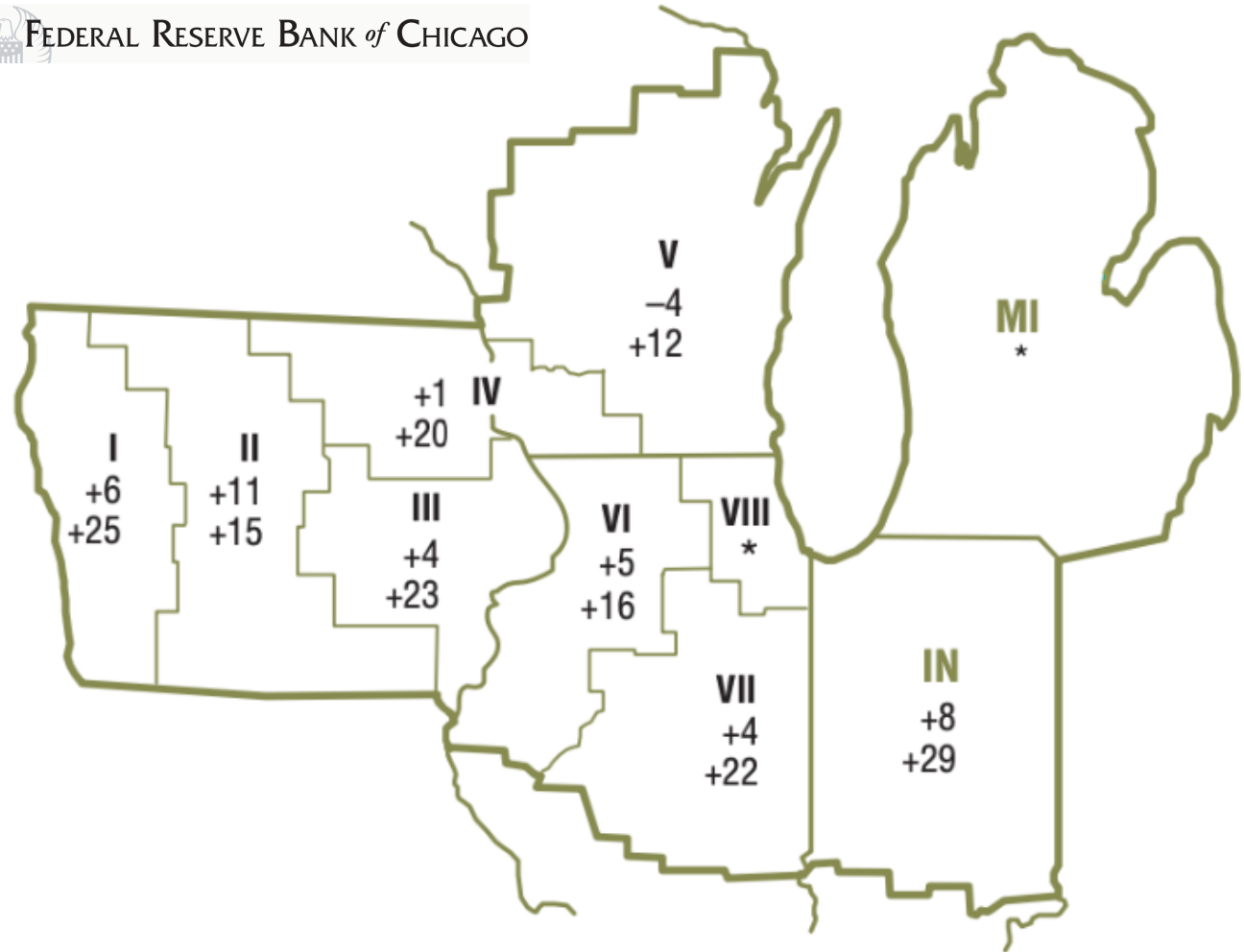
Percent change in dollar value of “good” farmland

Top: July 1, 2022 to October 1, 2022

Bottom: October 1, 2021 to October 1, 2022

	<u>July 1, 2022 to October 1, 2022</u>	<u>October 1, 2021 to October 1, 2022</u>
Illinois	+5	+20
Indiana	+8	+29
Iowa	+6	+22
Michigan	*	*
Wisconsin	-3	+12
Seventh District	+4	+20

*Insufficient response.



Land value increases are showing signs of slowing down

Current Farm Financial Situation

- Record high US Net Farm Income, 53% above its 20-year average
- High yields and prices in 2021 and 2022 for corn and soybeans
- Prices expected to be a little lower, but still high for 2023
- Livestock revenues are up in 2021 and 2022: dairy and cattle
- Large government payments in last few years, now back to normal
- Farms paid off debts, balance sheets have improved, bought land with low interest rates and additional government payments
- Average WI farm is in solid financial position going into 2023
- What's on farmers' minds for 2023?

