



Caring for You and Your Farm®

Winter 2021

Landowner Educational Webinar



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Grain Markets

Speaker:

Dick Pringnitz

*Farm Manager and Office Manager
Nevada, IA*

DickP@Hertz.ag





Winter 2021

Grain Markets

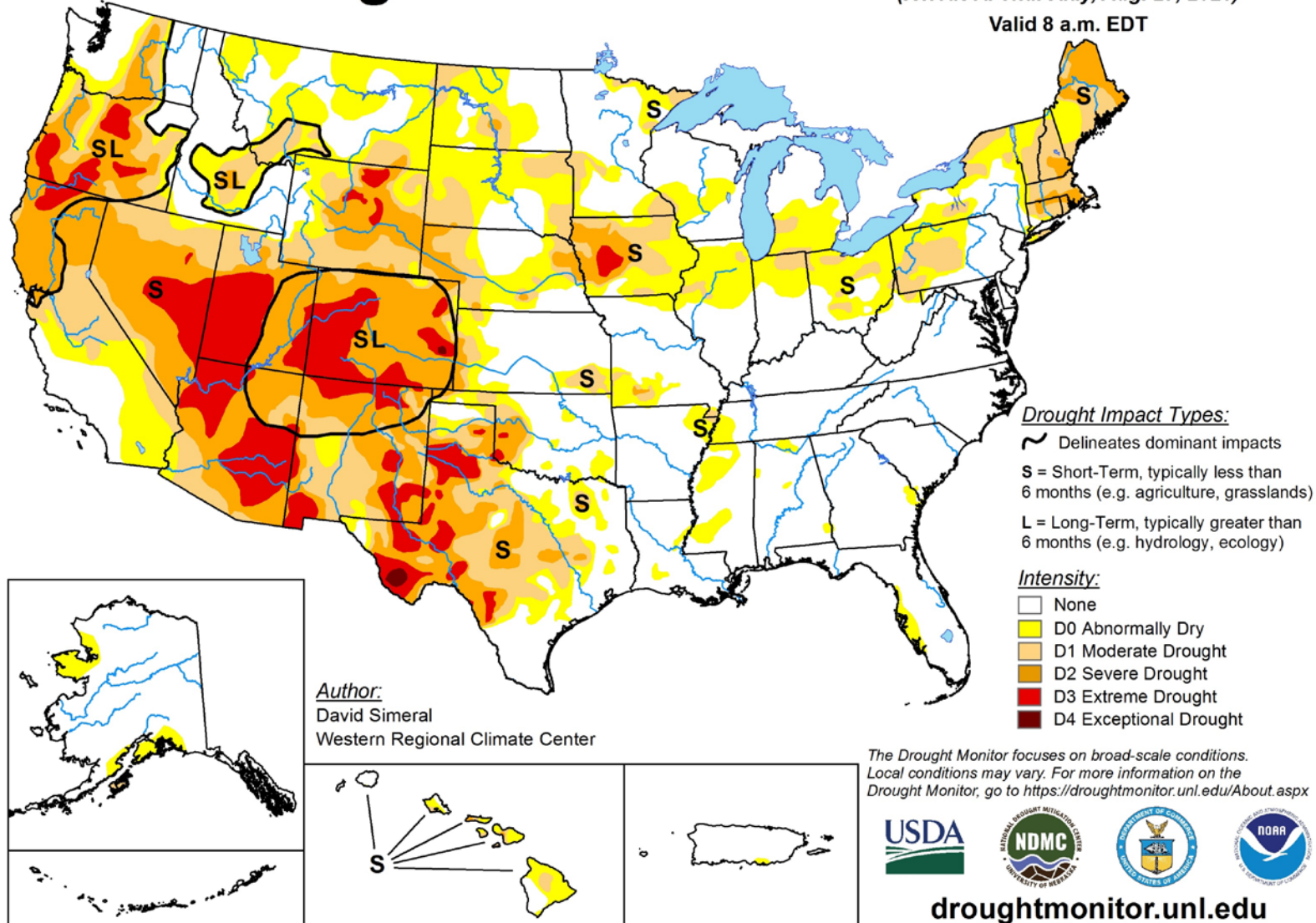


Weather



U.S. Drought Monitor

August 25, 2020
(Released Thursday, Aug. 27, 2020)
Valid 8 a.m. EDT



Source: droughtmonitor.unl.edu

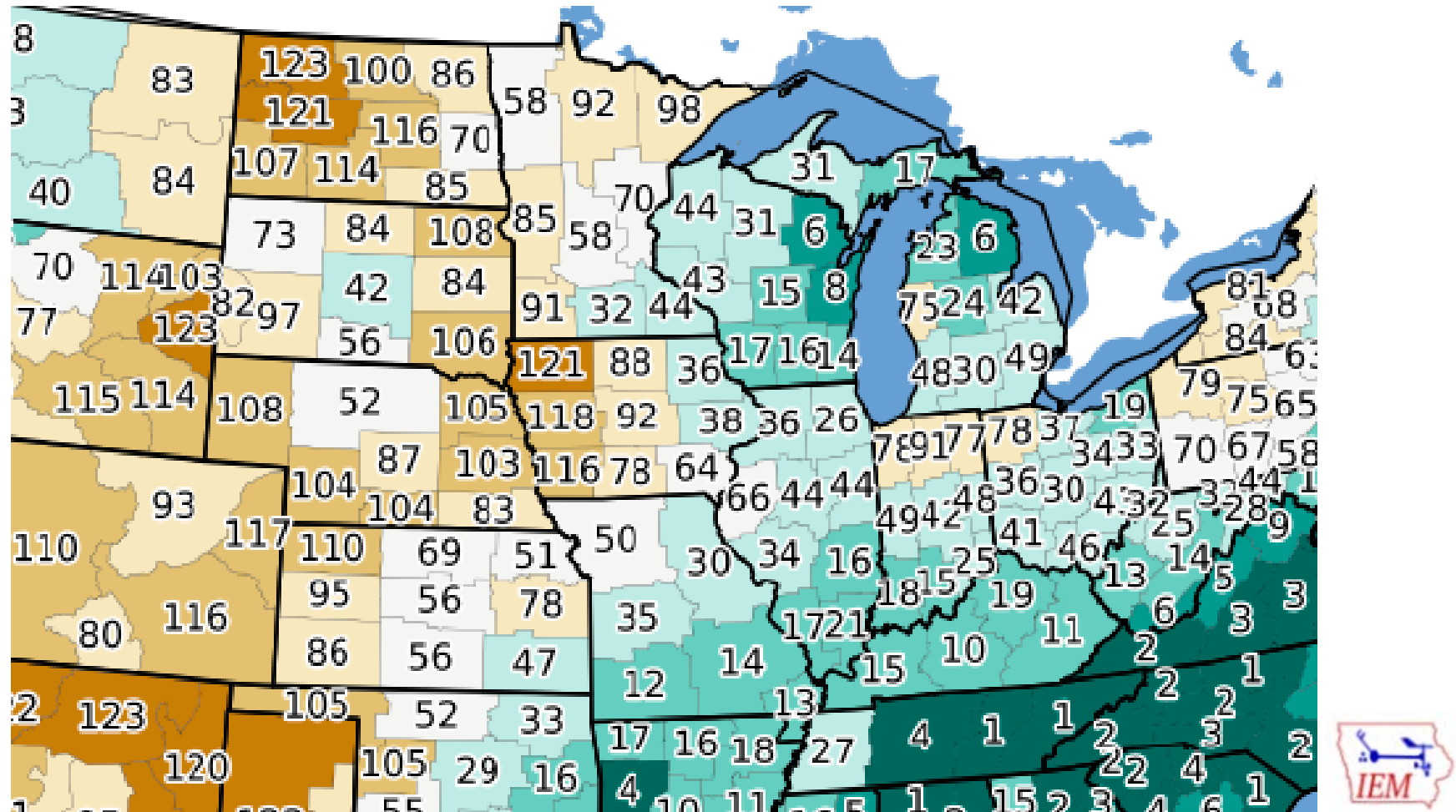
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Total Precipitation by Climate District

