



Caring for You and Your Farm®

Summer 2021

**Landowner Educational
Webinar**



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Farmland Values

Speaker:

Doug Hensley

President of Real Estate

Doug.Hensley@Hertz.ag





Caring for You and Your Farm®

Summer 2021

Land Values



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Agenda

- **Background & Hertz Market Coverage**
- **Land Values Update**
- **What's Driving This Market?**
- **What Can You Expect?**
- **What To Watch**
- **Questions?**

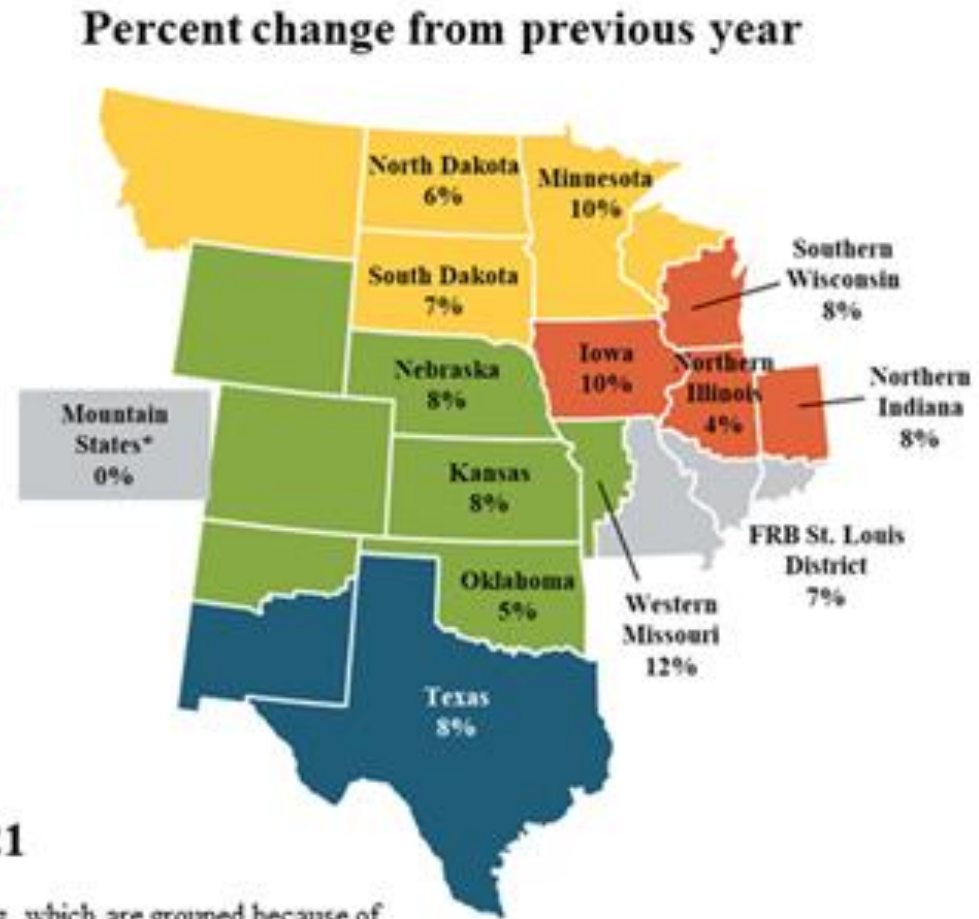
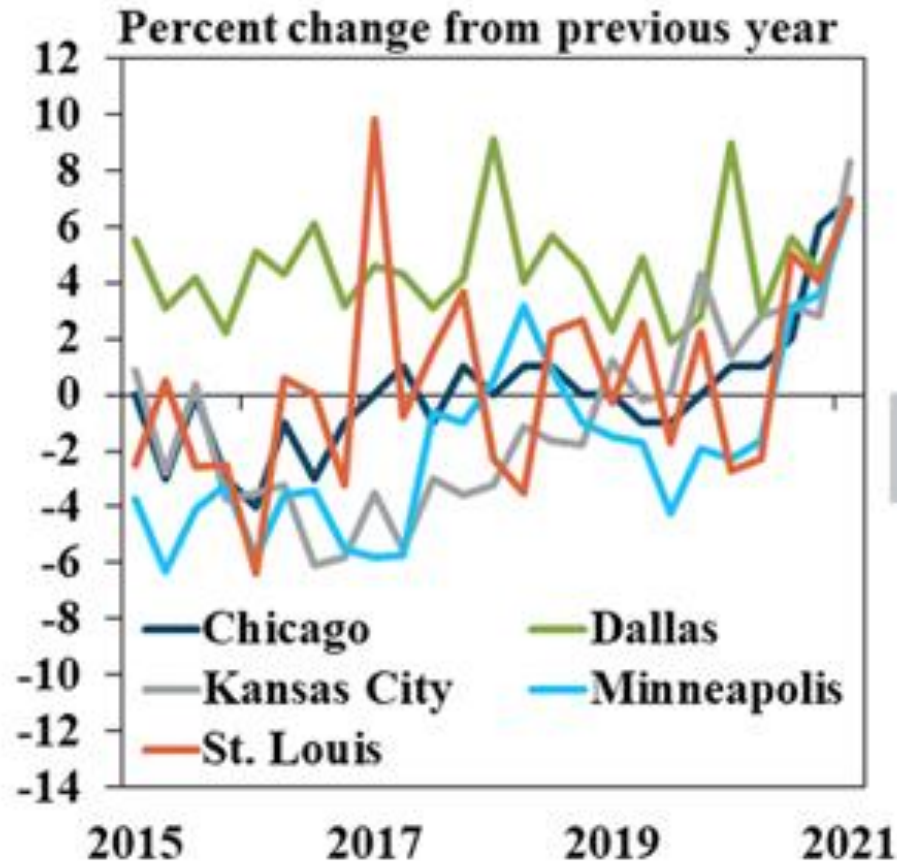


Farmland Values

Farmland values are a barometer of the economic health and wealth of the farming economy.



Non-Irrigated Land Values – Q1



*Mountain States include Colorado, northern New Mexico and Wyoming, which are grouped because of limited survey responses from each state.

Sources: Federal Reserve District Surveys of Agricultural Credit Conditions.



Source: Federal Reserve

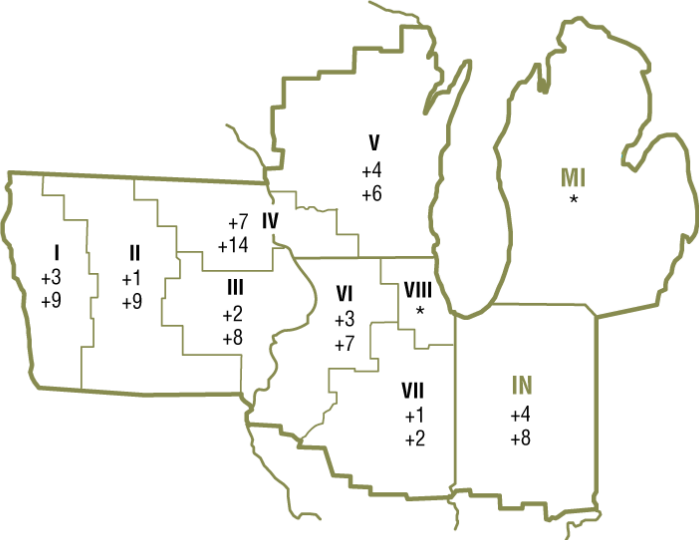
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Chicago Federal Reserve Study

Percent Change in Dollar Value of “Good” Farmland

	January 1, 2021 to April 1, 2021	April 1, 2020 to April 1, 2021
Illinois	+2	+4
Indiana	+4	+8
Iowa	+4	+10
Michigan	*	*
Wisconsin	+4	+8
Seventh District	+3	+7



Top: January 1, 2021 to April 1, 2021
Bottom: April 1, 2020 to April 1, 2021

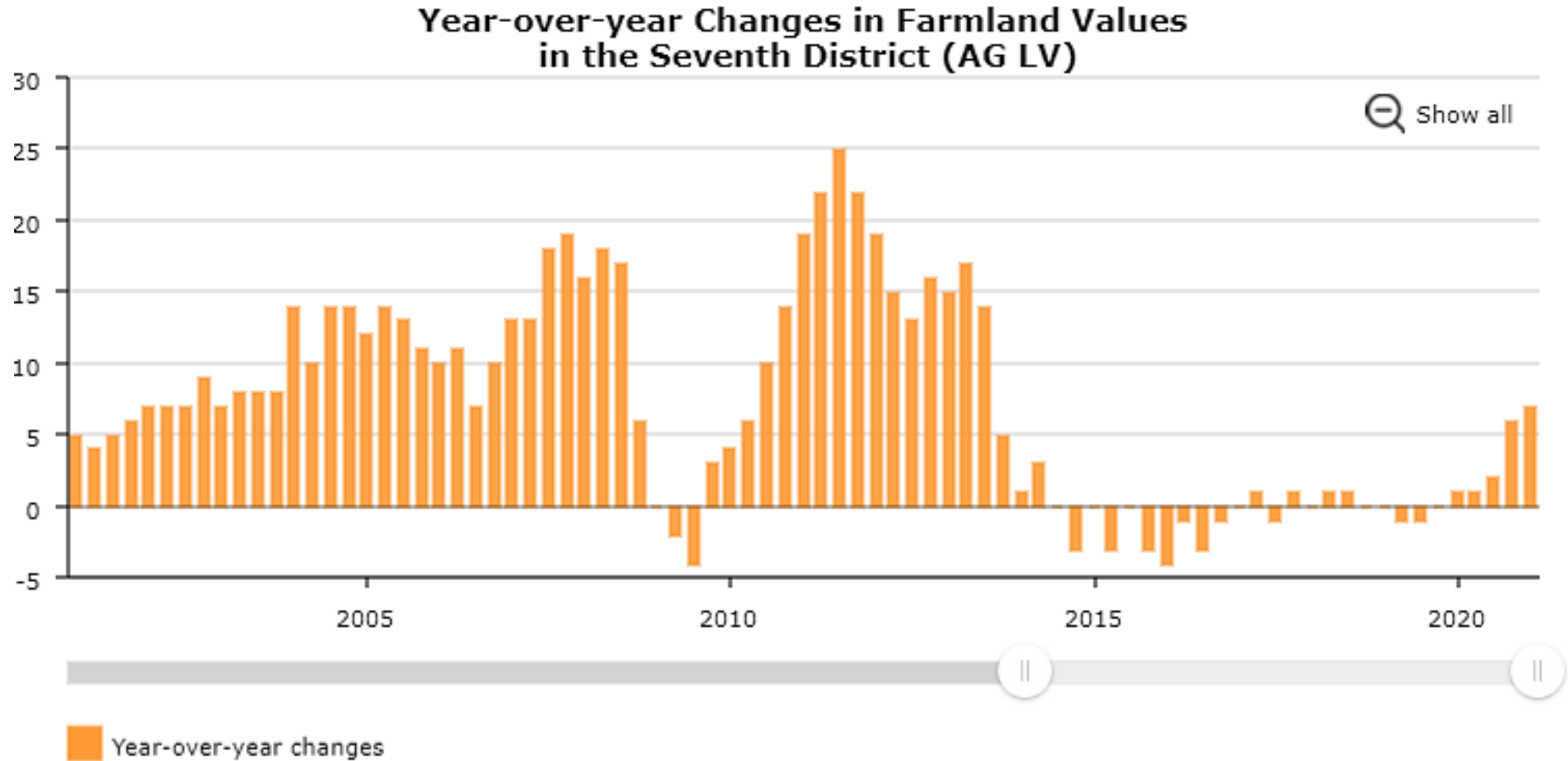


Source: Federal Reserve Bank of Chicago, AgLetter, No. 1992, May 2021

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Chicago Fed – Land Values Over Time

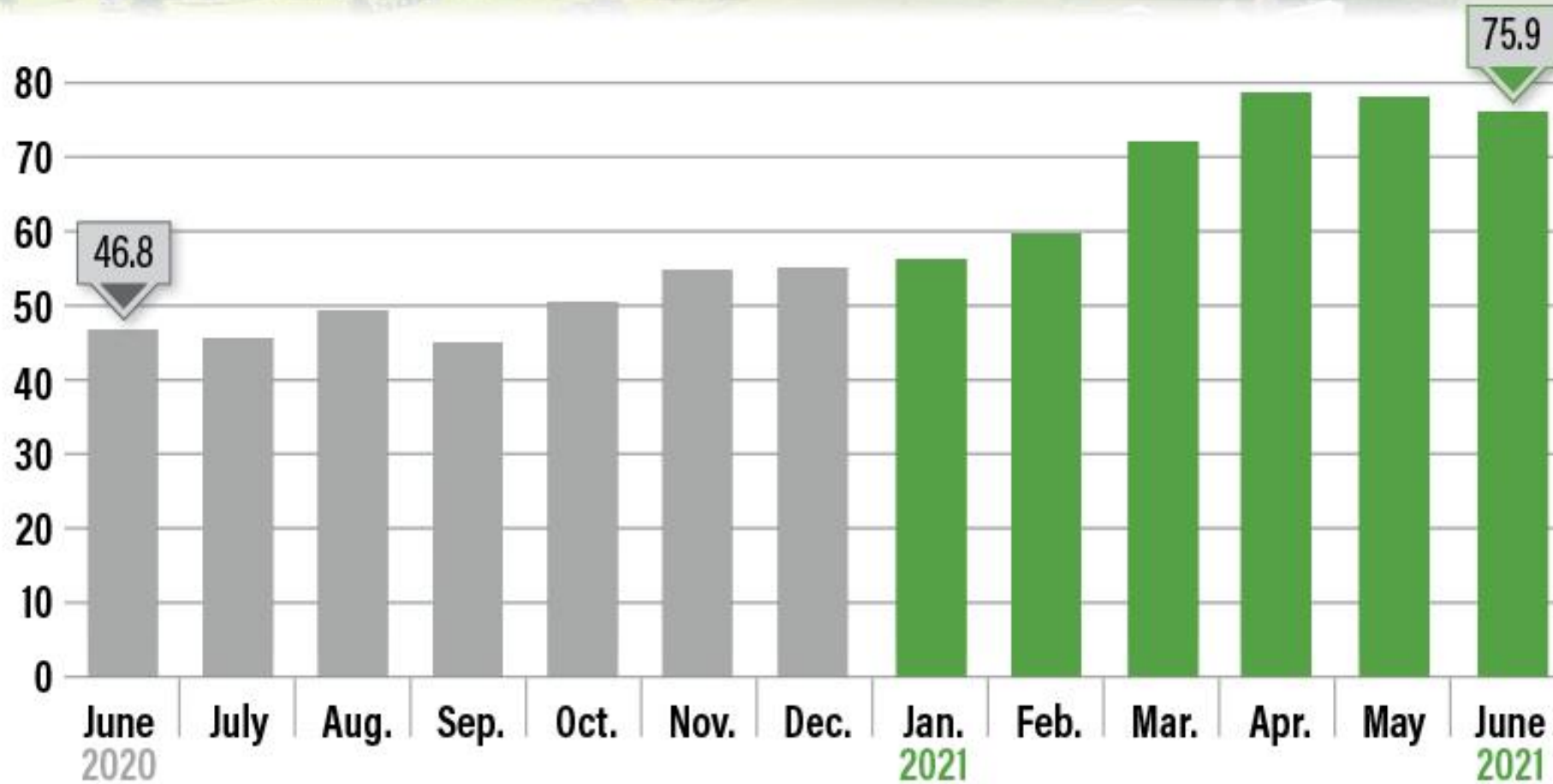


Source: Chicago Federal Reserve

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FARMLAND PRICE INDEX



Source: Creighton University, Rural Mainstreet Index

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Perspective... June Sales @ HFM