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COSTS!

Producers are Paying Higher Costs (Inflation = Higher Costs)

☆ Producer Price Index by Commodity: All Commodities (PPIACO)

DOWNLOAD

Observation:
Nov 2022: **263.235** (+ more)
Updated: 7:52 AM CST

Units:
Index 1982=100,
Not Seasonally Adjusted

Frequency:
Monthly

1Y | 5Y | 10Y | Max

2007-11-01

to

2022-11-01

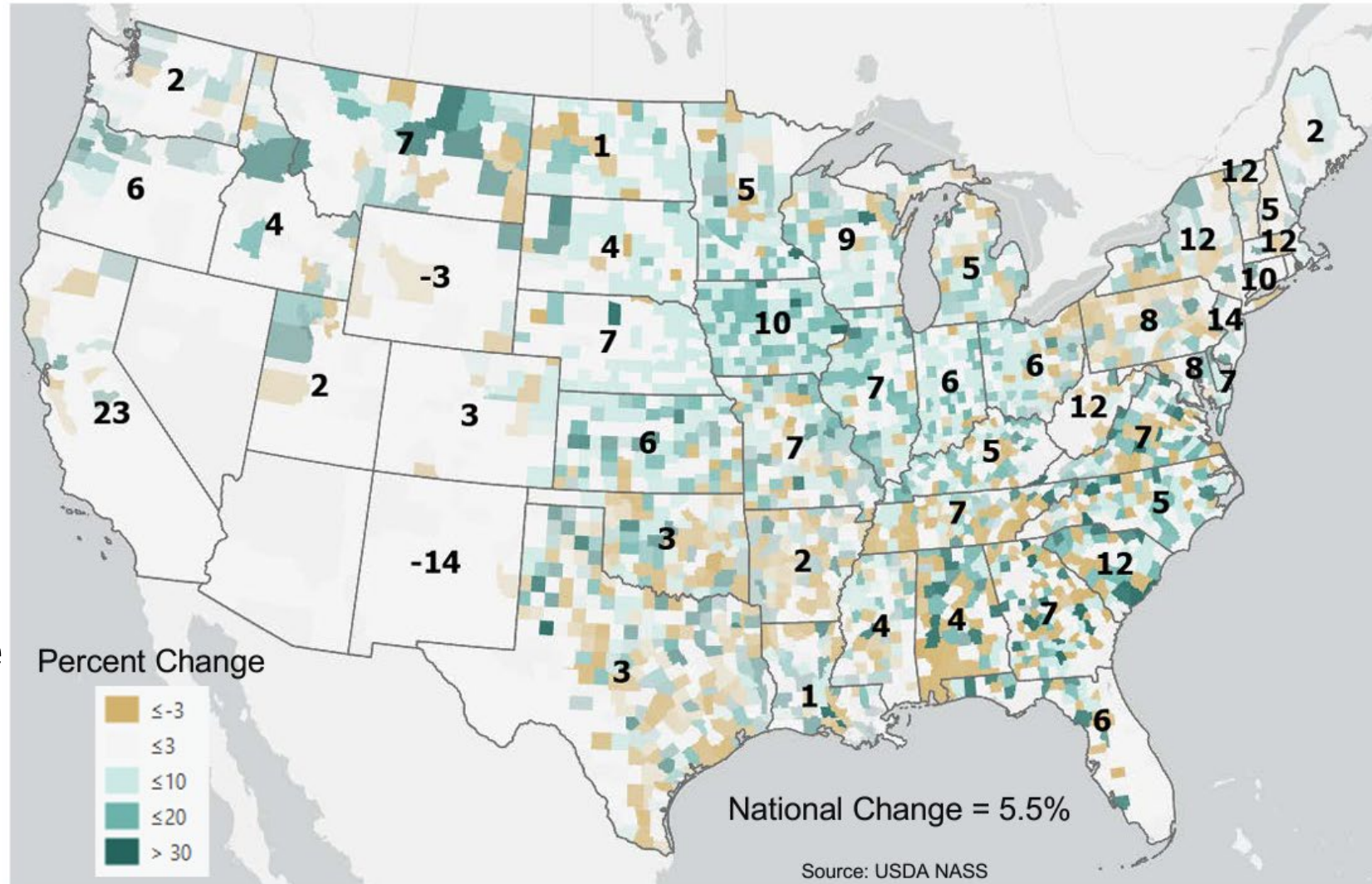
EDIT GRAPH