January 1 – December 31, 2020

Based on IEM Estimates, 1 is wettest out of 129 total years (1893-2021)



Source: IEM

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Derecho

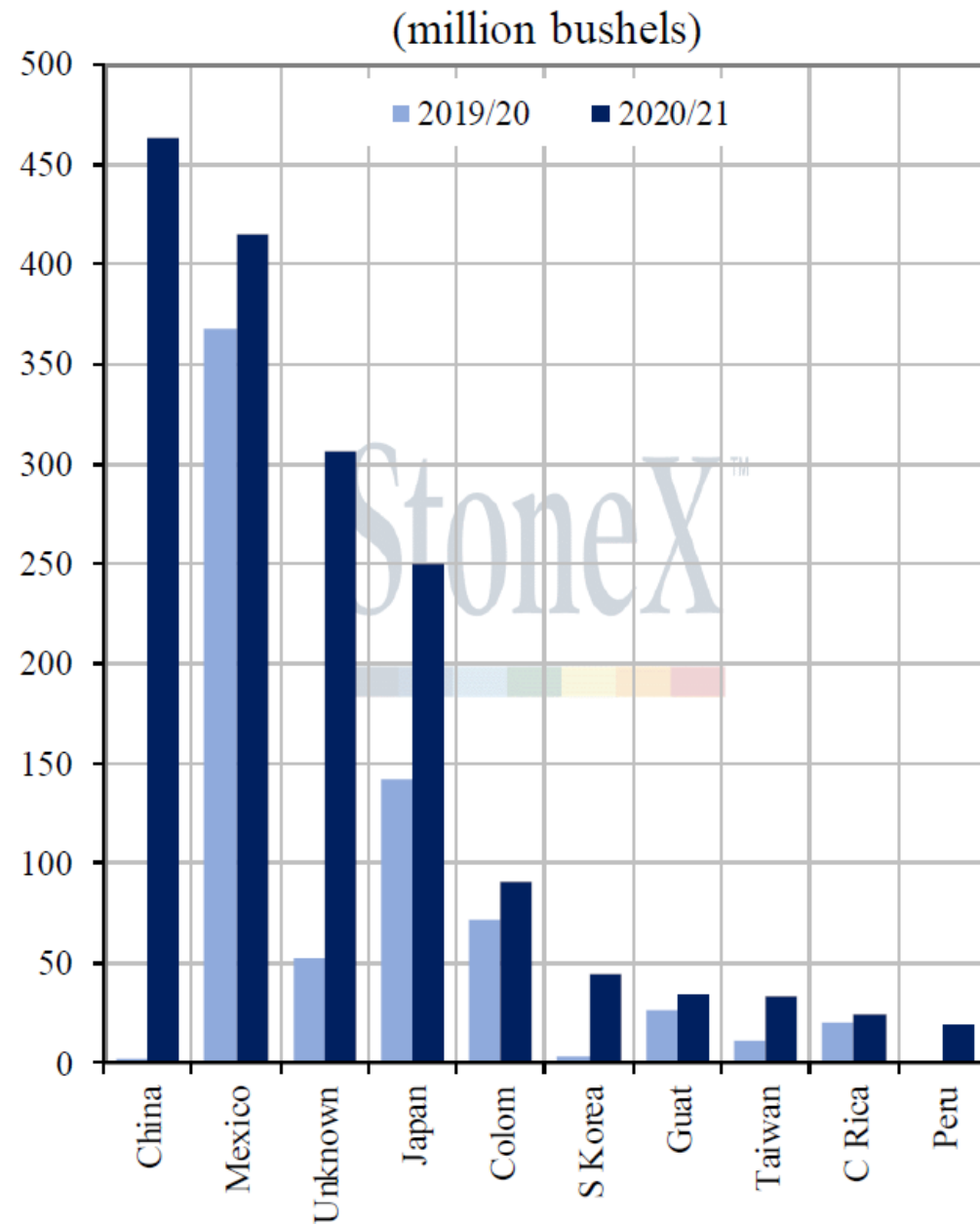
August 10, 2020



Agricultural Trade



U.S. Corn Export Sales by Destination

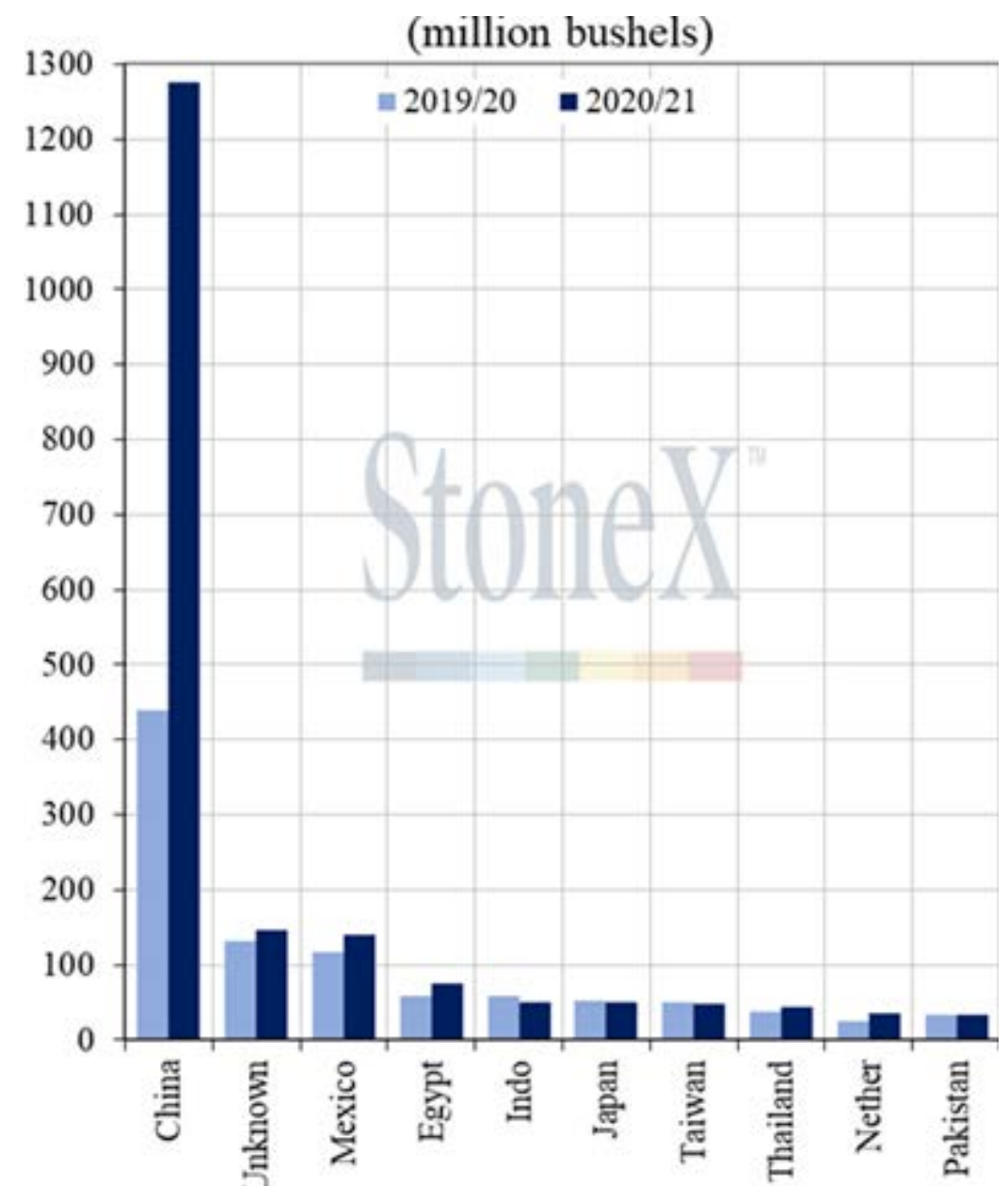


Source: USDA, StoneX

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U.S. Soybean Export Sales by Destination