- **34 Farms Offered at Public Auction**

- Sold! > \$10,000/Acre 29
- Sold! > \$12,000/Acre 26
- Sold! > \$14,000/Acre 18
- Sold! > \$16,000/Acre 5

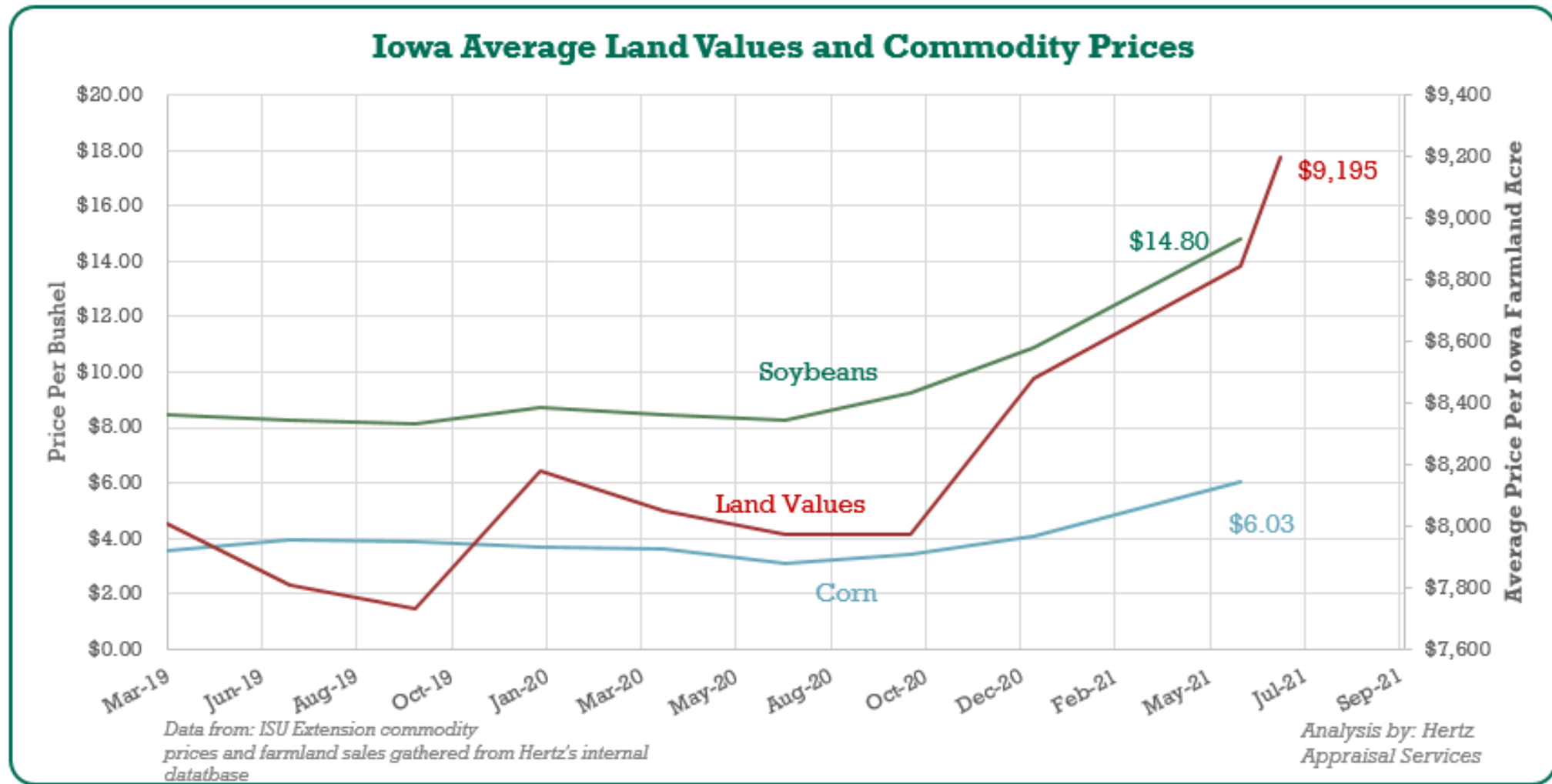
This market is STRONG... and is either at or above prior highs made back in 2013-2014.



What's Driving This Market???



Land Values & Commodities

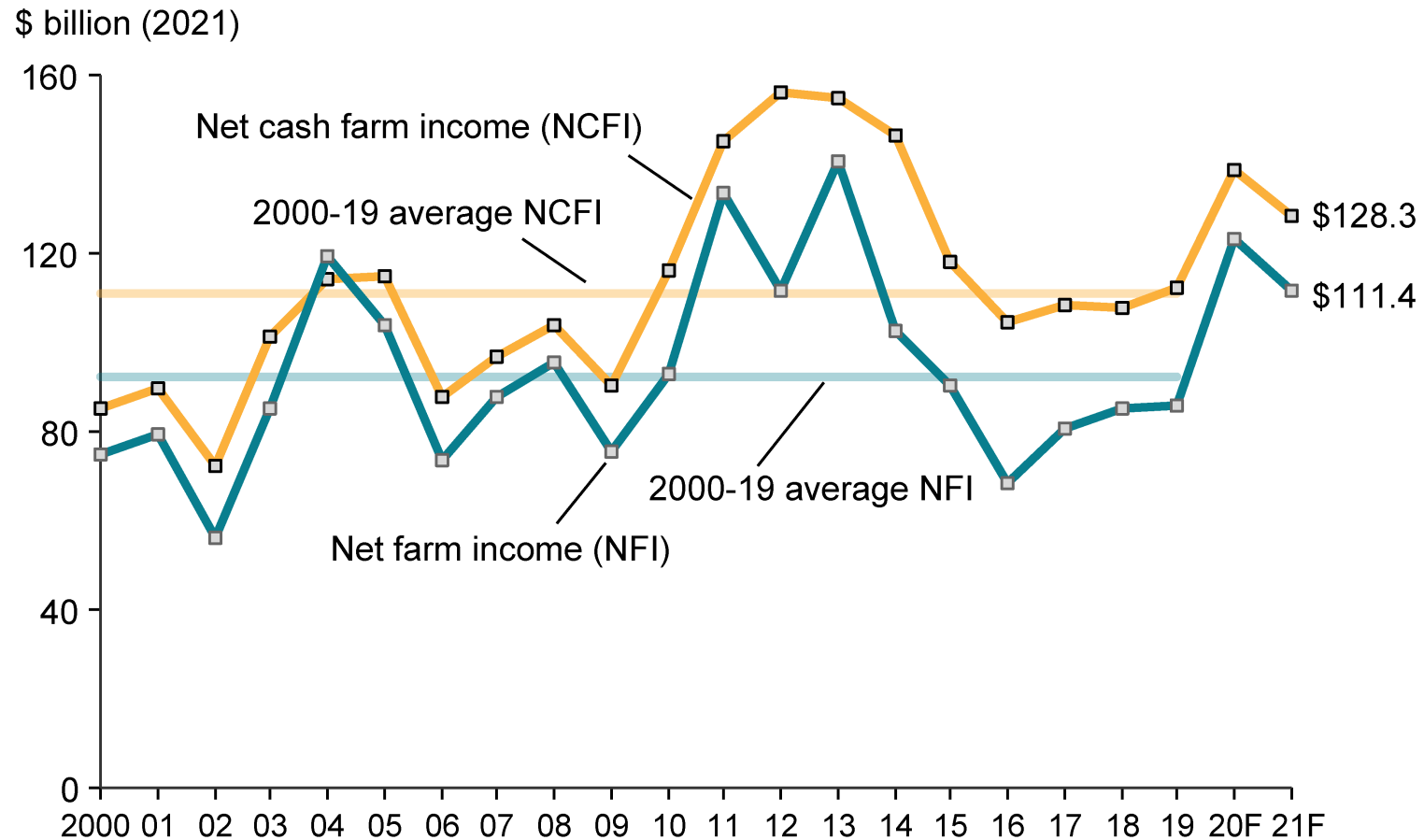


Source: ISU Extension

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Decreasing Farm Income... Huh?



Note: F = forecast. Values are adjusted for inflation using the Gross Domestic Product chain-type price index, 2021=100.

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

Data as of February 5, 2021.

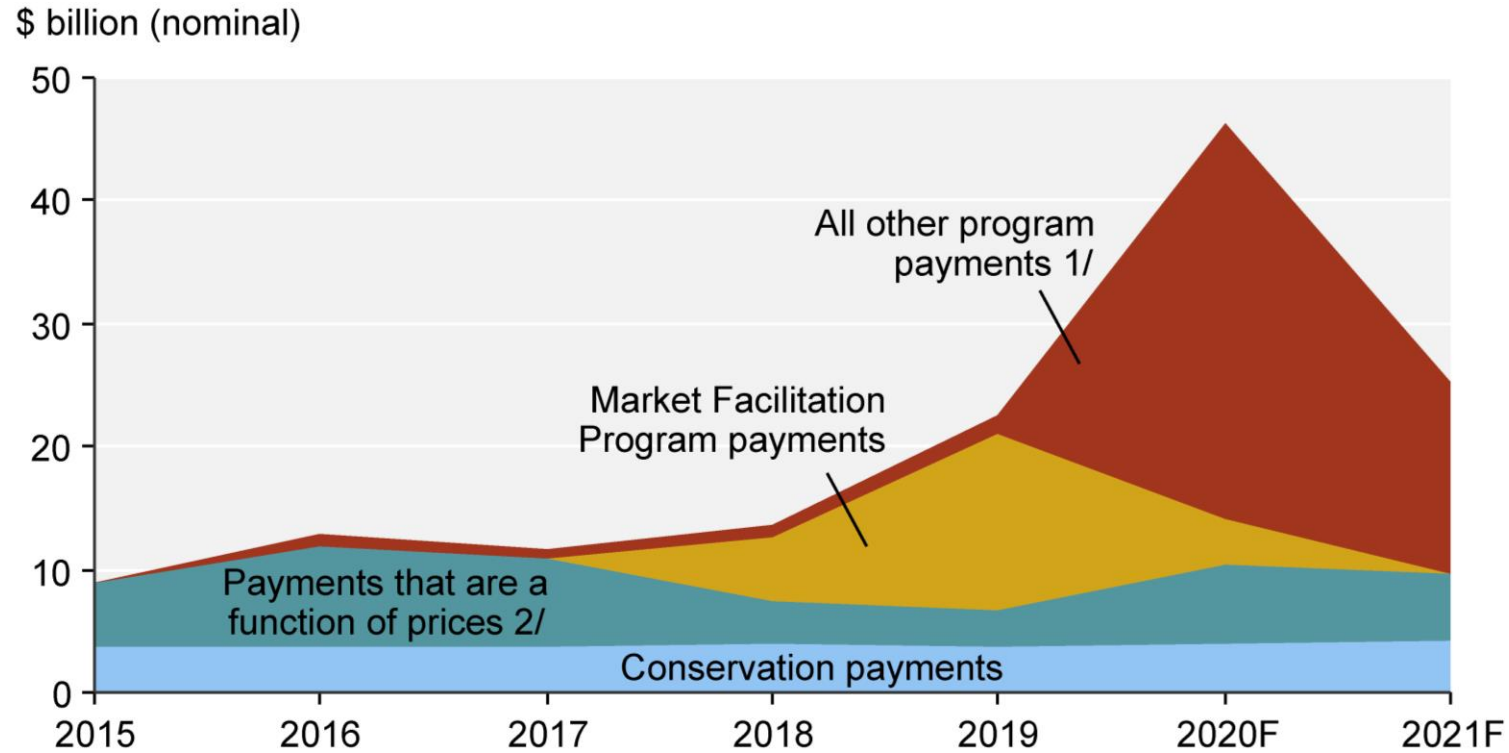


Source: USDA

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Decreasing Government Payments!



Note: F = forecast. 1/ "All other program payments" includes supplemental and ad hoc disaster assistance, which in 2020 and 2021 includes payments from the Coronavirus Food Assistance Program and the Paycheck Protection Program, and in 2021 also includes payments under the Consolidated Appropriations Act, 2021. 2/ Includes Price Loss Coverage, Agriculture Risk Coverage, loan deficiency payments (excluding grazeout payments), marketing loan gains, certificate exchange gains, and dairy payments.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of February 5, 2021.