FRED — Producer Price Index by Commodity: All Commodities

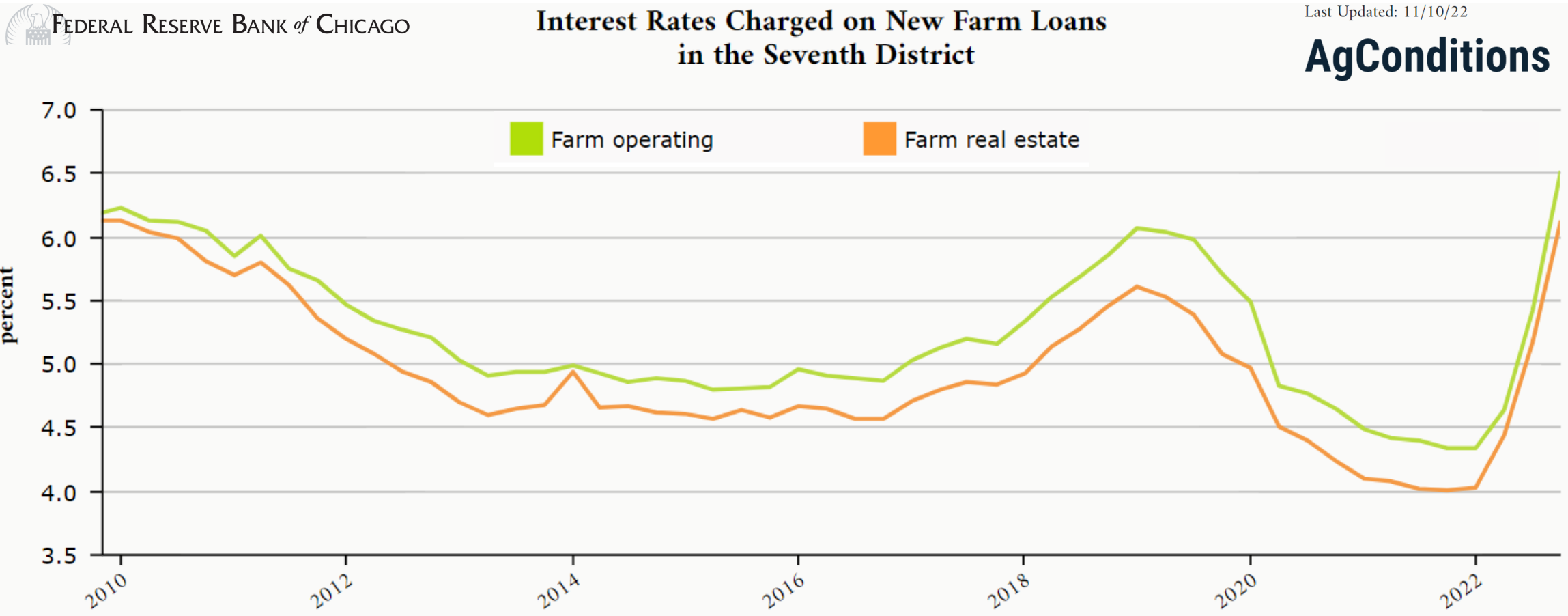


Percent Change in Cash Rent for Non-Irrigated Cropland 2021 - 22

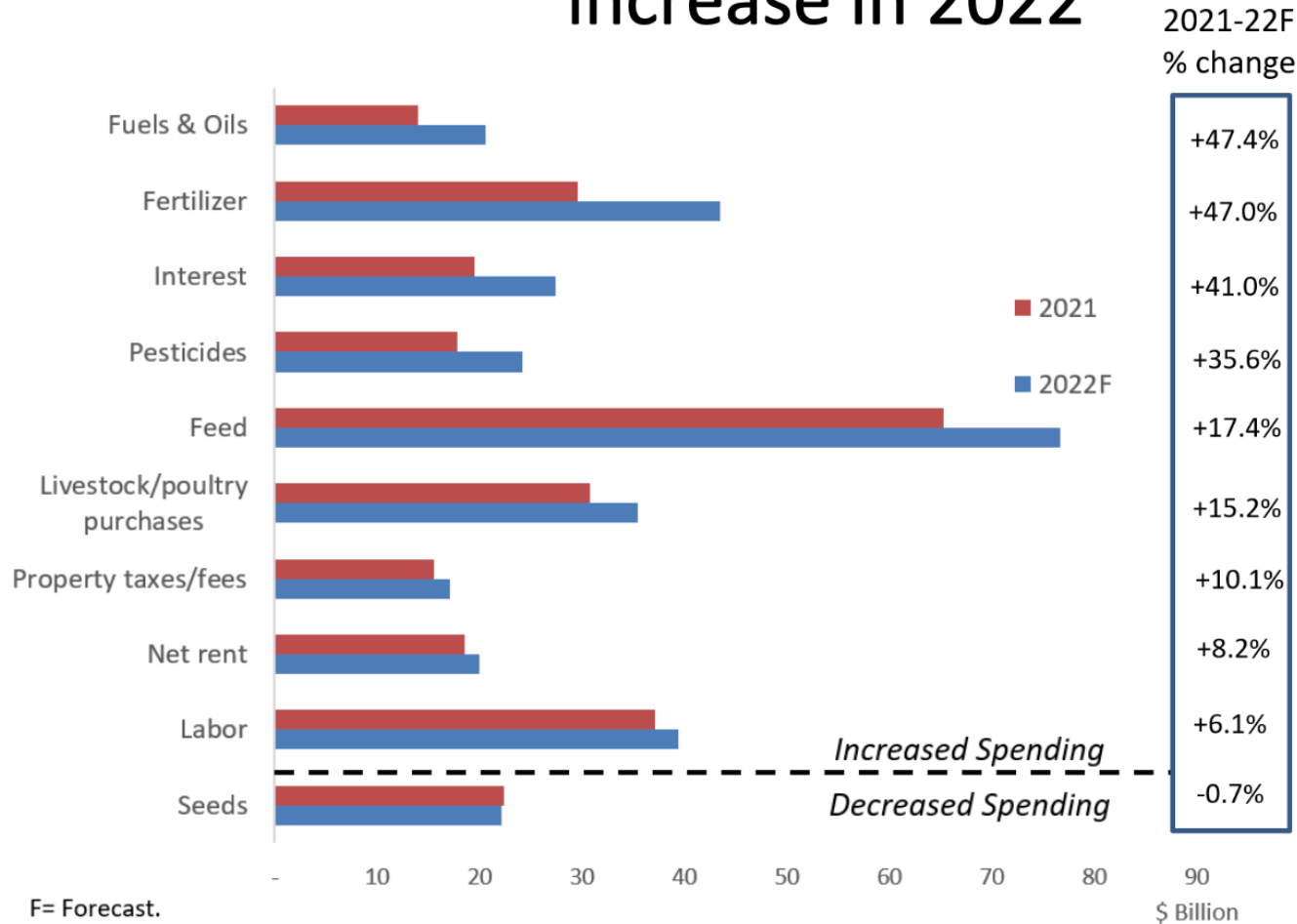
- Land rent up all over the Midwest
- WI up \$12/ac to \$145/ac (+9%)
- Consistent with land value increase and high crop and livestock prices



Record Low Interest Rates Have Ended Cost of Capital Increasing Rapidly