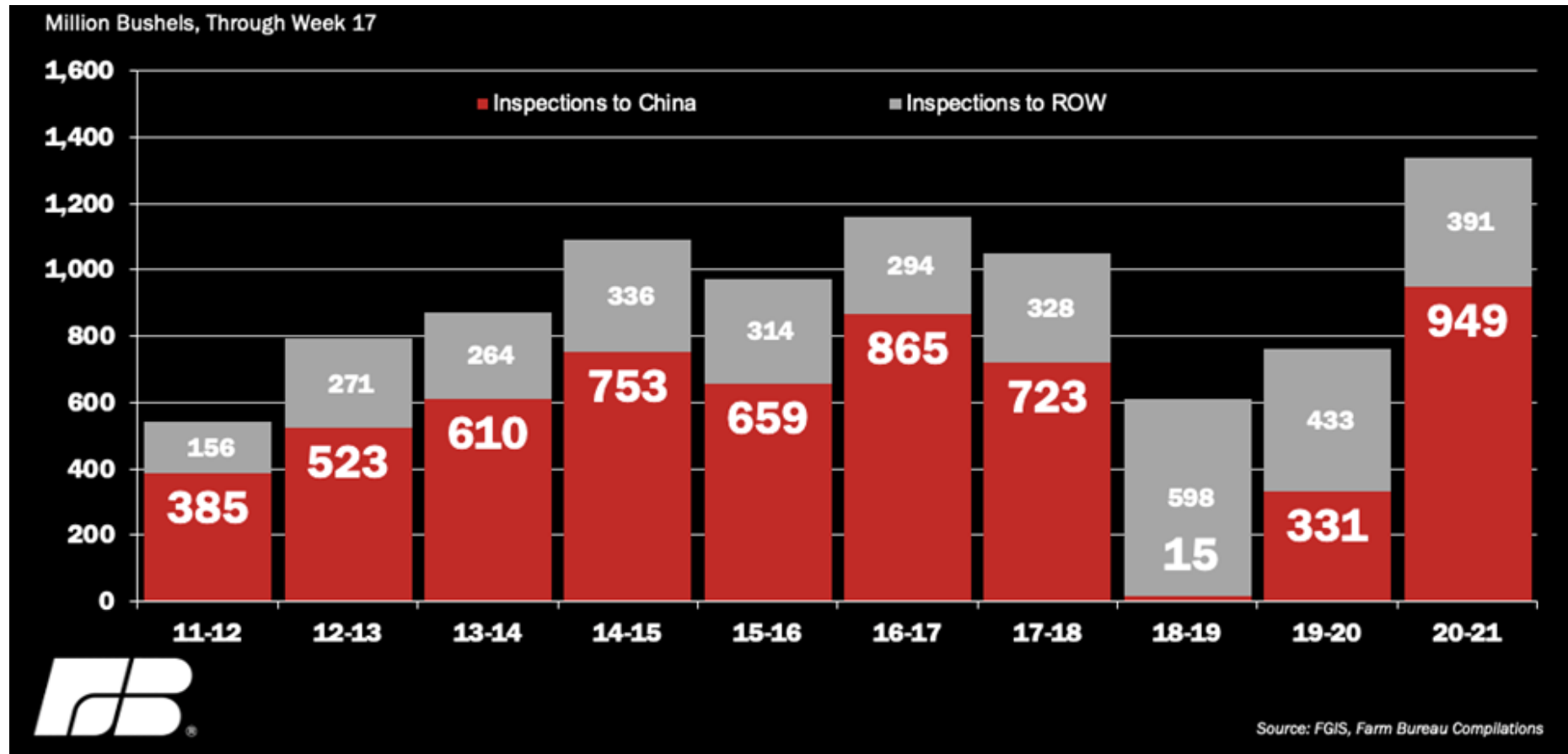


Source: USDA, StoneX

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Soybean Export Inspections



Source: FGIS, Farm Bureau Compilations

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Corn Market

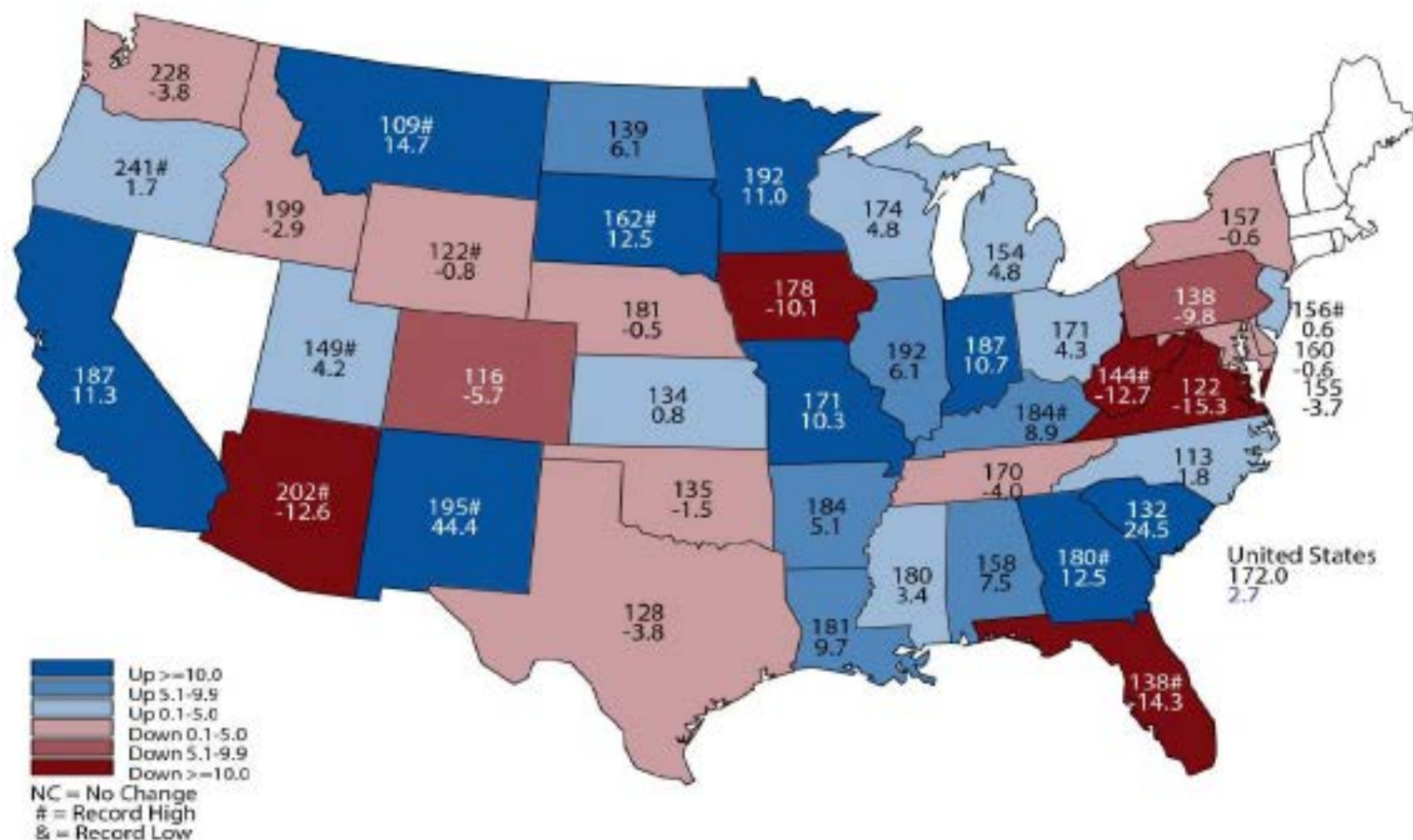


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2020 Corn Yield

Bushels and Percent Change from Previous Year



United States Department of Agriculture
National Agricultural Statistics Service

January 12, 2021



U.S. Corn Supply and Use

		2016	2017	2018	2019	2020
Area Planted	(mil. acres)	94.0	90.2	88.9	89.7	90.8
Yield	(bu./acre)	174.6	176.6	176.4	167.5	172.0
Production	(mil. bu.)	15,148	14,604	14,340	13,692	14,182
Beg. Stocks	(mil. bu.)	1,737	2,293	2,140	2,221	1,919
Imports	(mil. bu.)	57	36	28	42	25
Total Supply	(mil. bu.)	16,942	16,934	16,509	15,883	16,127
Feed & Residual	(mil. bu.)	5,467	5,302	5,432	5,903	5,650
Ethanol	(mil. bu.)	5,439	5,601	5,376	4,852	4,950
Food, Seed, & Other	(mil. bu.)	1,450	1,453	1,415	1,430	1,425
Exports	(mil. bu.)	2,293	2,438	2,065	1,778	2,600
Total Use	(mil. bu.)	14,649	14,793	14,288	13,963	14,625
Ending Stocks	(mil. bu.)	2,293	2,140	2,221	1,919	1,502
Season-Average Price	(\$/bu.)	3.36	3.36	3.61	3.56	4.30