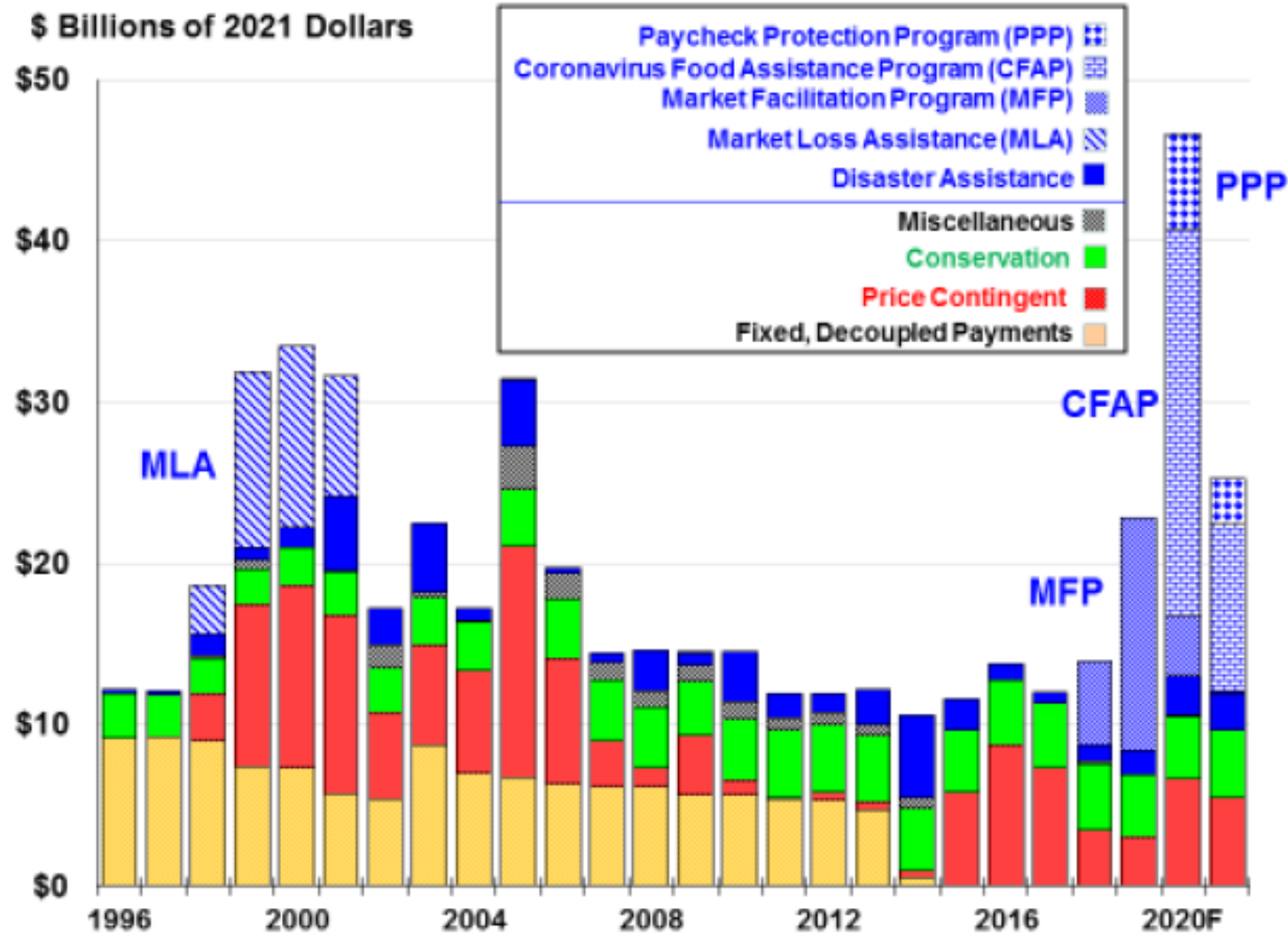


Source: USDA

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Decreasing Government Payments!

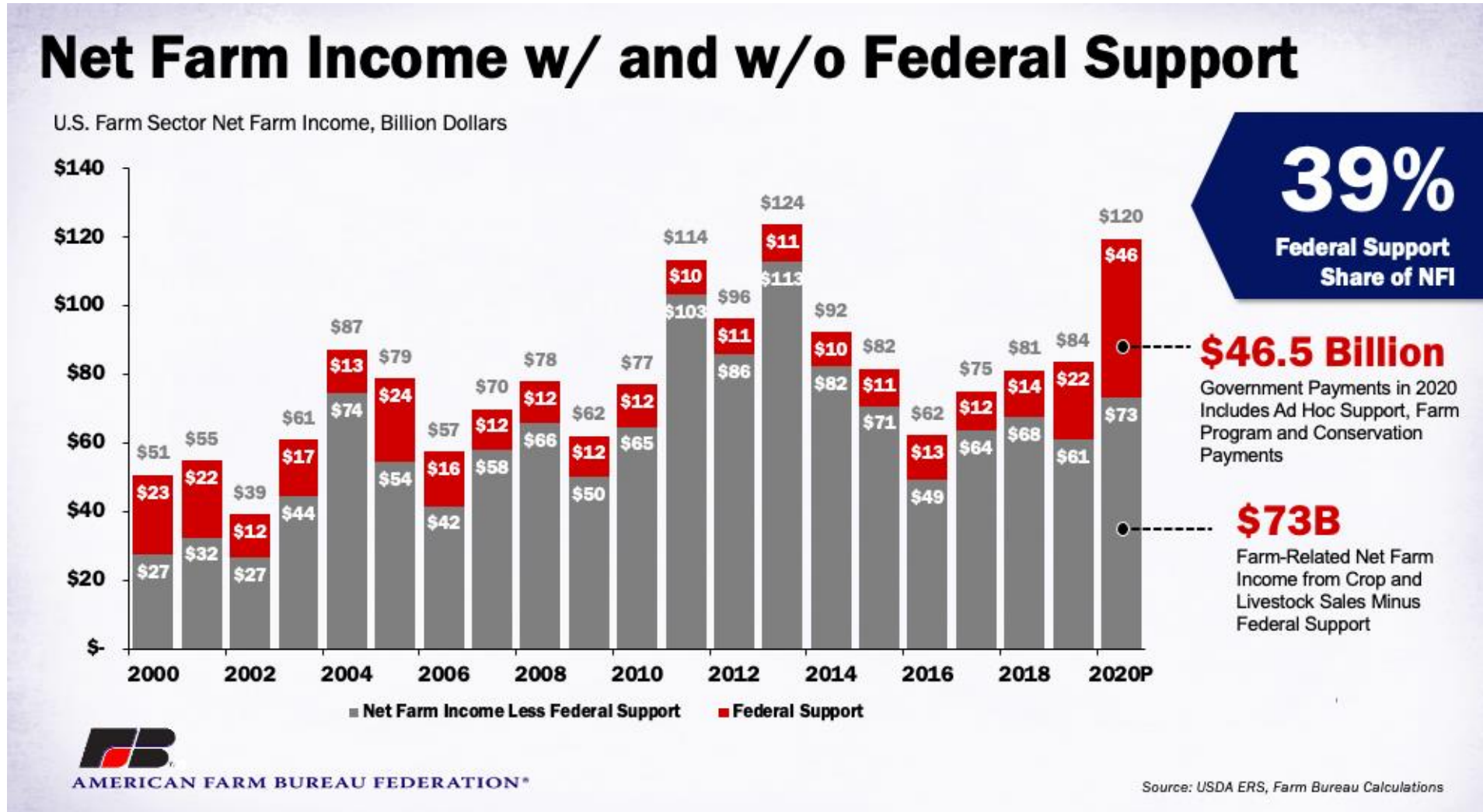


Source: Congressional Research Service, February 2021

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U.S. Net Farm Income

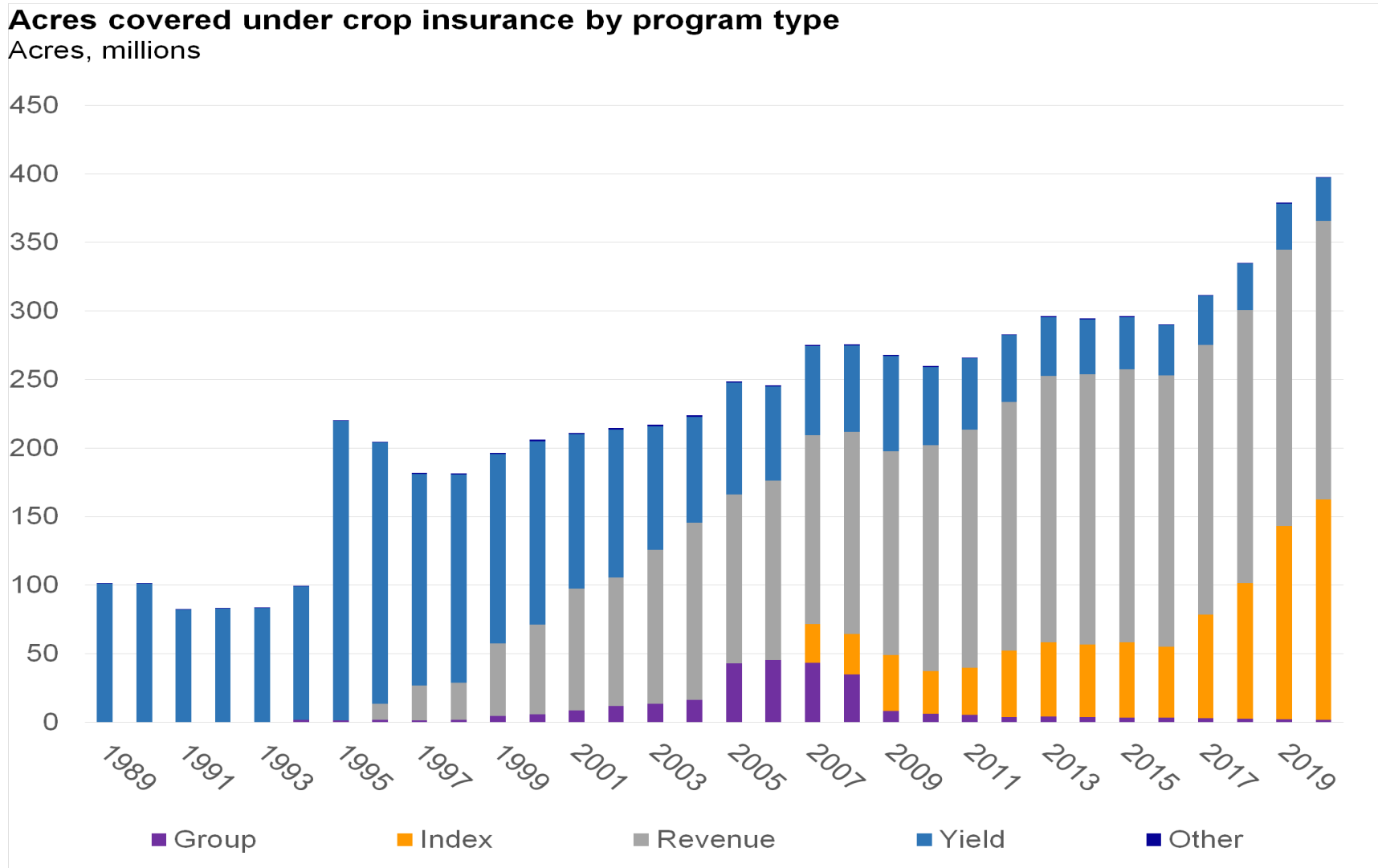


Source: USDA on Data, AFBF on Table

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Gov't Support – Crop Insurance

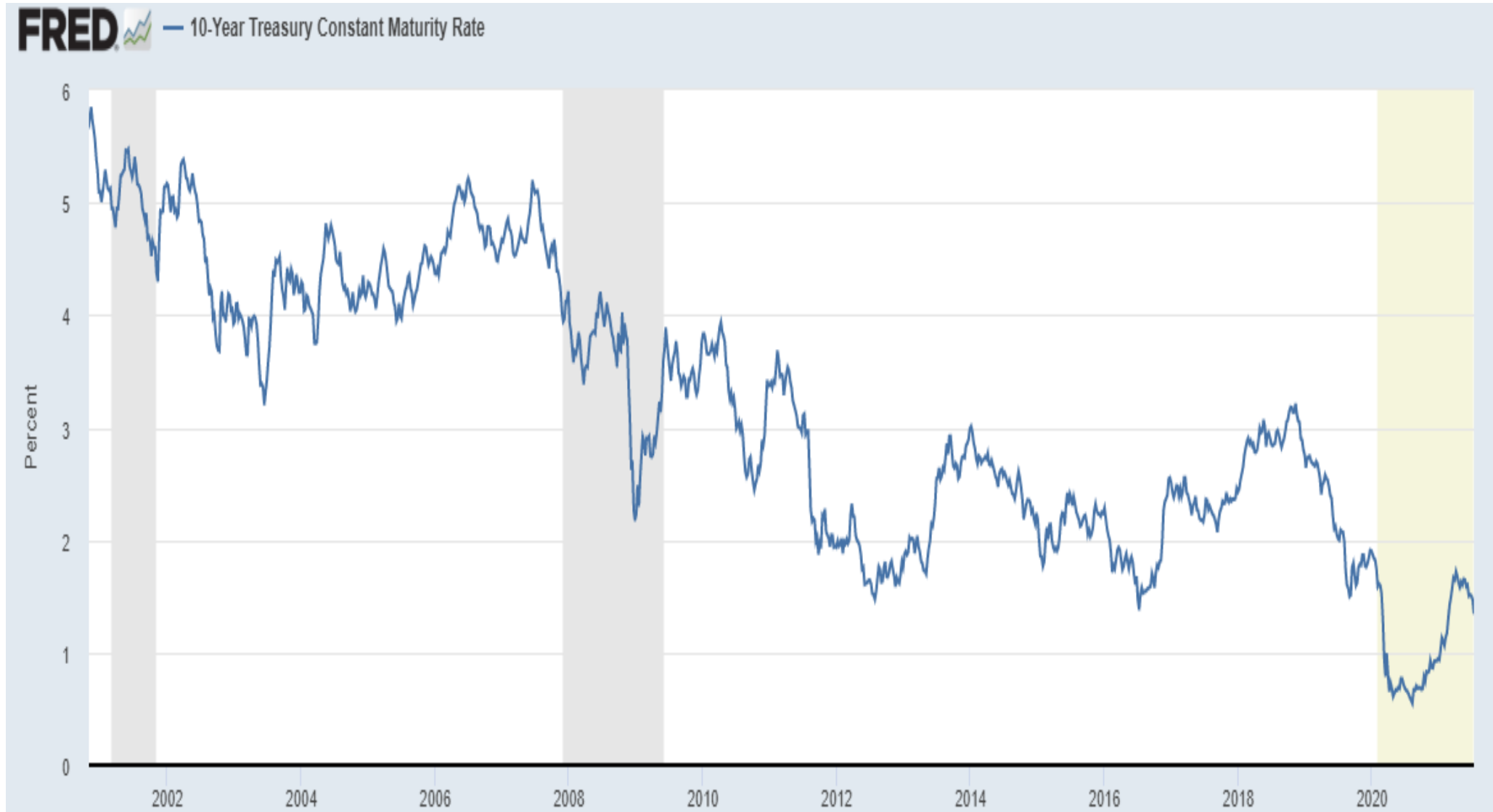


Source: USDA Economic Research Service

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Interest Rates – 10 Year Treasury