Almost all individual expense items forecast to increase in 2022



Fertilizer and feed are expected to see largest dollar increases.

Farmers are anxious going into 2023

- How high will costs go?
- Will costs remain high or start to fall?
- Will crop and livestock prices remain high enough to justify higher costs?

F= Forecast.

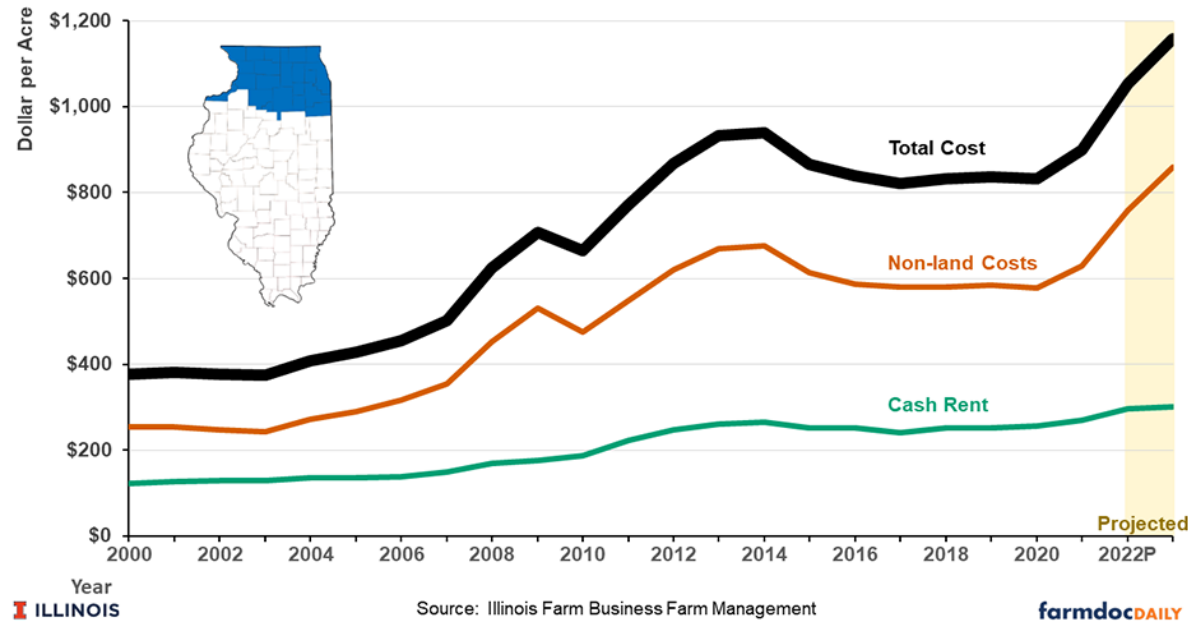
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