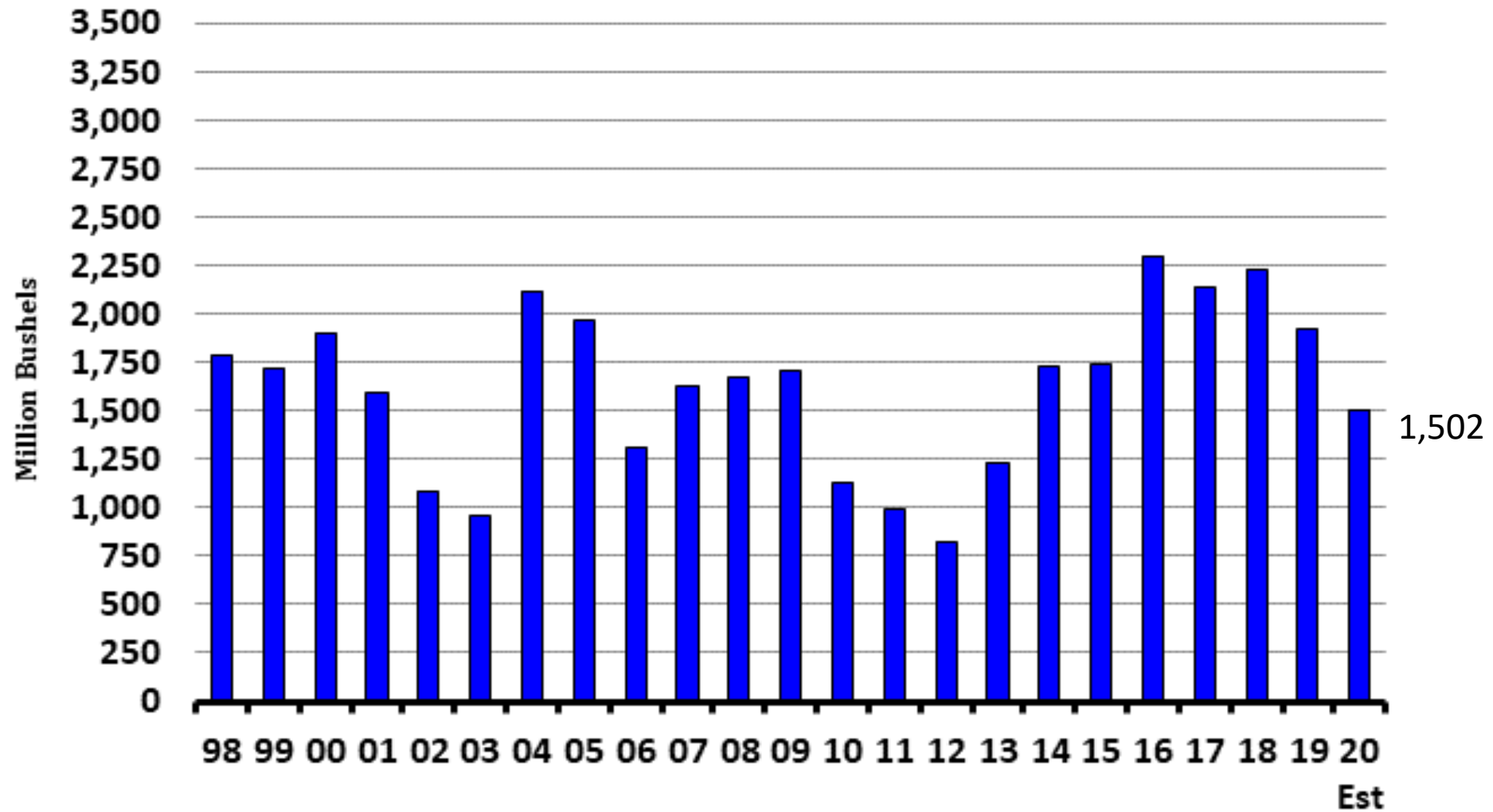


Source: USDA-WAOB

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U.S. Corn Ending Stocks



Most Recent: 1,502 As Of 02/09/2021

The Hightower Report



Source: CME Group

www.Hertz.ag



U.S. Corn Exports



Most Recent: 2,600 As Of 02/09/2021

The Hightower Report



Source: CME Group

www.Hertz.ag



Corn Futures

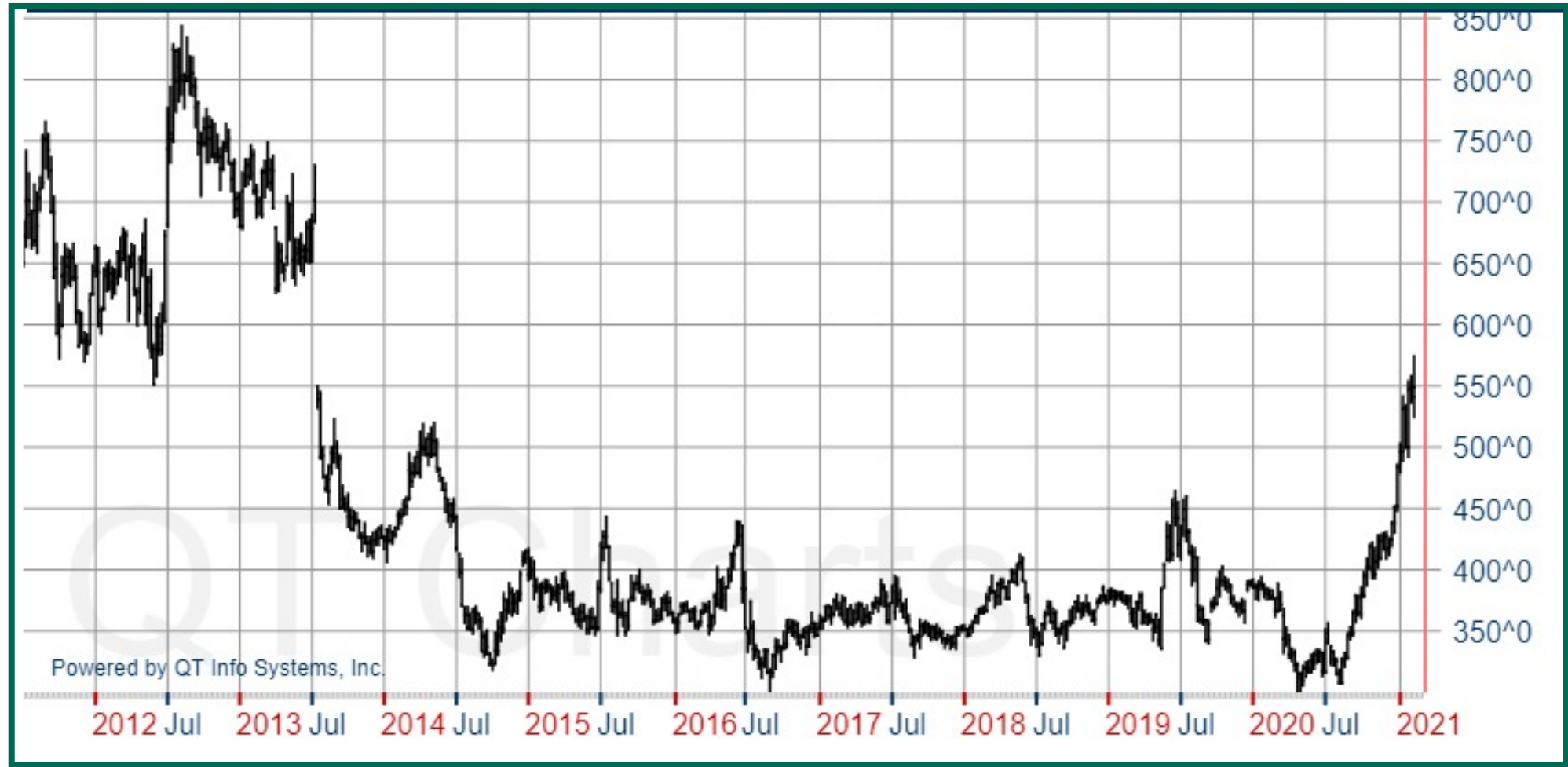


Source: Pro Farmer

www.Hertz.ag



Corn Continuous Weekly Chart



Source: Pro Farmer

www.Hertz.ag



Soybean Market

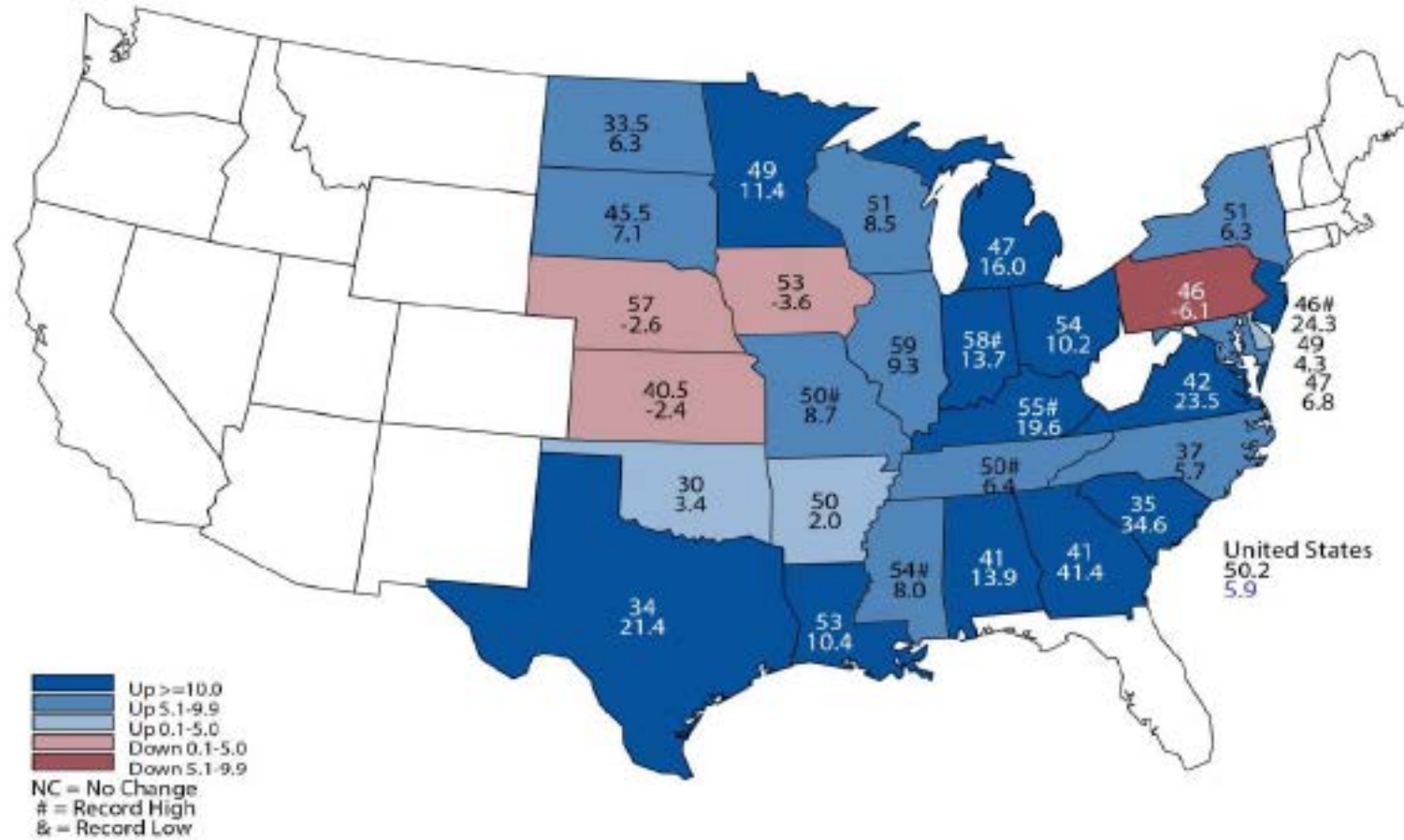


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2020 Soybean Yield

Bushels and Percent Change from Previous Year



United States Department of Agriculture
National Agricultural Statistics Service

January 12, 2021



U.S. Soybean Supply and Use

		2016	2017	2018	2019	2020
Area Planted	(mil. acres)	83.4	90.2	89.2	76.1	83.1
Yield	(bu./acre)	52.0	49.3	50.6	47.4	50.2
Production	(mil. bu.)	4,296	4,412	4,428	3,552	4,135
Beg. Stocks	(mil. bu.)	197	302	438	909	525
Imports	(mil. bu.)	22	22	14	15	35
Total Supply	(mil. bu.)	4,515	4,735	4,880	4,476	4,695
Crush	(mil. bu.)	1,901	2,055	2,092	2,165	2,200
Seed & Residual	(mil. bu.)	146	113	127	105	125
Exports	(mil. bu.)	2,166	2,129	1,752	1,682	2,250
Total Use	(mil. bu.)	4,214	4,297	3,971	3,952	4,575
Ending Stocks	(mil. bu.)	302	438	909	525	120
Season-Average Price	(\$/bu.)	9.47	9.33	8.48	8.57	11.15