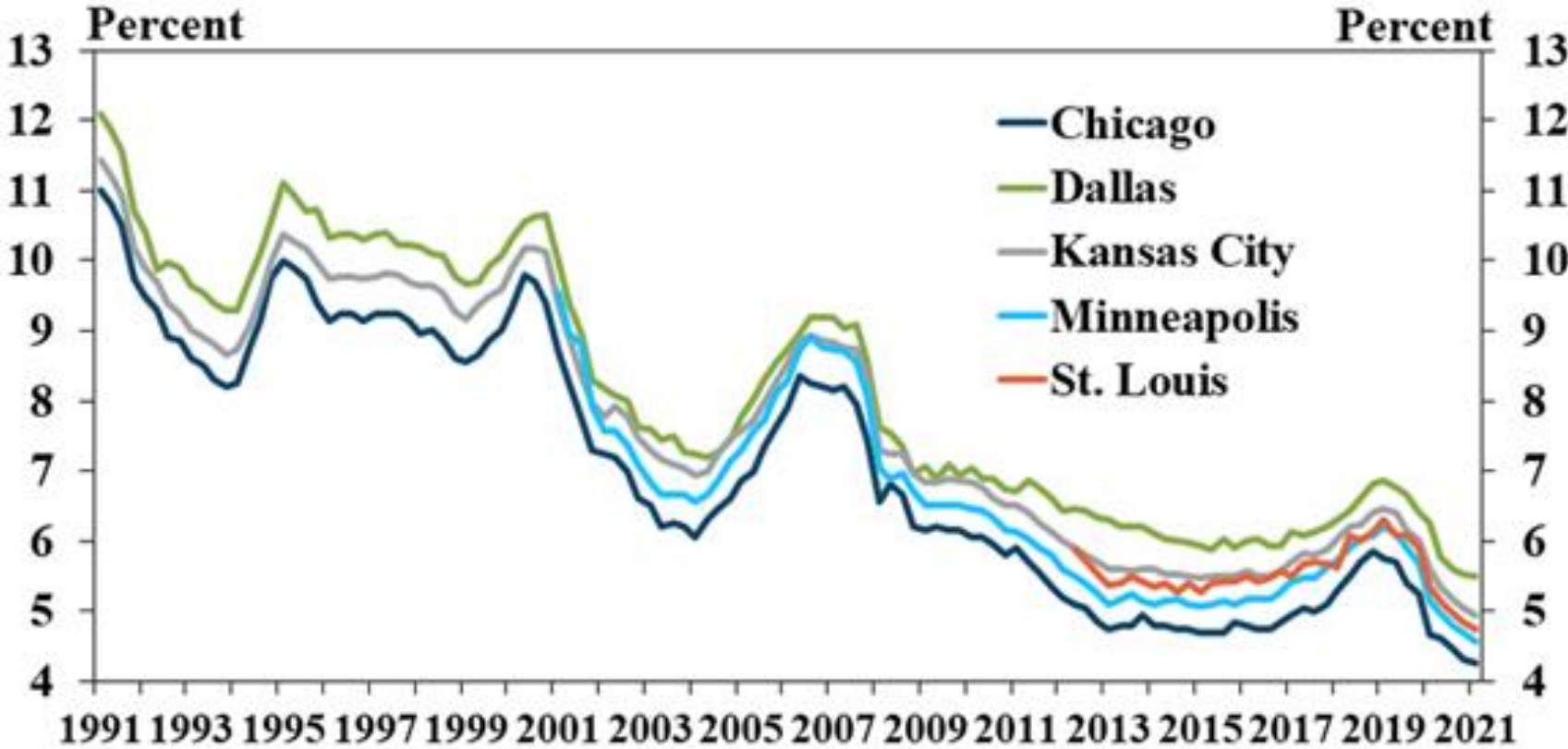


Source: St. Louis Federal Reserve Bank

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Interest Rates... Historical by Fed



*Average of fixed rates on agricultural loans of all types – operating, intermediate and real estate.
Note: Minneapolis survey began Q1 2001. St. Louis survey began Q2 2012. Chicago District includes only operating and real estate loans.
Sources: Federal Reserve District Surveys of Agricultural Credit Conditions.



Source: Federal Reserve

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Interest Rates... & More

Credit conditions at Seventh District agricultural banks

	Loan demand	Funds availability	Loan repayment rates	Average loan-to-deposit ratio	Interest rates on farm loans		
					Operating loans ^a	Feeder cattle ^a	Real estate ^a
	(index) ^b	(index) ^b	(index) ^b	(percent)	(percent)	(percent)	(percent)
2020							
Jan–Mar	117	107	59	78.9	4.83	5.01	4.51
Apr–June	103	119	64	77.6	4.77	4.94	4.40
July–Sept	85	131	93	75.0	4.65	4.79	4.24
Oct–Dec	91	148	133	73.6	4.49	4.66	4.10
2021							
Jan–Mar	79	162	146	69.7	4.42	4.58	4.08

^aAt end of period.

^bBankers responded to each item by indicating whether conditions in the current quarter were higher or lower than (or the same as) in the year-earlier quarter. The index numbers are computed by subtracting the percentage of bankers who responded “lower” from the percentage who responded “higher” and adding 100.

Note: Historical data on Seventh District agricultural credit conditions are available online, <https://www.chicagofed.org/publications/agletter/index>.

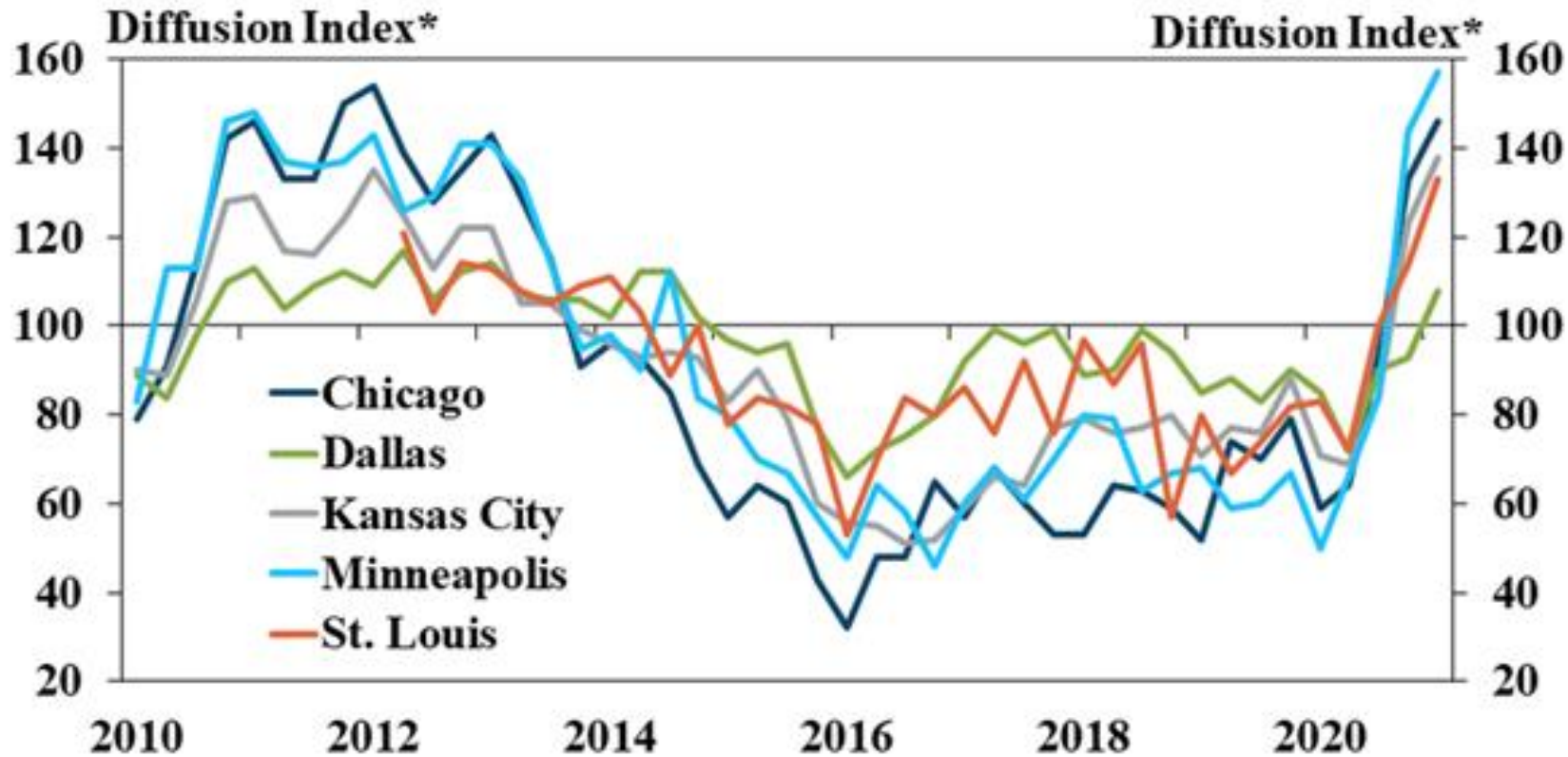


Source: Chicago Federal Reserve

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Bank Repayment Capacity



*Bankers responded by indicating whether conditions during the current quarter was higher than, lower than or the same as in the year-earlier period. The index numbers are computed by subtracting the percentage of bankers who responded "lower" from the percentage who responded "higher" and adding 100.

Note: St. Louis survey began Q2 2012.

Sources: Federal Reserve District Surveys of Agricultural Credit Conditions.

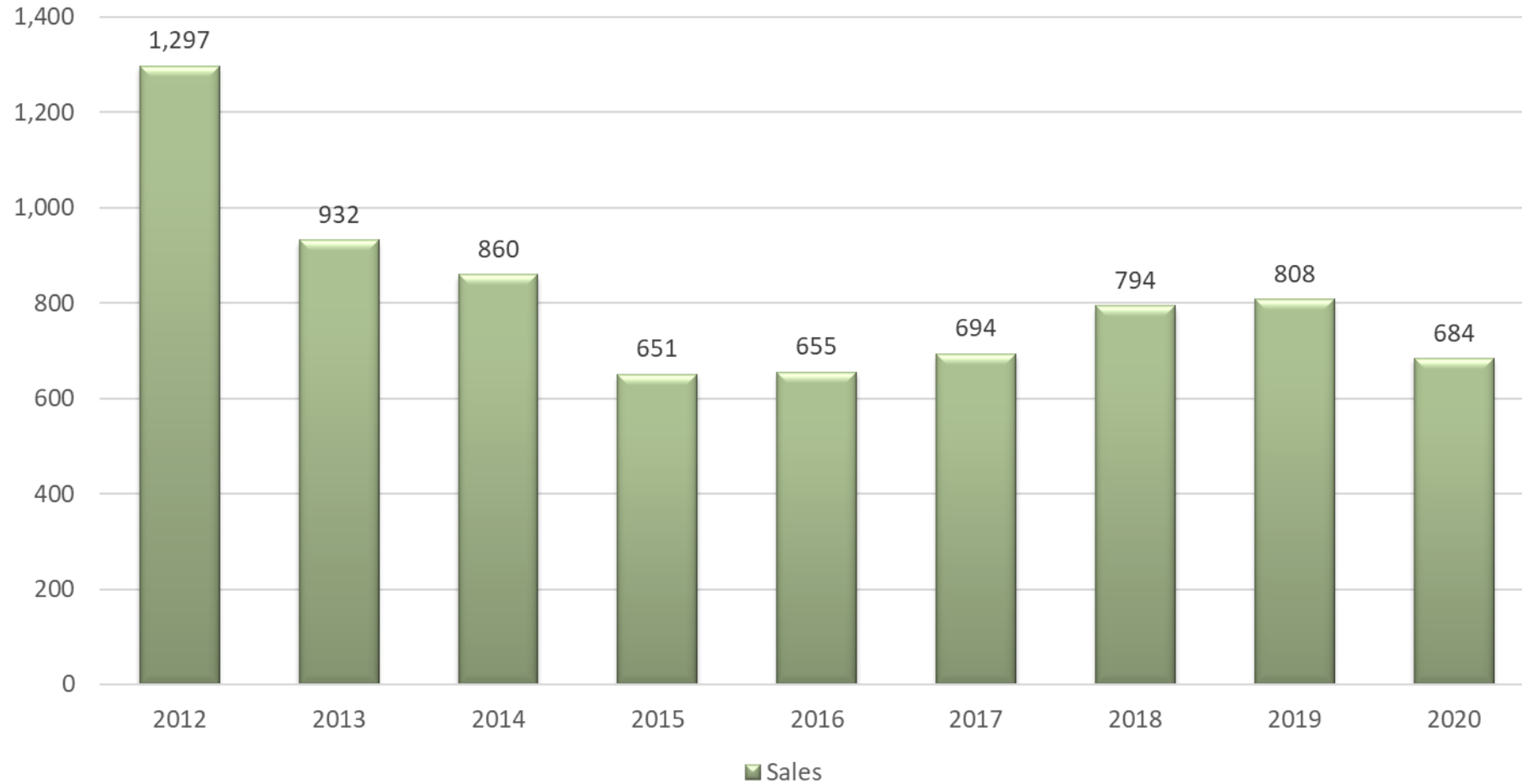


Source: Federal Reserve

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Land Sale Volume – IA Farmland Market Sales



Source: Farm Credit Services of America

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What's Driving This Market???