Data as of December 1, 2022



U of IL Projecting Record Costs for 2023 Crops (Dec 6, 2022)

Figure 1. Costs of Producing Corn in Northern Illinois Projected to be Record High



<https://farmdocdaily.illinois.edu/2022/08/2023-crop-budgets-higher-costs-and-lower-returns.html>
<https://farmdocdaily.illinois.edu/2022/12/revised-2023-crop-budgets.html>

2023 Crop Budgets for Northern Illinois

Corn	2021	2022P	2023P
Non-land Costs	\$629	\$758	\$867
Land Rent	\$271	\$296	\$301
Farmer Return	\$477	\$193	\$47

Non-land cost increase +23% +17%

Soybean	2021	2022P	2023P
Non-land Costs	\$371	\$472	\$519
Rent	\$271	\$296	\$301
Farmer Return	\$287	\$64	\$50

Non-land cost increase +24% +15%

Recommendations on Managing Costs in 2023

Projected Cost Changes, 2022 to 2023, Northern IL

Category	Corn	Soybean
Fertilizer	14%	0%
Chemicals	35%	31%
Seeds	7%	15%
Insurance	37%	56%
Machinery	22%	17%
Fuel	52%	100%
Interest	35%	31%
Total Cost	17%	15%

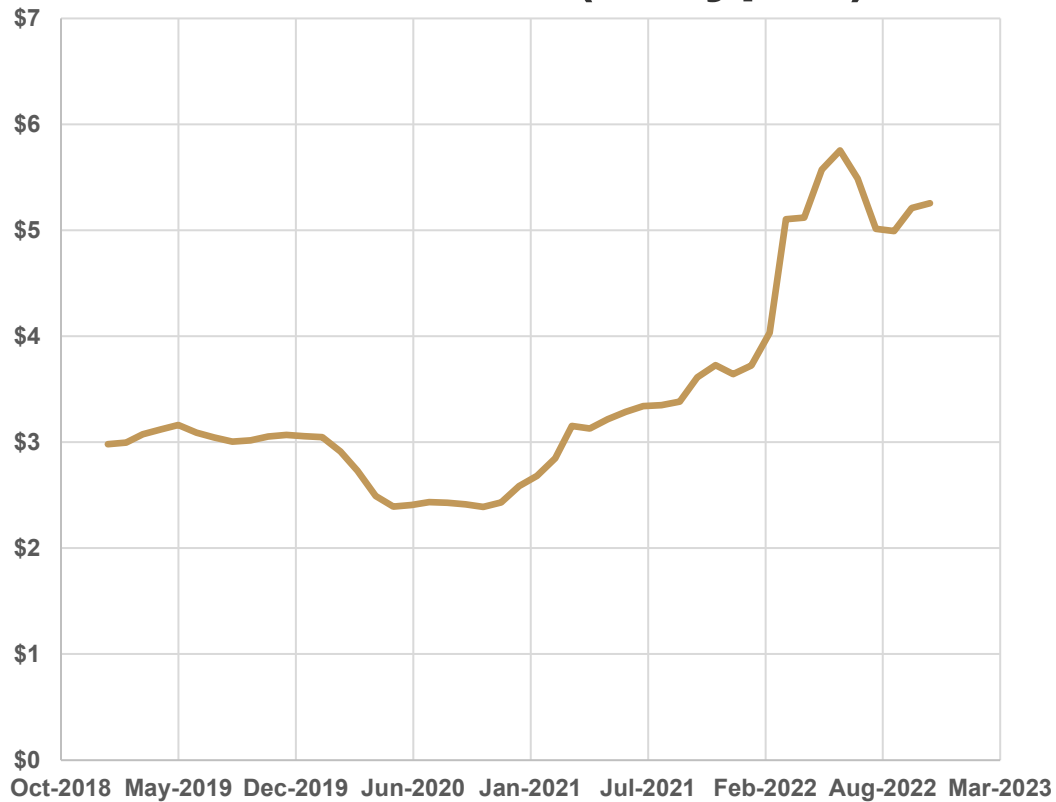
- **Small Steps, Big Changes:** Achieving positive returns in a time of high input costs
- Positive, but thin, margins for 2023, so need to manage costs without losing yield
- This is what today's speakers will focus on
- You will hear many ideas from subject matter experts on how to manage better
- You are the expert for your farm
- Pick 3 or 4 of these options that make sense for your operation and try them