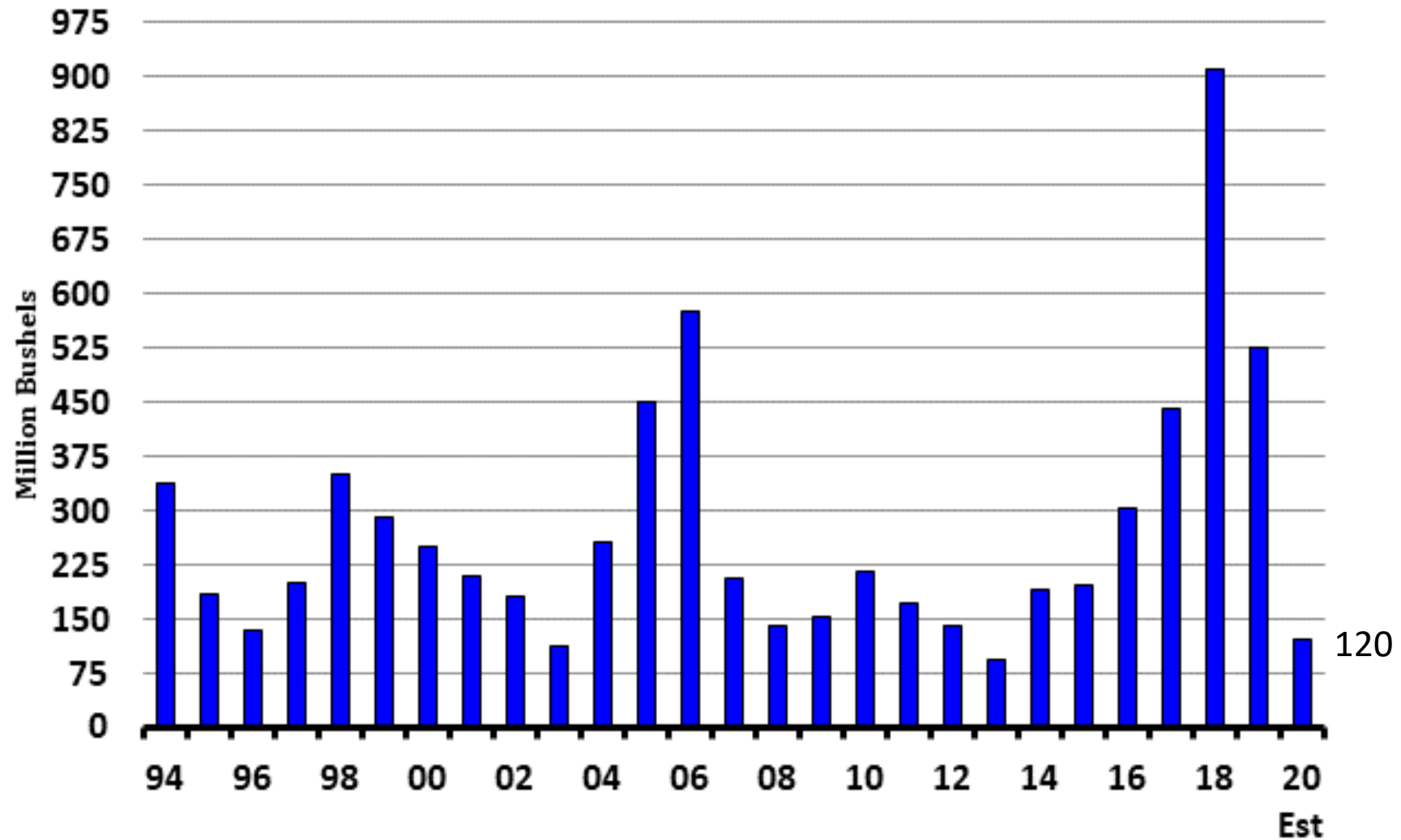


Source: USDA-WAOB

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U.S. Soybean Ending Stocks



Most Recent: 120 As Of 02/09/2021

The Hightower Report



Source: CME Group

www.Hertz.ag



U.S. Soybean Exports



Most Recent: 2,250 As Of 02/09/2021

The Hightower Report



Source: CME Group

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Soybean Futures



Source: Pro Farmer

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Soybean Continuous Weekly Chart



Source: Pro Farmer

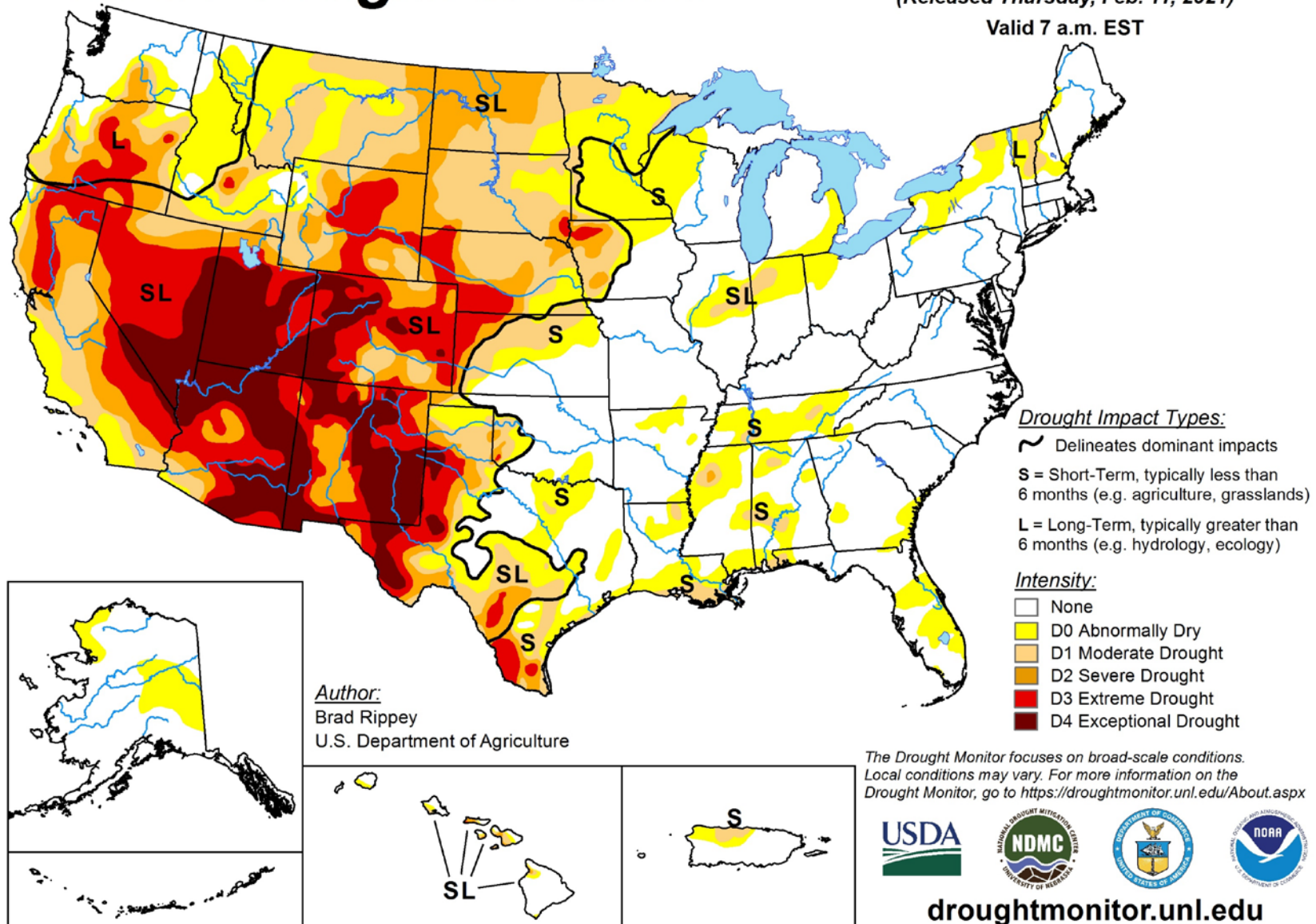
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U.S. Drought Monitor