- **Commodity Prices**
- **Farm Income**
- **Government Support... kind of**
- **Interest Rates**
- **Borrowing Capacity... \$\$\$ to Loan**
- **Land Sale Volume**



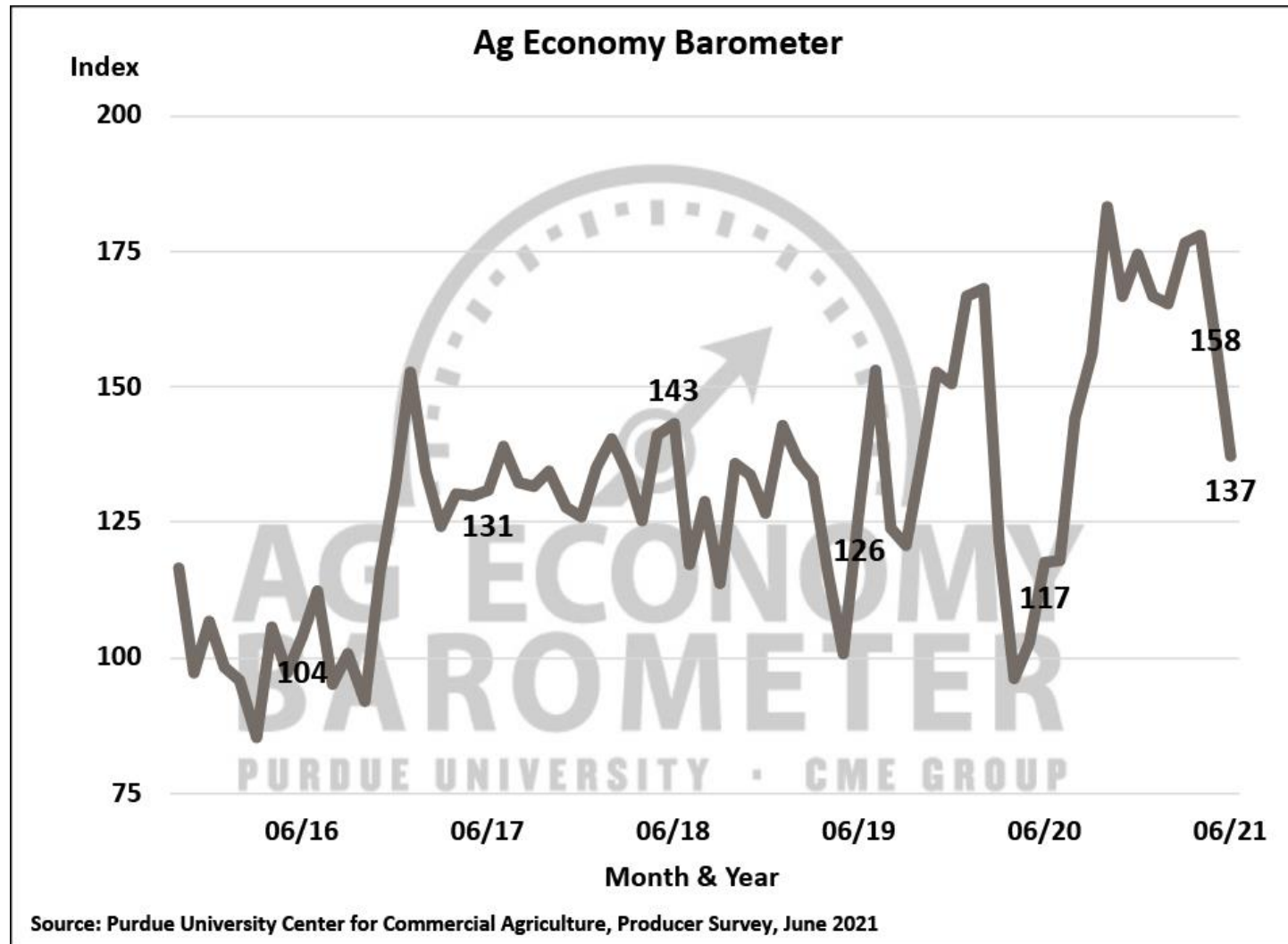
Do you ever recall a market where all the major drivers aligned simultaneously?



So... What To Expect???



Attitudes Improved Quickly... But...



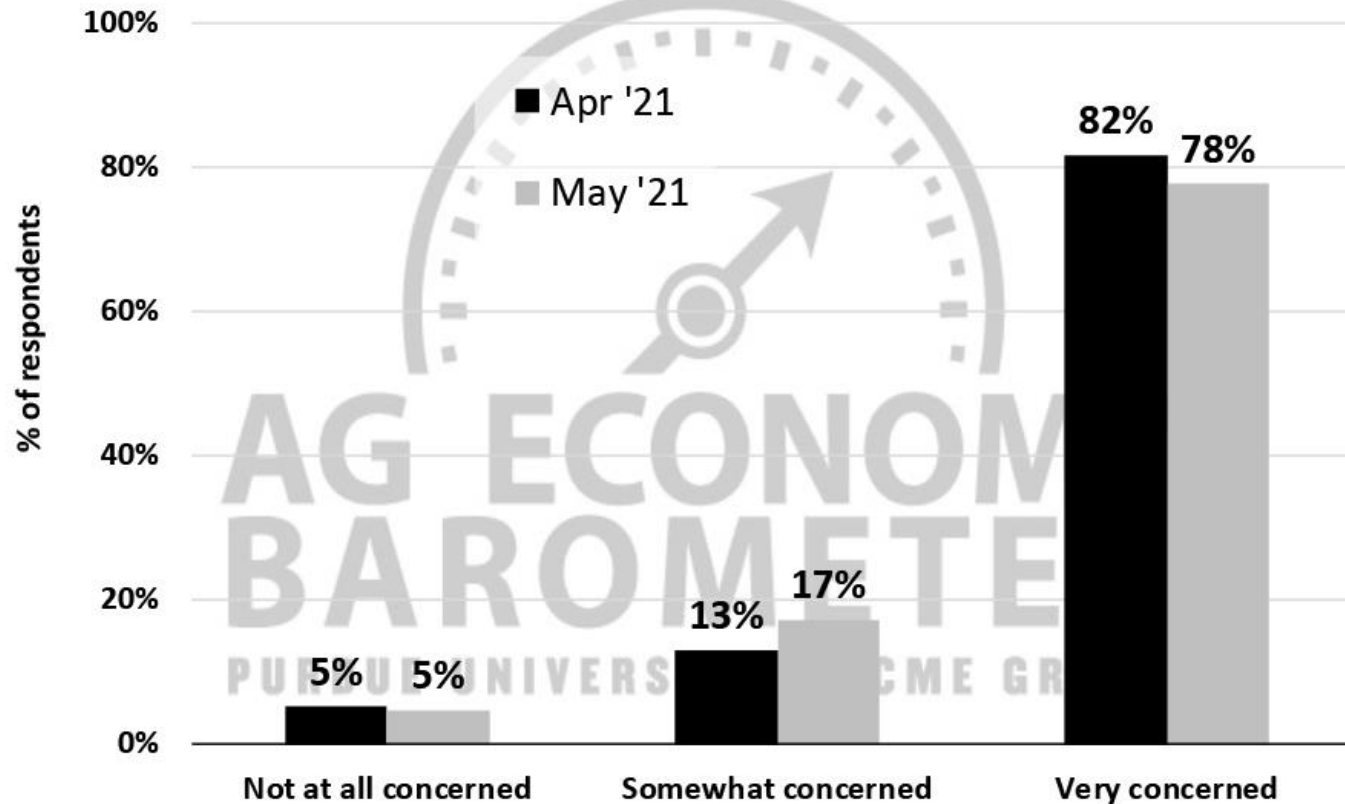
Source: Purdue – Ag Economy Barometer, June 2021

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Disruption Is Possible...

How concerned are you that changes in estate tax policy currently being considered by Congress will make it more difficult to pass your farm on to the next generation of farmers in your family?



Source: Purdue Center for Commercial Agriculture, Producer Survey, April-May 2021

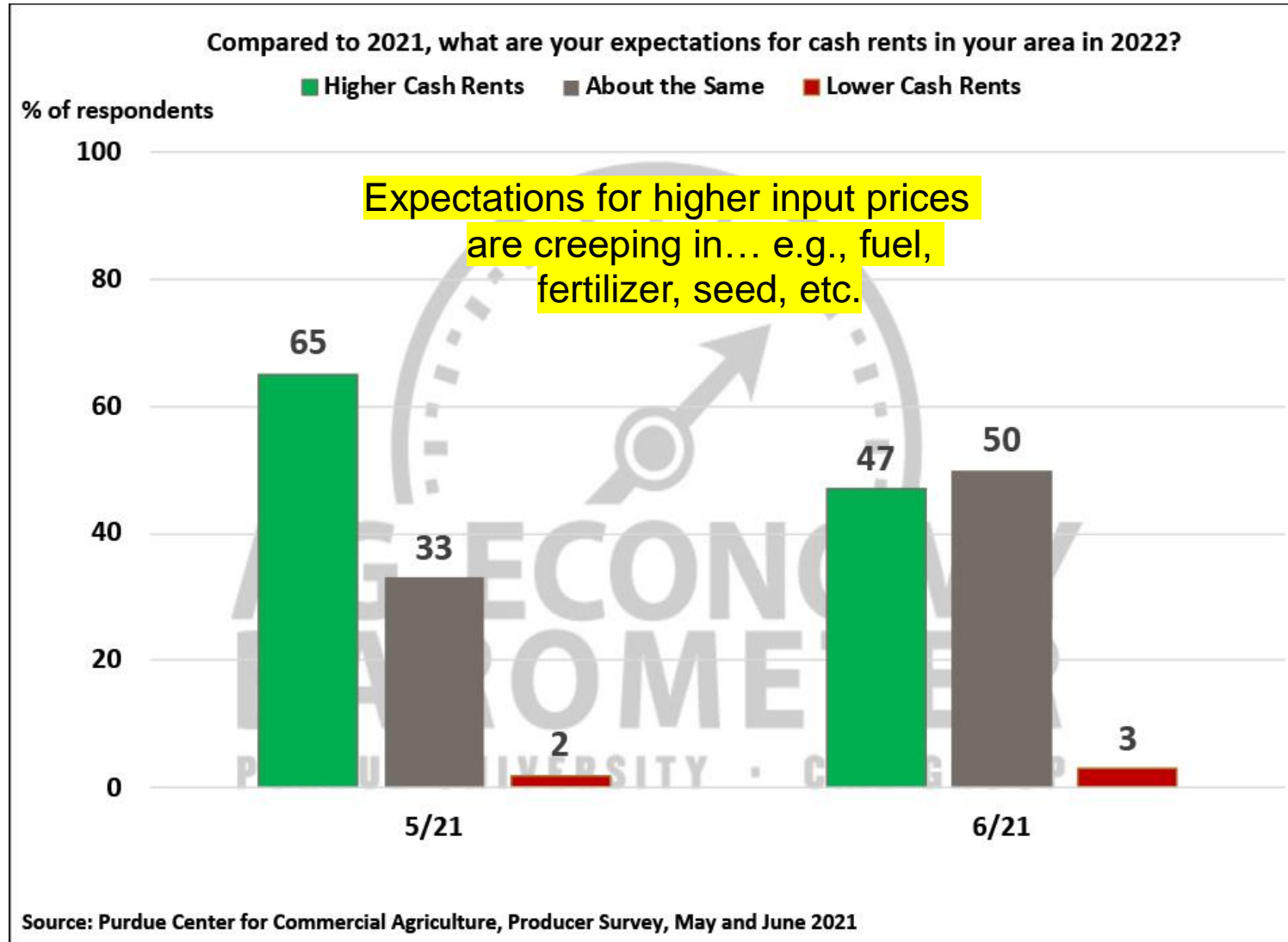


Source: Purdue, April-May 2021

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2022 Rental Outlook

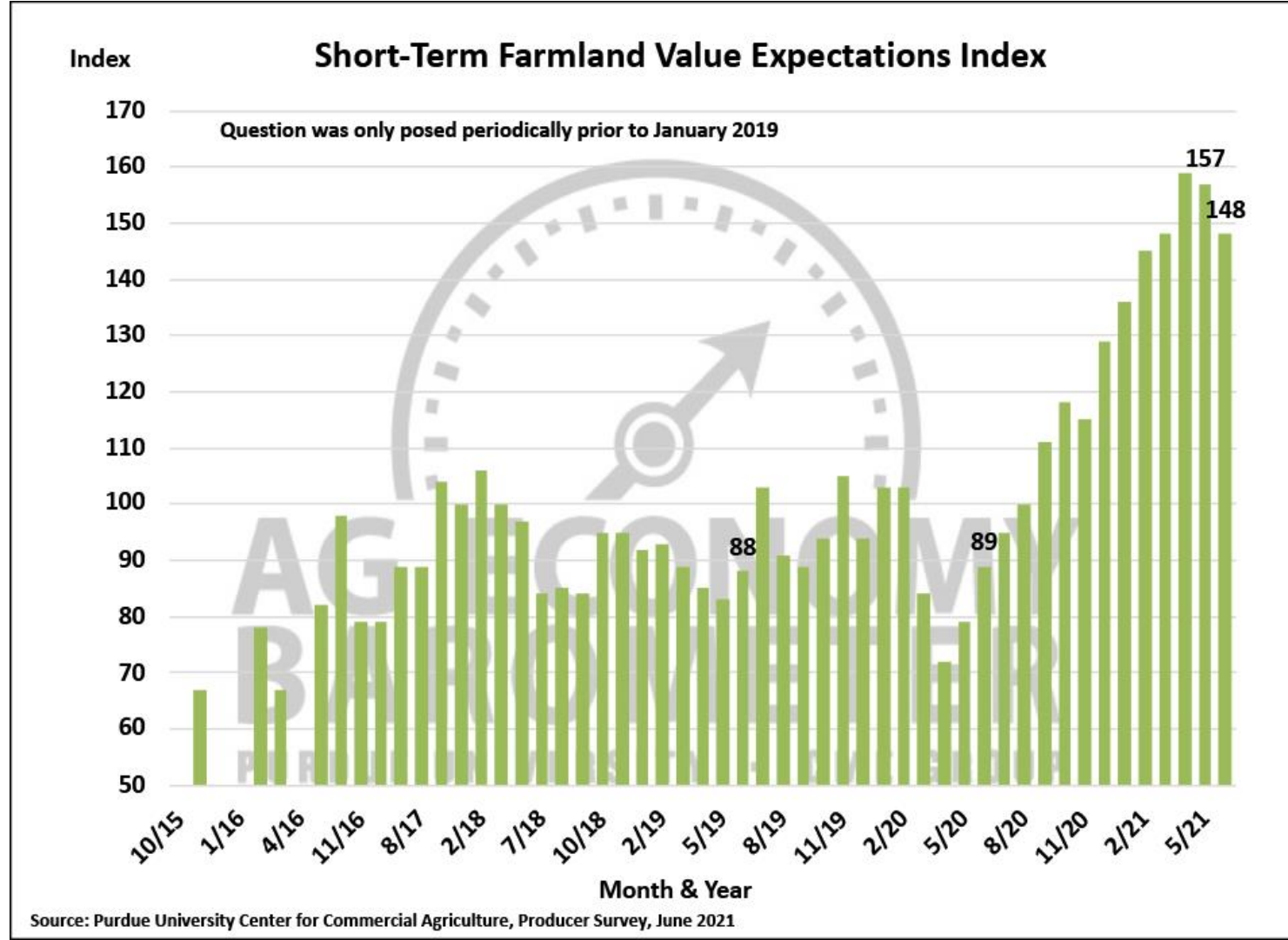


Source: Purdue – Ag Economy Barometer, May & June '21

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Land Values: Short-Term Expectations