Recommendations for Managing Input Costs

- Fertilizer prices currently stable at prevailing high levels
 - Futures markets suggest fertilizer prices may decline some, but lots of uncertainty from energy prices, Ukraine/Russia war, and logistics
 - Buy before March, as prices tend to be above average during planting rush
- Chemicals: Up 30% to 35% from 2022
 - Buy before planting/spraying rush, as prices tend to be above average then
- Crop Insurance: Crop prices about same as last year, out of your control
 - Buy Revenue Protection with 70-80% coverage level, Enterprise Units
- Fuel costs are trending downward, so wait to buy, but not too long
 - NOAA predicts cold winter, lots of uncertainty from Ukraine/Russia war

Diesel fuel prices have been high, but futures are falling

US Monthly Average On-Highway Diesel Price (all types)

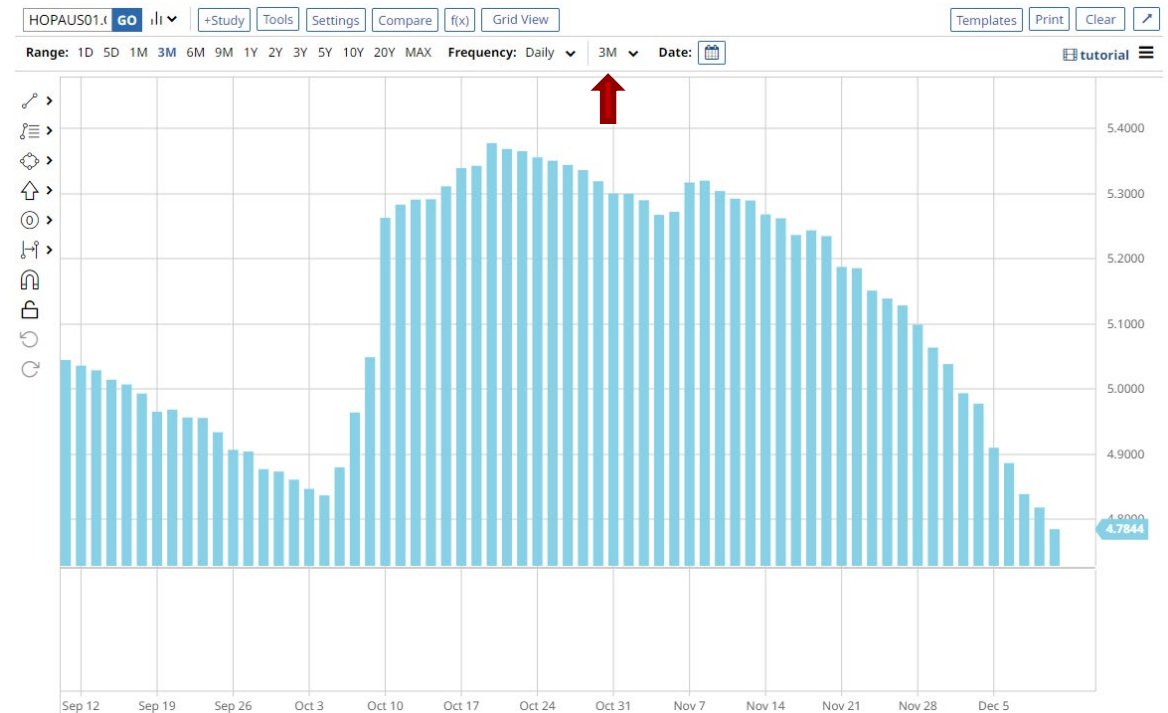


https://www.eia.gov/dnav/pet/PET_PRI_GND_DCUS_NUS_W.htm

3-Month Diesel Futures Price

US Diesel Price (HOPAU01.CM)

4.7844 -0.0334 (-0.69%) 12/09/22 [CMENRF_IDX]