February 9, 2021
(Released Thursday, Feb. 11, 2021)

Valid 7 a.m. EST



Source: droughtmonitor.unl.edu

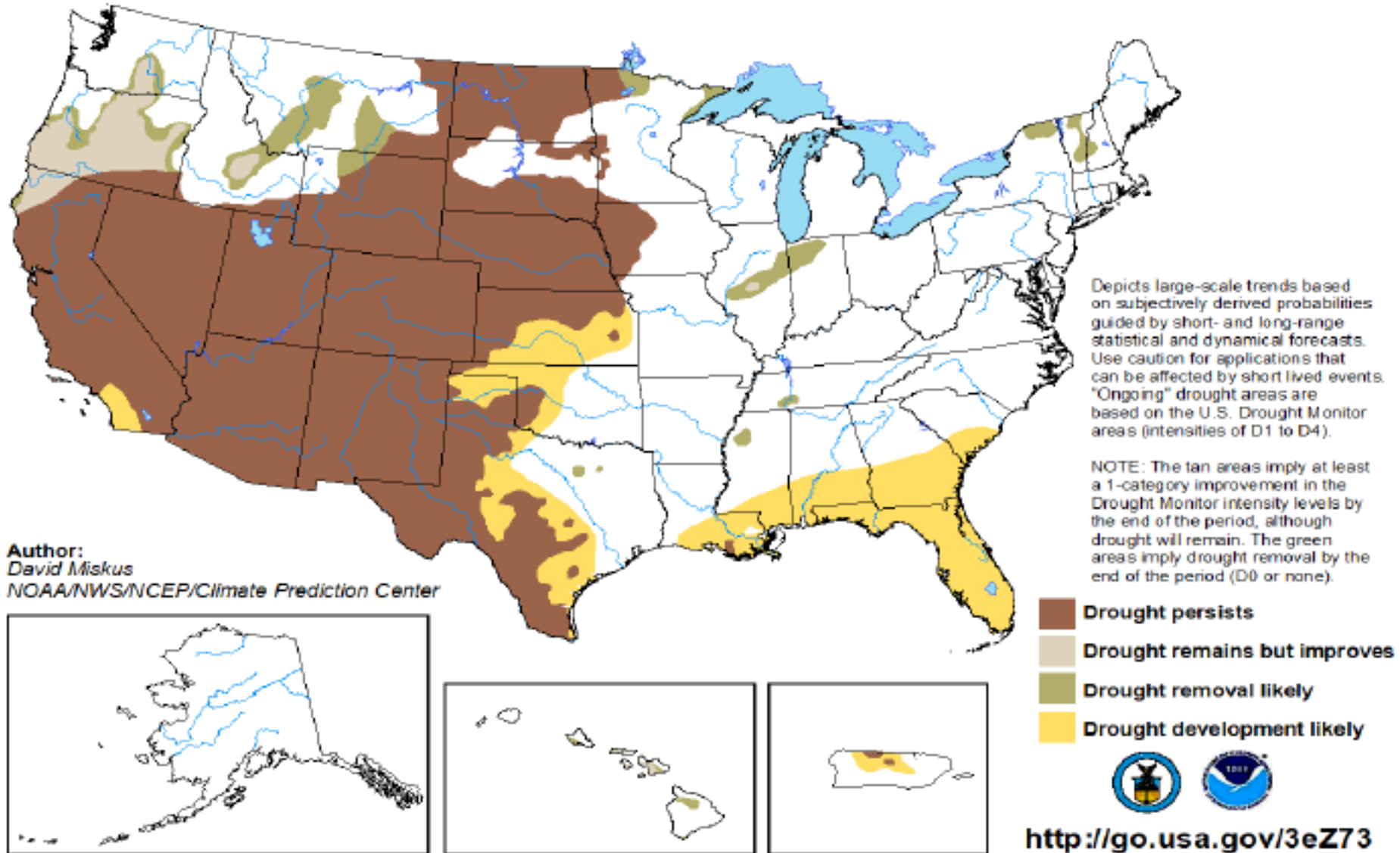
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U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for January 21 - April 30, 2021
Released January 21



Source: droughtmonitor.unl.edu

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Farmland Leases

Speaker:

Jeff Troendle

President of Farm Management

JeffT@Hertz.ag





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Farmland Leases



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Purpose of a Lease

To define the split of income,
expenses, and responsibilities
of farm owner and farm
operator



Cash Rent vs Participating Leases

- Consistency vs Maximum Potential
- Stated Expectations vs Control
- Short-Term vs Long-Term
- Tax Planning Flexibility



Marketing vs Yield vs Input Costs

When is 5% more than 5%?

- 200 bushels X \$0.225 per bushel = \$45
- Extra 10 bushel per acre X \$4.50/Bu = \$45
- Saving 5% on \$400 of inputs/Acre = \$20



Fertilizer Balance

Soil testing, crop removal vs application rates



Where are rents headed?

Average Cash Rents by State

<u>Year</u>	<u>Illinois</u>	<u>Iowa</u>	<u>Minnesota*</u>	<u>Nebraska **</u>
2020	260	222	189	225
2019	263	219	181	225
2018	260	222	192	210
2017	260	219	198	220
2016	283	230	213	234
2015	295	246	236	247
2014	323	260	248	260
2013	339	270	246	280
2012	331	252	224	270
2011	271	214	188	228

****Average for Irrigated cropland**

***Average for Southwest Region**

**Sources: Iowa State University, University of Minnesota,
University of Nebraska, and ISPFARMA**



Sustainability

Speaker:

Craig Welter

Farm Manager

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Sustainability



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Goals of Sustainability

- Lower, more efficient input usage
- Reduced erosion and nutrient loss
 - Nitrate leaching/Ammonium runoff
 - 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
- Retain carbon in soil
- Not “one size fits all”!





Planting Soybeans Into Cereal Rye Cover Crop



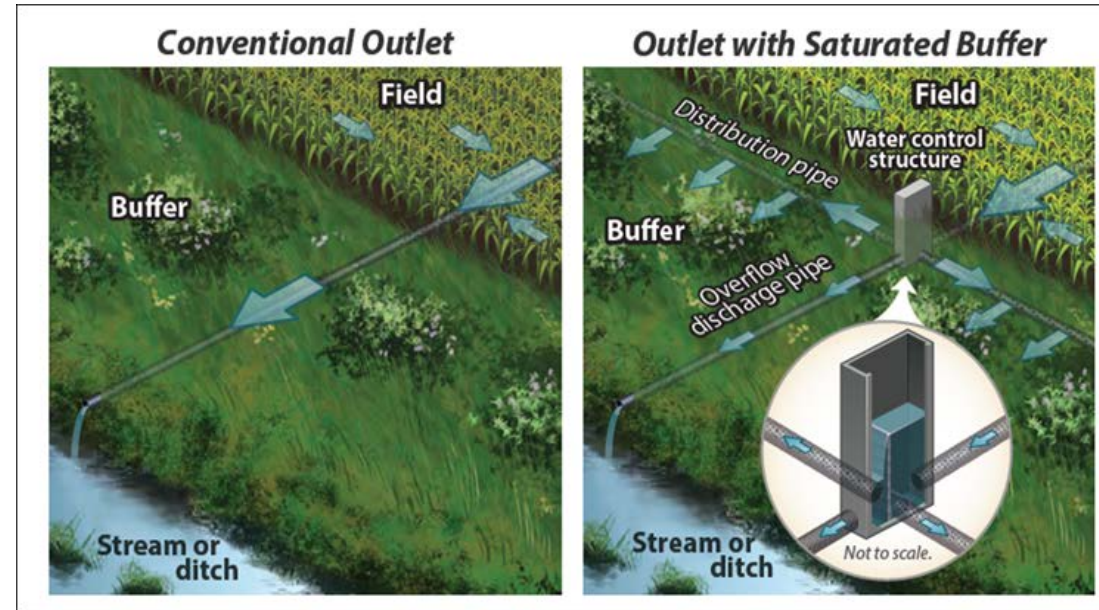
Cover Crops

- 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
 - What are soils like on your farm?
 - 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. 42% nitrate removal
 - Can treat up to 200 acres
 - Requires adequate field slope & ample space for buffer strip