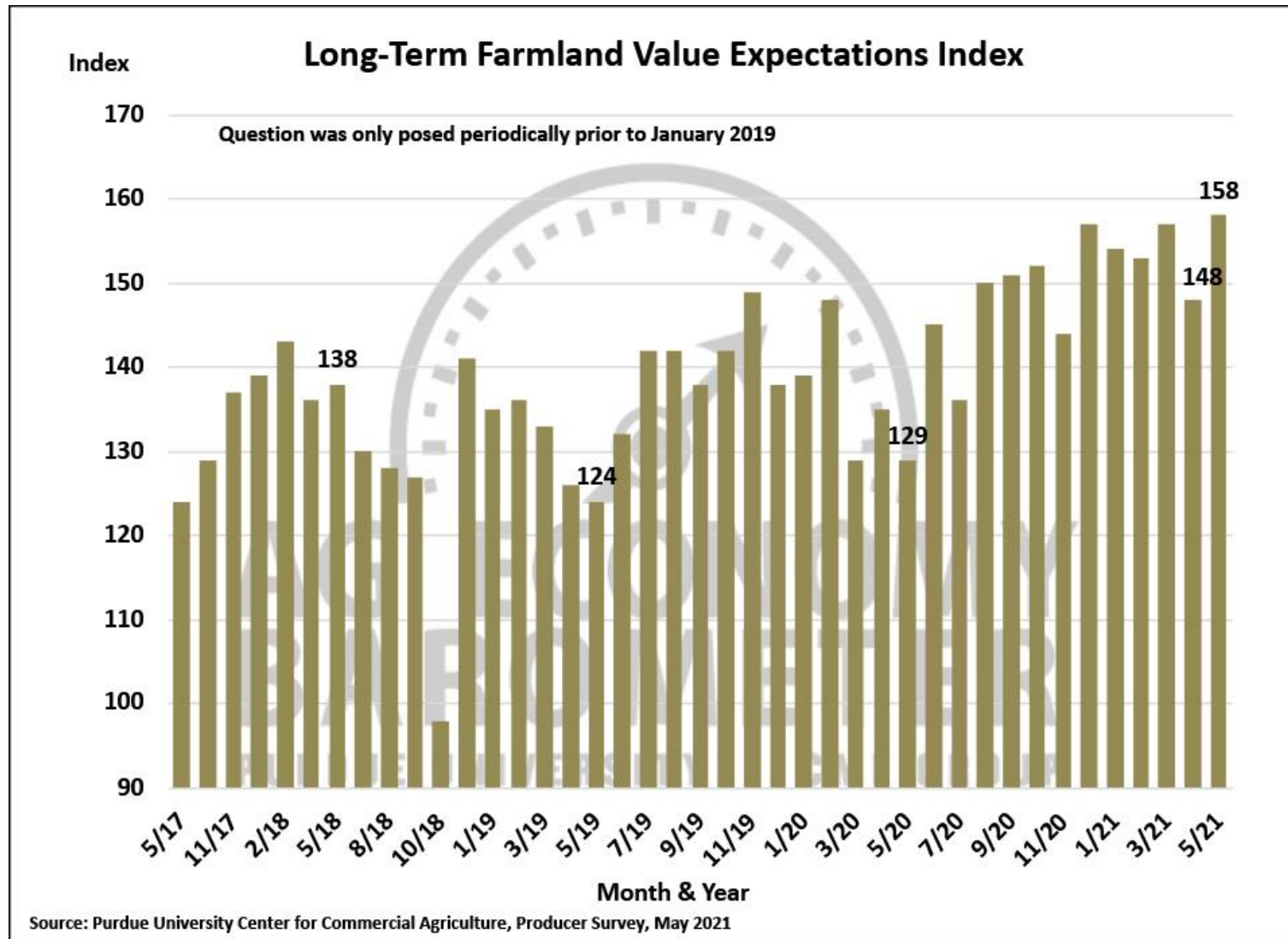


Source: Purdue – Ag Economy Barometer, June 2021

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Land Values: Long-Term Expectations



Source: Purdue – Ag Economy Barometer, May 2021

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Who Are The Buyers?

- Farmers → 60-80%, depends where!
- Local Investors – Individuals
- Non-Local Investors – Individuals
- Institutions – e.g., *TIAA-CREF, John Hancock, Prudential, UBS, Other Pension/Retirement Plans*
- Newer Institutional Investors – e.g., *Summit, Ceres, Homestead Capital*
- Crowd Funding Individual Farms – e.g., *AcreTrader*



Farmland: Financial Performance 1990-2020

Asset/Index	Annual Ave. Return	Standard Deviation	Coefficient of Variation	US Ag 32 States Correlation	Minimum Return	Maximum Return
	----- 1991 - 2020 -----					
US Ag 32 States	8.6%	3.79%	0.441	1	-1.2%	19.3%
NCREIF Total Farmland	11.0%	6.62%	0.604	0.655	2.0%	33.9%
Indiana	9.0%	5.06%	0.562	0.652	-1.0%	22.0%
Illinois	9.2%	5.65%	0.611	0.797	0.8%	26.0%
Iowa	10.7%	7.39%	0.693	0.645	-5.3%	24.9%
Minnesota	10.3%	5.51%	0.535	0.787	-1.8%	20.3%
Dow Jones	8.2%	14.38%	1.759	-0.108	-41.3%	28.9%
Composite BEITS	10.1%	17.67%	1.746	-0.106	-47.5%	32.5%
AAA	5.7%	1.64%	0.290	0.263	2.5%	8.8%
TCM10Y	4.3%	1.84%	0.433	0.339	0.9%	7.9%
Mort30F	5.9%	1.72%	0.290	0.345	3.1%	9.2%
CD6M	3.37%	2.18%	0.648	0.355	0.2%	6.6%
Gold	5.29%	14.13%	2.672	0.040	-31.9%	27.7%
PPI	1.71%	3.94%	2.304	0.141	-7.4%	8.2%
CPI	2.22%	0.87%	0.394	0.288	0.1%	4.0%

Source: University of Illinois, TIAA Center for Farmland Research

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What To Watch In Coming Months...

- **Commodity Prices**
- **Interest Rates**
- **Sales Volume**
- **Farm Policy Under New Administration**
(e.g., ad-hoc Support, Crop Insurance)
- **Tax Policy Under New Administration**
(e.g., Income tax rates, Capital Gain tax rates, Step-Up in Basis, 1031 still allowed?)



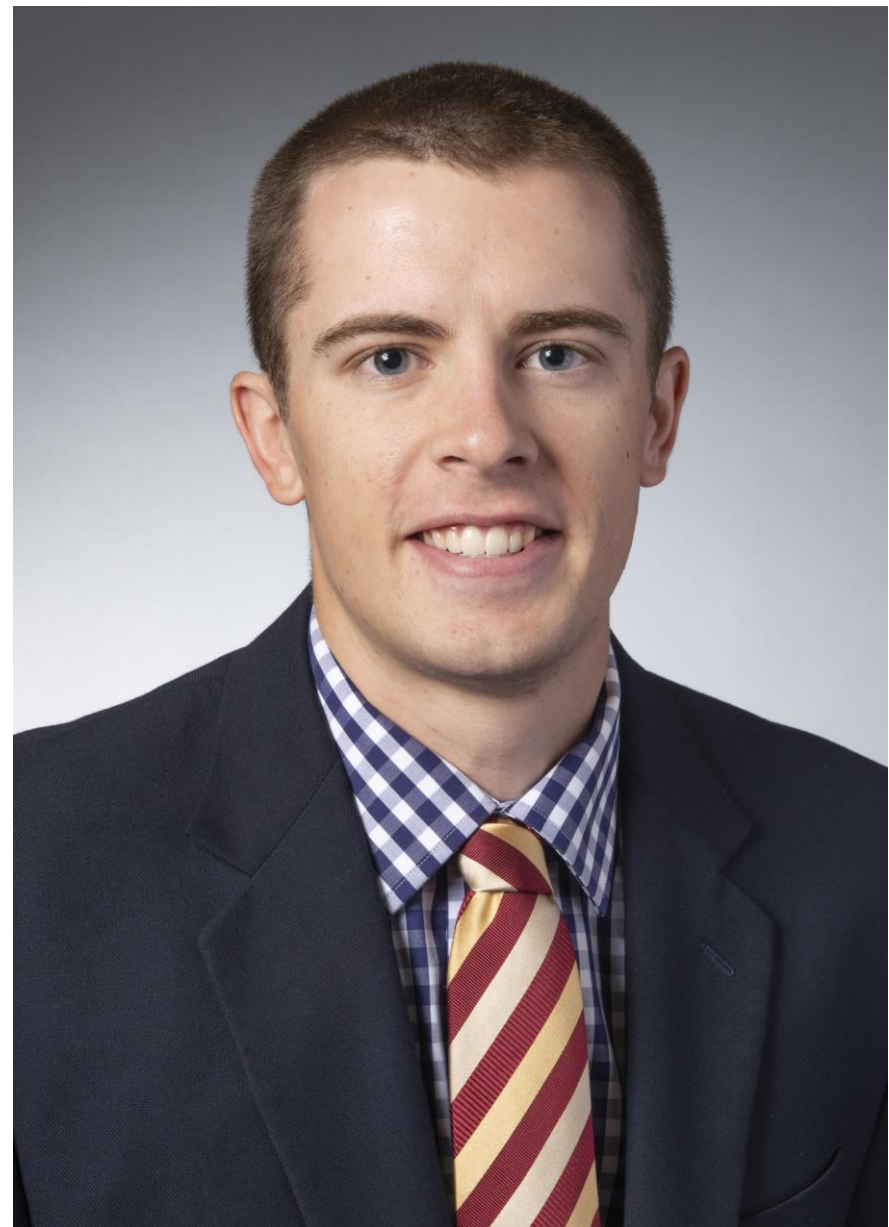
Sustainability

Speaker:

Craig Welter

Farm Manager

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Sustainability



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Agenda

- Goals of Sustainability
- Technology/Operations and Sustainability
- Sustainable Agronomic Practices
- Water Quality
- Carbon Credits
- Questions?



Goals of Sustainability

- Lower, more efficient input usage
 - Nitrate leaching
- Reduced erosion and nutrient loss
 - Nitrogen & phosphorus runoff
- Improved water quality
- Healthier soil
 - Increased organic matter
 - Sequestered carbon



Technology & Farm Practices

- “4 Rs” of Nutrient Application
 - Right Rate, Right Source, Right Place, Right Time
 - Split nitrogen applications
- Variable Rate Applications
 - Applying fertilizer, lime, and seed where it is needed
- Machinery Capabilities
 - Guidance Systems
 - Automatic Section Control
 - ExactApply



Reduced Tillage

- Minimize soil disturbance
- Allow crop residue to help prevent soil erosion
- Improved soil structure
- Increased soil organic matter & retained carbon
- Can save \$\$\$
- Not “one size fits all”!