<https://www.barchart.com/futures/quotes/HOPAU01.CM/interactive-chart>

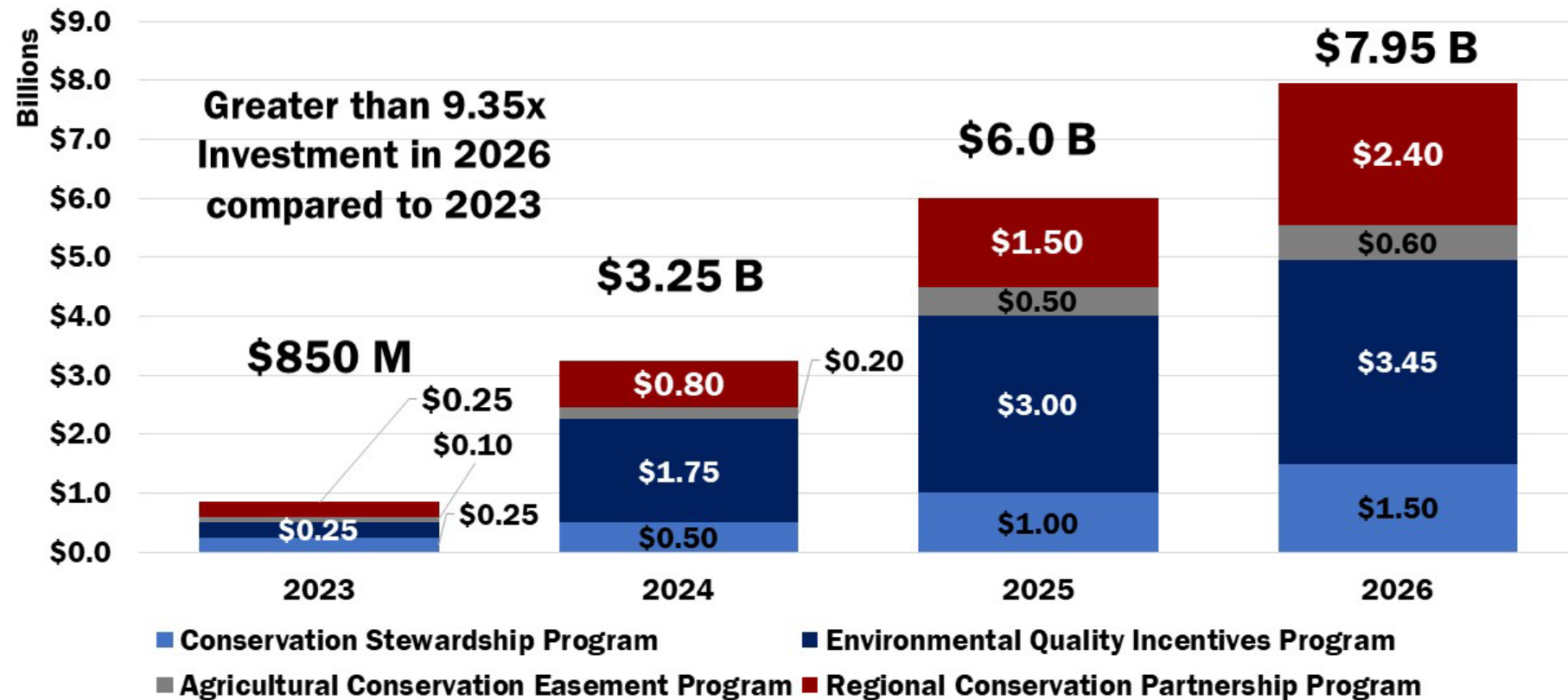
Recommendations for Managing Input Costs

- Interest Expenses: Modest decline likely as inflation seems to be slowing
 - Watch inflation, the Fed will increase interest rates to try to slow inflation
 - If a recession starts, expect Fed to decrease interest rates
 - USDA-FSA Marketing Assistance Loans: Short-term low interest loans with grain as collateral, 5.625% rate, lower rates for other FSA loans
- Grain Marketing: have a marketing plan, use forward/futures contracts to lock in 2023 crop margins, but allow upside gains
 - Put Options: Put a price floor 40 cents below CME corn price for 30 cents/bu or \$1 below soybean CME price for 50 cents/bu
 - Besides weather, biggest risk is global recession destroying demand: Put a floor on your price to preserve your margin

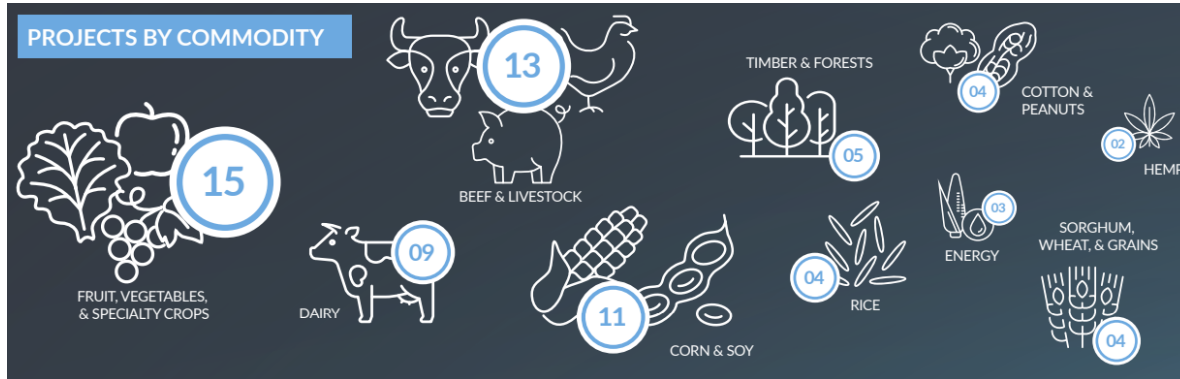
Emerging Conservation Opportunities:

What's in the Inflation Reduction Act (IRA)?

CBO Conservation Baseline & \$18.05 Billion from IRA



USDA Partnerships for Climate Smart Commodities



- Climate Smart = Sustainability plus Climate change Mitigation & Adaptation
- **Pay farmers to implement climate-smart production practices on working lands**
- Measure, monitor and verify carbon and greenhouse gas benefits from these
- Develop markets and promote the resulting climate-smart commodities

\$2.8 Billion on 70 Projects

- The DeLong Co: \$40 M
- Edge Dairy Farmer Coop: \$50 M
- Organic Valley: \$25 M
- Carbon A List (Danone): \$70 M
- Iowa Soybean Assoc: \$95 M
- ADM and Partners \$90 M
- Farm Journal and Partners \$40 M
- National Assoc Consvrtn Dists: \$90 M
- National Fish Wildlife Foundtn \$95 M

Summary

- Average WI farm in solid financial position entering 2023
- Crop prices a little lower, crop costs up 15% to 17% for 2023
- 2023 expected margins thinner
- Cost slowing, wait a few months?
 - Spring will bring planting rush
- FSA for lower interest loans
- Put options to create price floor
- New conservation opportunities
- Listen for good ideas, try 3 or 4

Questions? Comments?



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	Keynote
09:00-09:15	Paul Mitchell: Farming in an Age of Inflation
09:15-09:30	
	Soils and Cover Crops
09:30-09:45	Dan Smith: Controlling Weeds and Costs for Cover Crop Interseeding
09:45-10:00	Ruark: Cover crops, nitrogen management, and soil health
10:00-10:15	Arriaga: How much cover crop biomass do you need to reduce runoff and phosphorus losses?
10:15-10:30	Jones: Improved Phosphorus and Potassium Management: Considerations and Lessons Learned
10:30-10:45	BREAK
	Corn
10:45-11:00	Arriaga: N Rate Adjustment with tillage management in Corn
11:00-11:15	Luck: Planter setup and closing wheel options for no-till corn planting
11:15-11:30	Rodrigo Werle/Nick Arneson: herbicide updates and chemical weed management in conventional corn
11:30-11:45	Damon Smith - Managing Tar Spot Efficiently
11:45-12:00	Emily Bick - Updates in Corn Rootworm Research
	Lunch and Special Speaker
12:00-12:15	Lunch service and getting settled
12:15-12:30	John Shutske - "Autonomous Ag" in Wisconsin: Will We Leap Forward or be Held Back?
12:30-12:45	
12:45-13:00	BREAK and REGROUP
	Soybean
13:00-13:15	Shawn Conley-Management Implications for Crop Insurance Updates.
13:15-13:30	Rodrigo Werle/Nick Arneson - weed management considerations in early planted soybeans.
13:30-13:45	Damon Smith - Managing White Mold with Improved BMPs
	Small Grains and Forages
13:45-14:00	Shawn Conley - Management of Hybrid Rye for Grain or Forage
14:00-14:15	Mark Renz - Challenges in managing foxtails in forages
14:15-14:30	Luck: Corn silage kernel processing research update
14:30-14:45	Patton: Alfalfa forage copper levels on eastern Wisconsin dairy farms using copper sulfate footbaths
14:45-15:00	Mark Renz - Identification tips for annual grasses

2023 Agricultural Outlook Forum



- Morning: **Situation and Outlook** for Wisconsin agricultural industries: dairy, corn, soybeans, and livestock
- Afternoon: **Climate Smart Dairy in WI**
- Tuesday, January 24, 2023
- Registration opens soon
- In-person: \$50 for lunch and treats
- Livestream on YouTube: Free
- <https://renk.aae.wisc.edu/2023-agricultural-outlook-forum/>