Planting Soybeans Into Cereal Rye Cover Crop



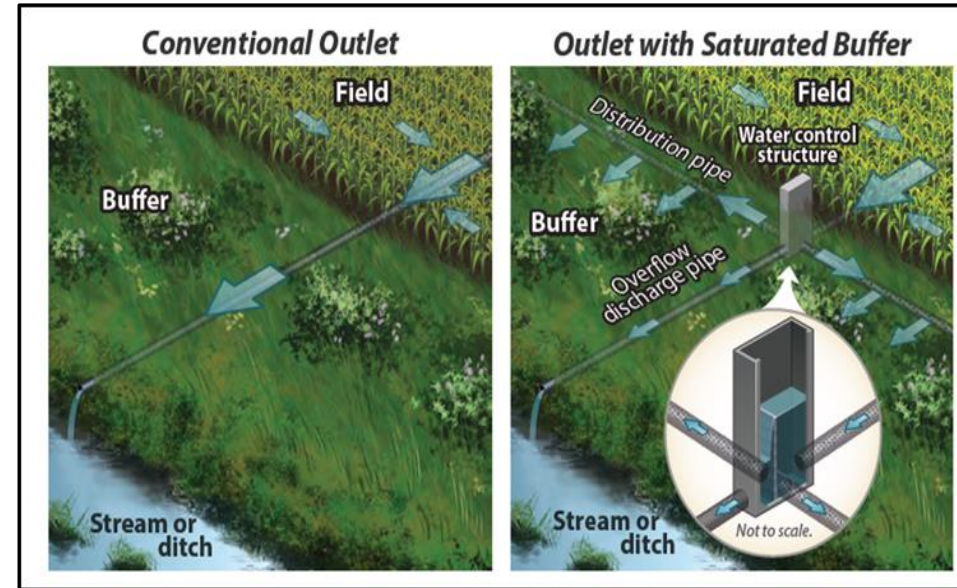
Cover Crops

- Benefits
 - Provide protection from soil erosion
 - Improve organic matter, soil structure, & soil carbon
 - Create below-ground biological activity
 - Suppress weed pressure
 - Improve water quality by retaining nutrients
- Considerations
 - Soil types
 - When can you establish the cover?
 - Crop rotation
 - How will the cover be terminated?
 - Cost: \$25 to \$50 per acre
 - Some cost share available



Edge-of-Field Practices

- Saturated Buffers
 - Control tile-drained water before entering streams
 - Convert excess nitrate to harmless nitrogen gas
 - Avg. 61% nitrate removal
 - Range: 22-96%
 - Can treat up to 200 acres
 - Requires adequate field slope & ample space for buffer strip



- \$2,000-4,000 to install
- USDA cost share available
- Low maintenance

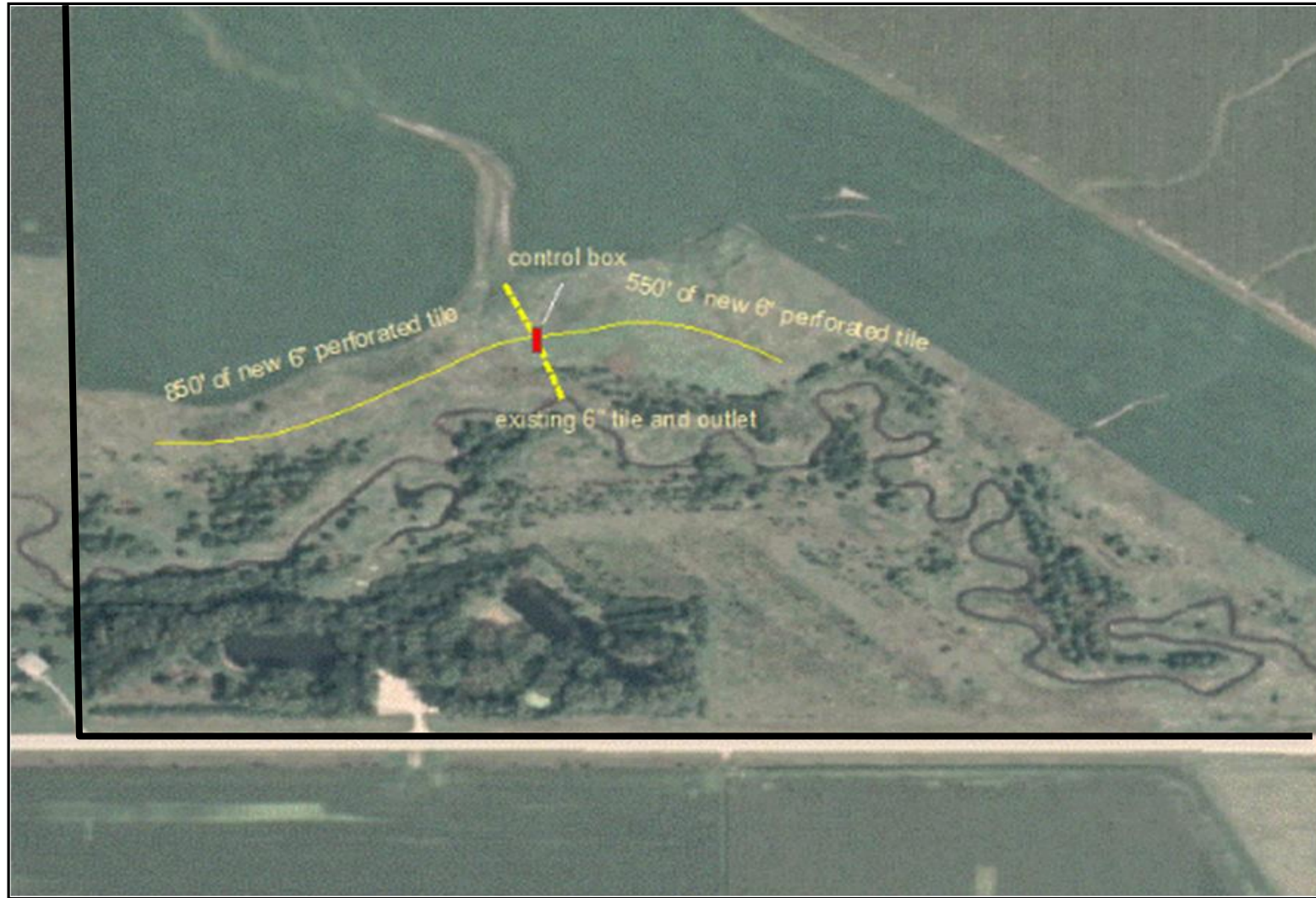


Image source: USDA

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Saturated Buffer



Saturated Buffer



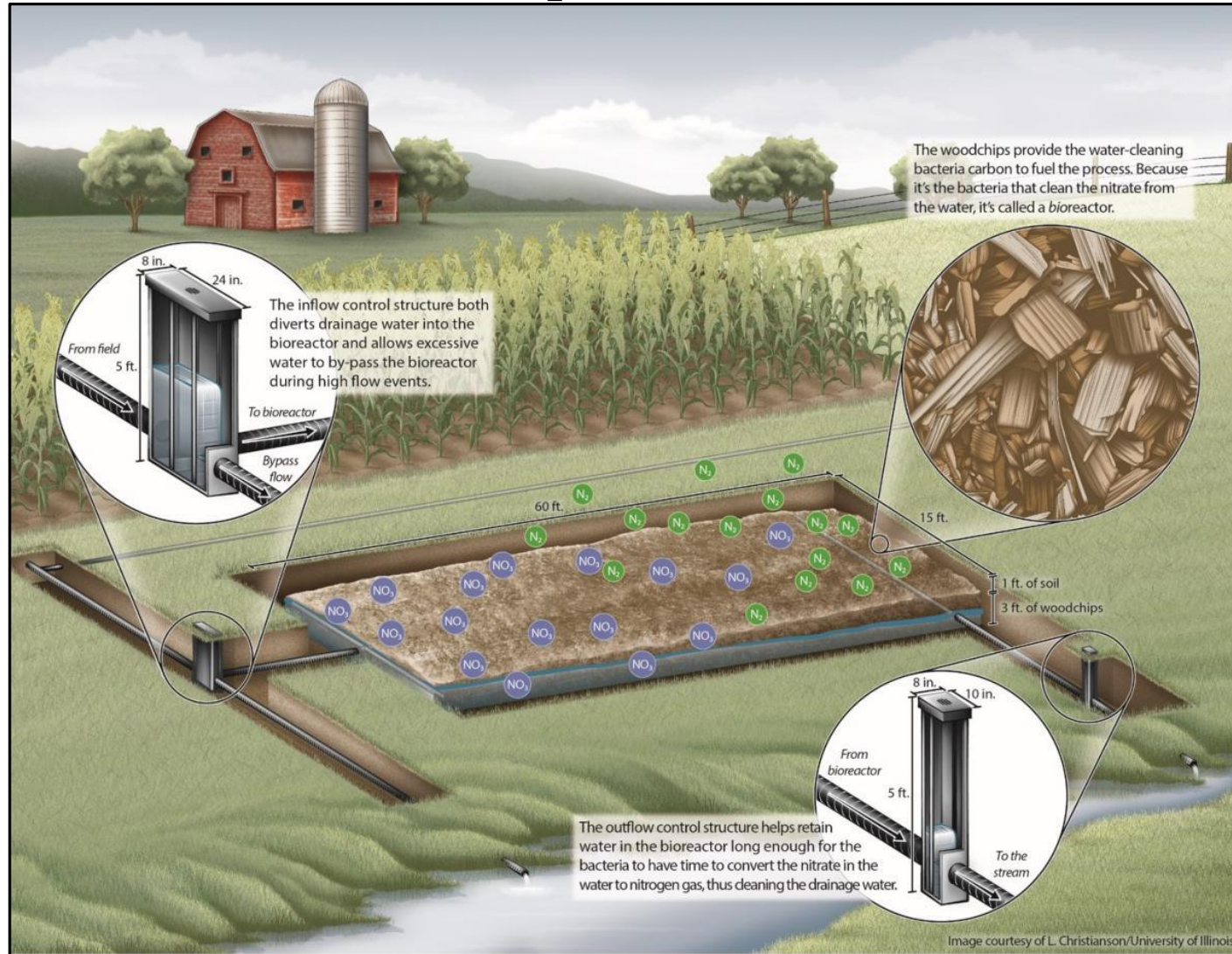
Saturated Buffer



**Distribution
Tile**



Woodchip Bioreactor



Edge-of-Field Practices

- Woodchip Bioreactors
 - Remove nitrates from tile-drained water with bacteria
 - Reduce nitrate levels in water by 15-60%
 - Typically handle up to 80 acres of drainage
 - Cost: Approximately \$10,000 to install
 - USDA cost share is available
 - Woodchips need to be replaced after 10 years



Woodchip Bioreactor



Image source: Ohio State University
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Water Quality

- Water Credits
 - Initiative to reduce pollutants in water
 - Corporations, cities, etc. purchase water credits to reduce their nitrate & phosphate pollution impact
 - Landowners receive extra incentive for water quality improvements
 - Not widely available yet



Carbon Credits

- Why is carbon important?
 - Initiative to reduce carbon emissions across all sectors
 - Various companies voluntarily purchasing “carbon credits” to offset their own emissions
 - Agriculture is part of the solution

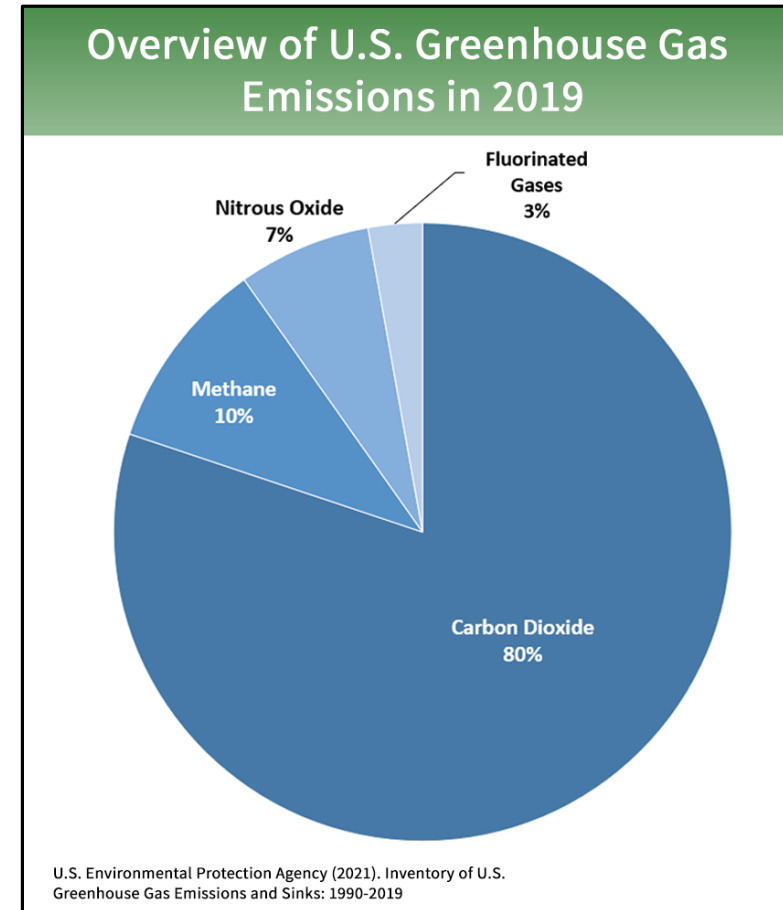


Image source: Environmental Protection Agency

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Agriculture's Carbon Impact

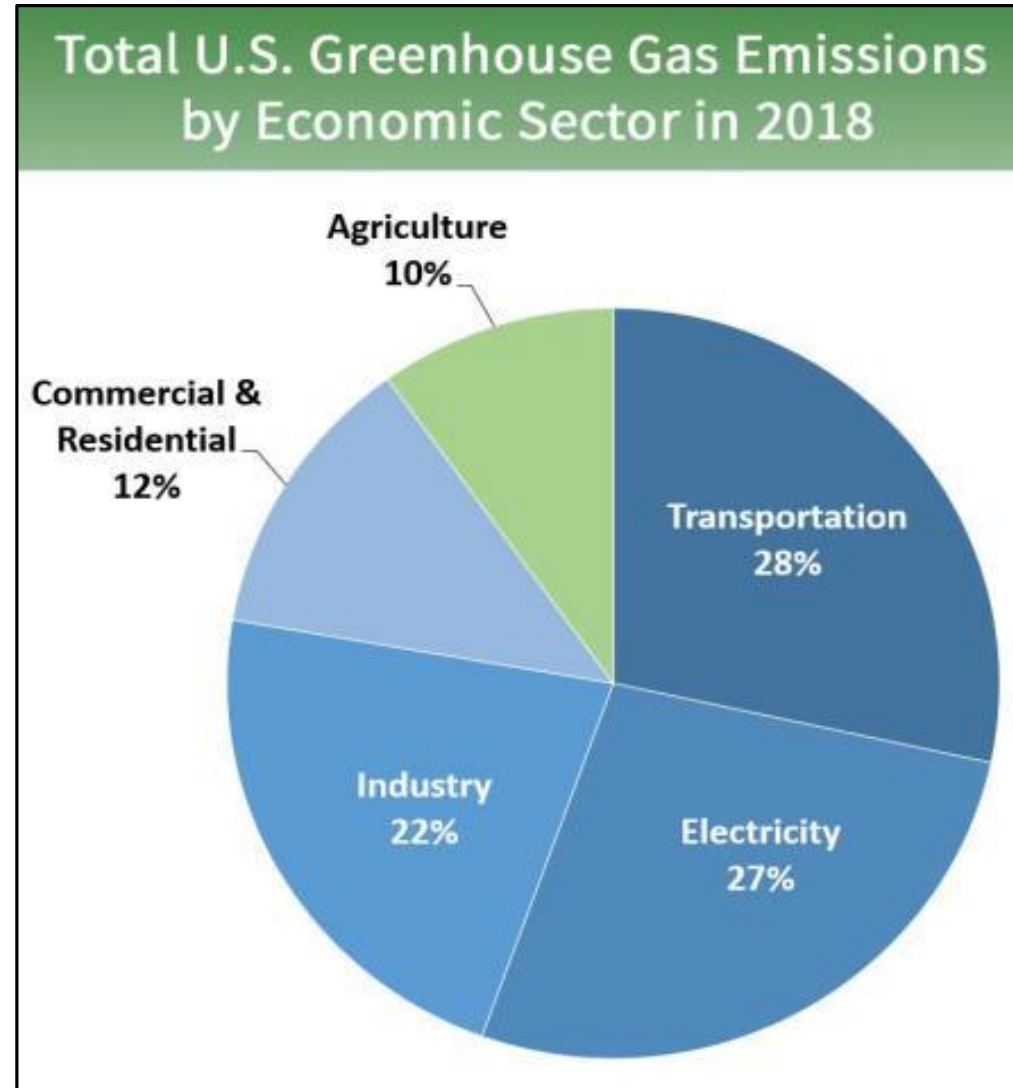


Image source: Environmental Protection Agency

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Agriculture's Carbon Impact

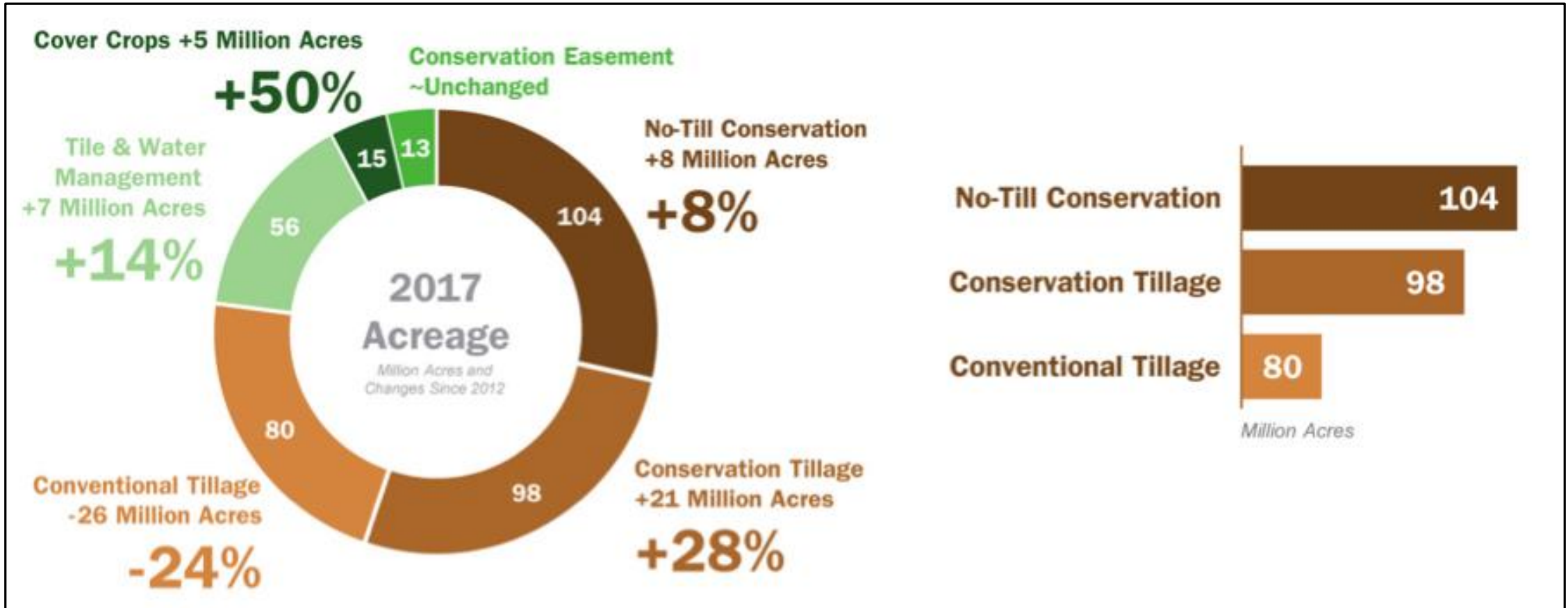


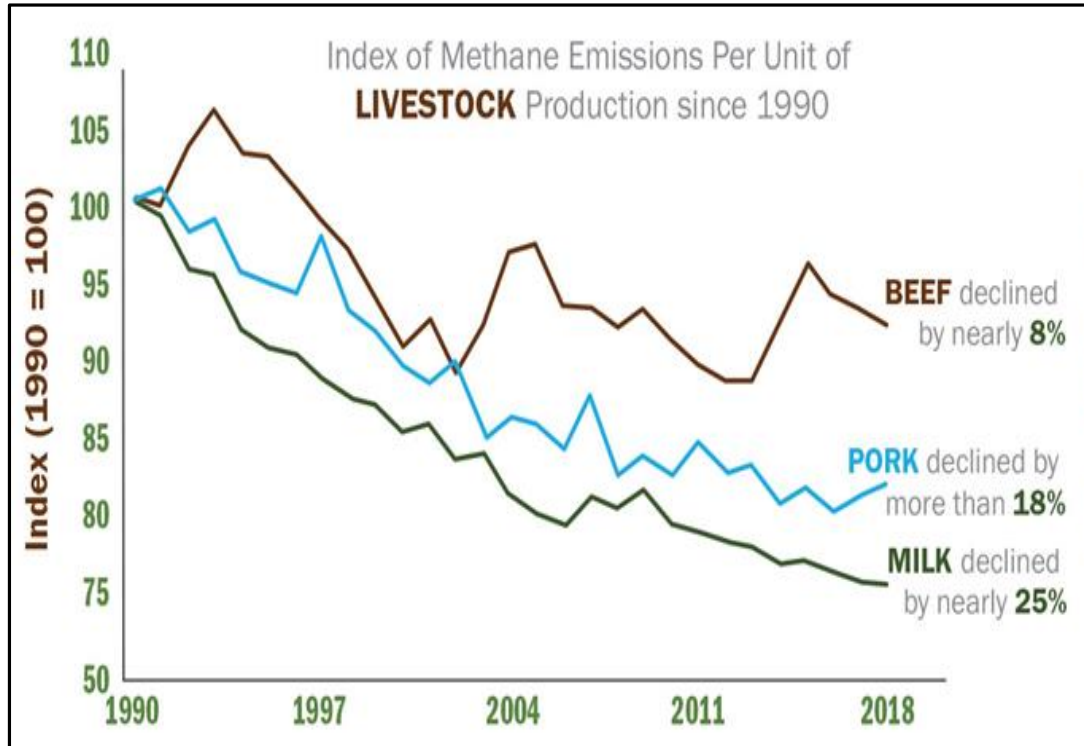
Image source: American Farm Bureau Federation

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Agriculture's Carbon Impact

Livestock Methane Emissions Since 1990



Crop GHG Emissions Since 1980

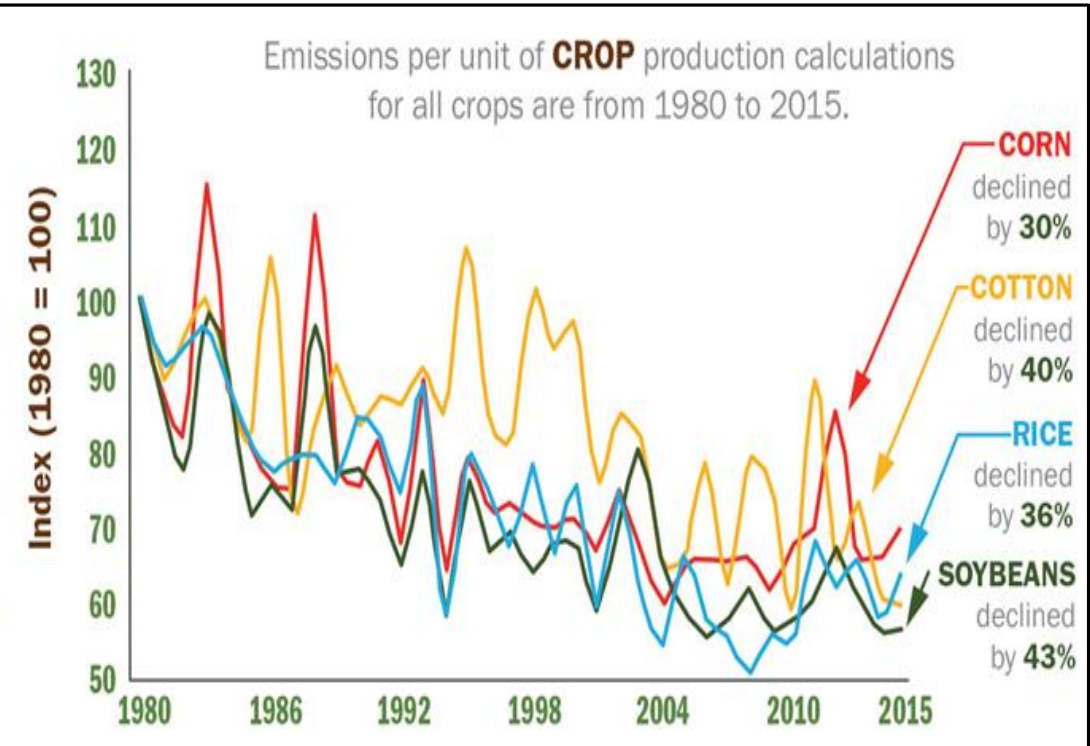


Image source: American Farm Bureau Federation

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Carbon Cycle

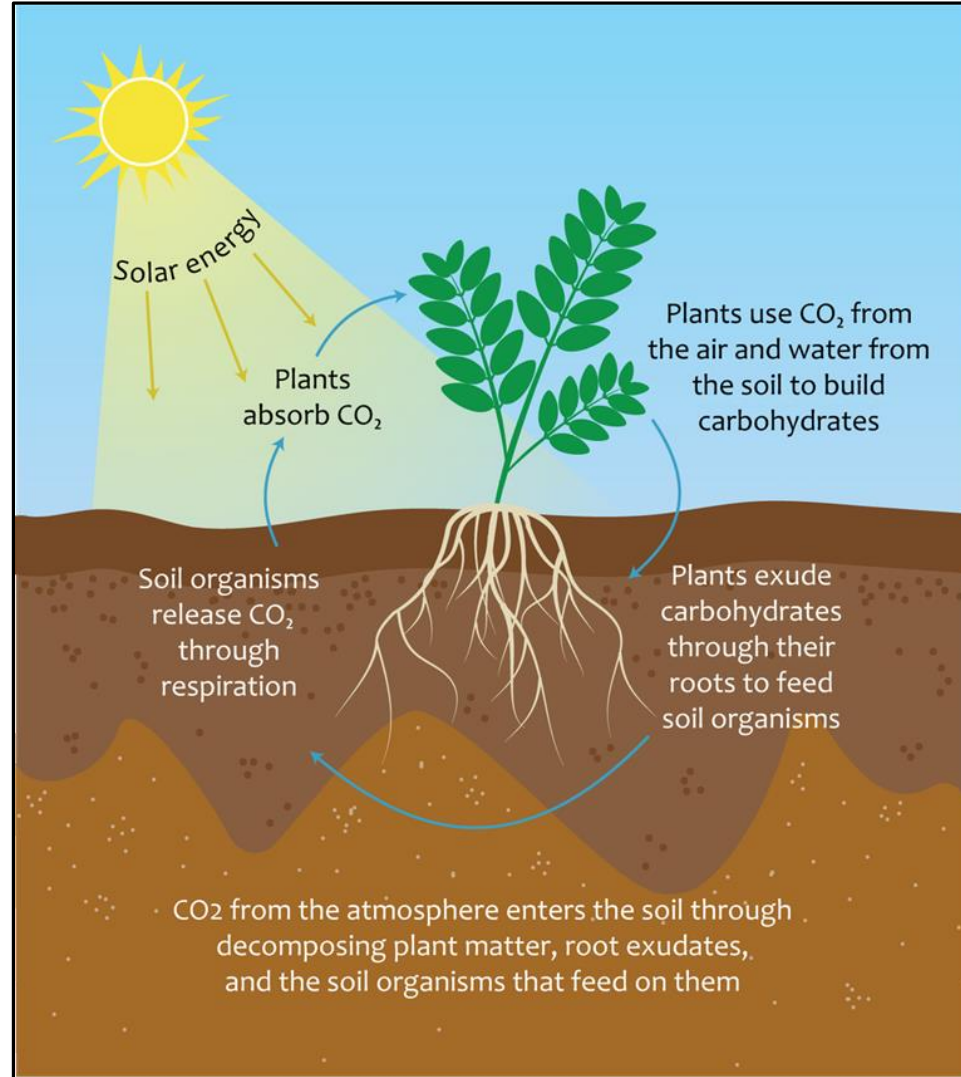


Image source: Colorado State University

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Carbon Credits

- How do we build soil carbon?
 - Reducing soil disturbance
 - Frequent living root systems below ground
 - Decomposing crop residue
 - Altering fertilizing methods
 - Lower usage rates
 - Manure
 - Changing crop rotations



Carbon Credits

- Market structure
 - Carbon “Brokers” offer carbon credit programs
 - 1.) Farmers/landowners sign up with “broker”
 - 2.) Farming practice changes are made
 - 3.) Carbon brokers estimate carbon sequestered
 - 4.) Corporate buyers purchase credits from broker to offset their own emissions
 - 5.) Carbon brokers pay producers for credits earned
- Carbon Brokers
 - Indigo Ag, Nori, Land O’ Lakes, CIBO, Bayer, Corteva, Nutrien, and others
 - Potential USDA involvement?



Carbon Credits

- Brand new market
 - Risk and uncertainty about contracts
 - Long-term commitments
 - Carbon calculations are vague
- Show Me the Money!
 - Estimate 0.5-1.0 ton carbon sequestered per acre
 - Current payments of \$15-20 per ton of carbon
 - Can range from \$3-40 per acre depending on program offering, practices used, & measurements taken
 - Where does the market go from here?



Carbon Credits

- Farm lease considerations
 - Consider including a clause for the following:
 - Who has the right to agree to a contract?
 - Who gets paid? Is there a payment split?
 - If so, how are costs of participating shared between parties?
 - What happens if the lease is terminated?





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