- Costs vary by farm but installation is typically \$2,000-4,000
- USDA cost share available
- Low maintenance



Image Source: USDA

www.Hertz.ag

Saturated Buffer



Saturated Buffer



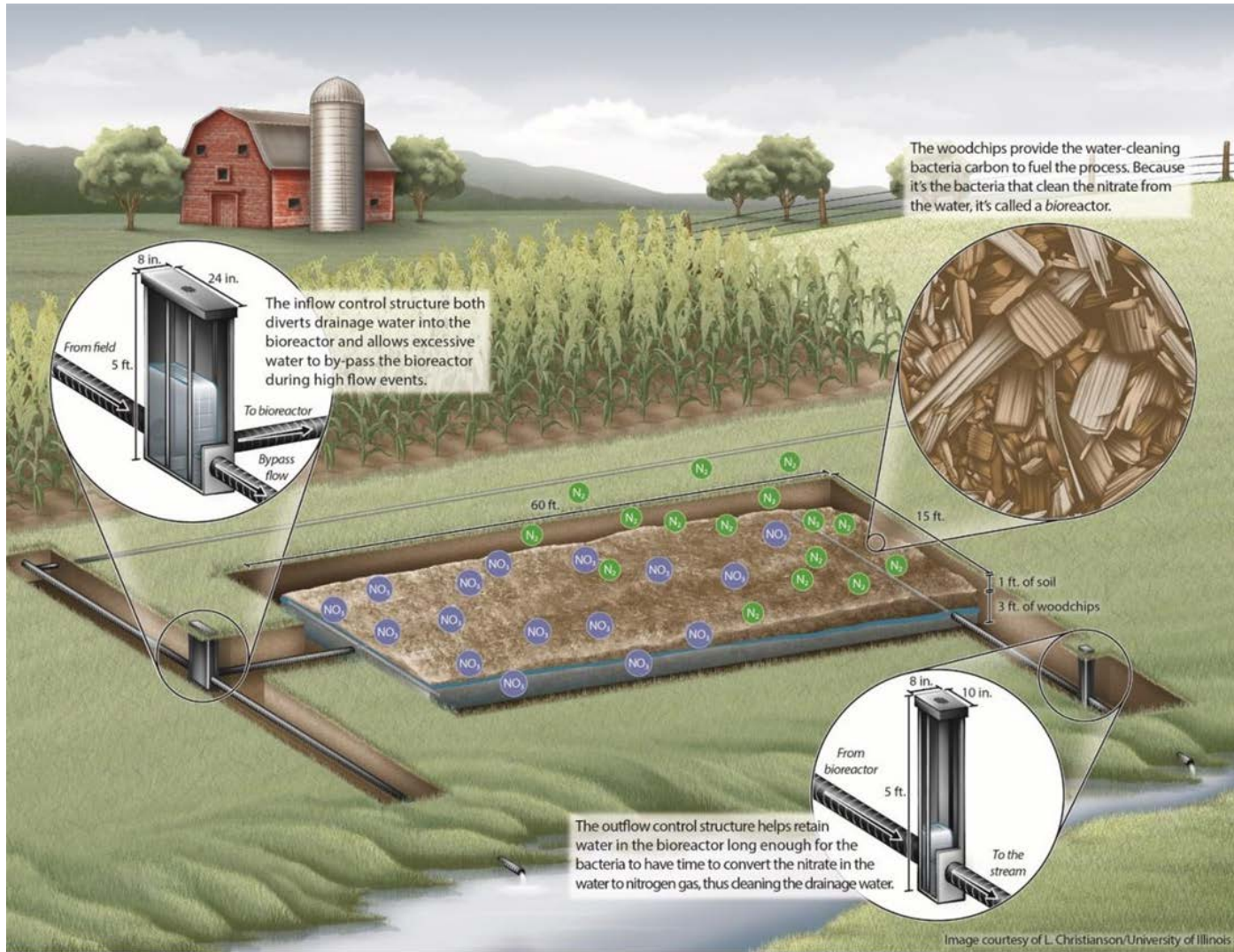
Saturated Buffer



**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
 - USDA cost share is available
 - Woodchips need to be replaced after 10 years



Woodchip Bioreactor



Image Source: Ohio State University
www.Hertz.ag



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 offering to purchase “carbon credits” to offset their emissions
 - Agriculture is part of the solution

Total U.S. Greenhouse Gas Emissions
by Economic Sector in 2018

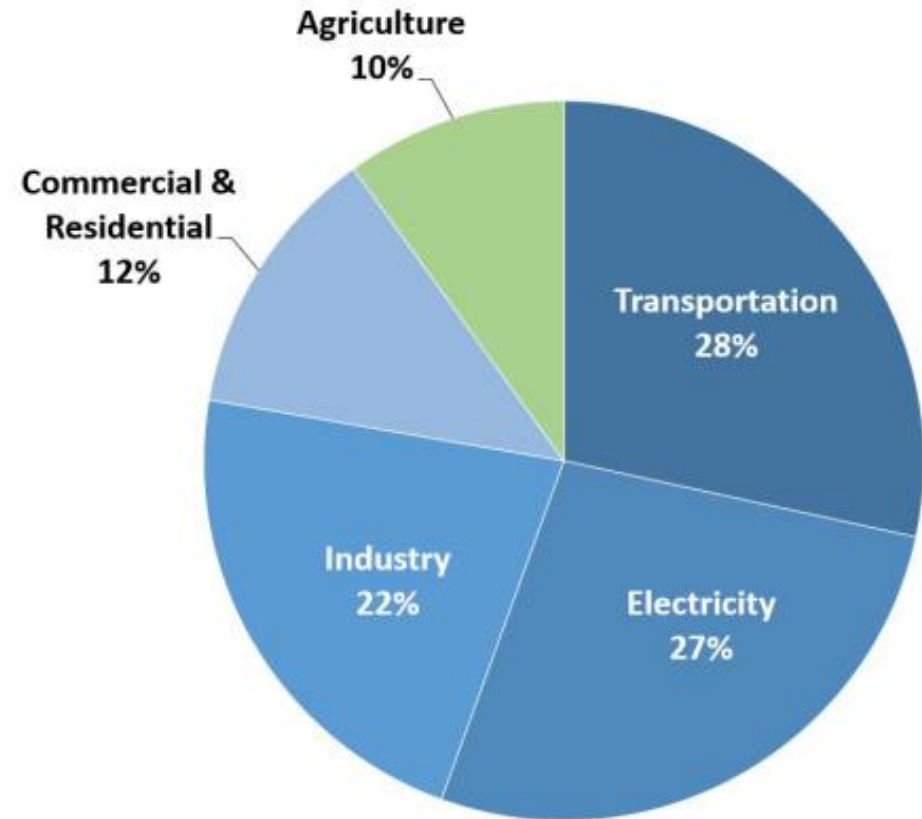


Image Source: Environmental Protection Agency

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Agriculture's Carbon Impact

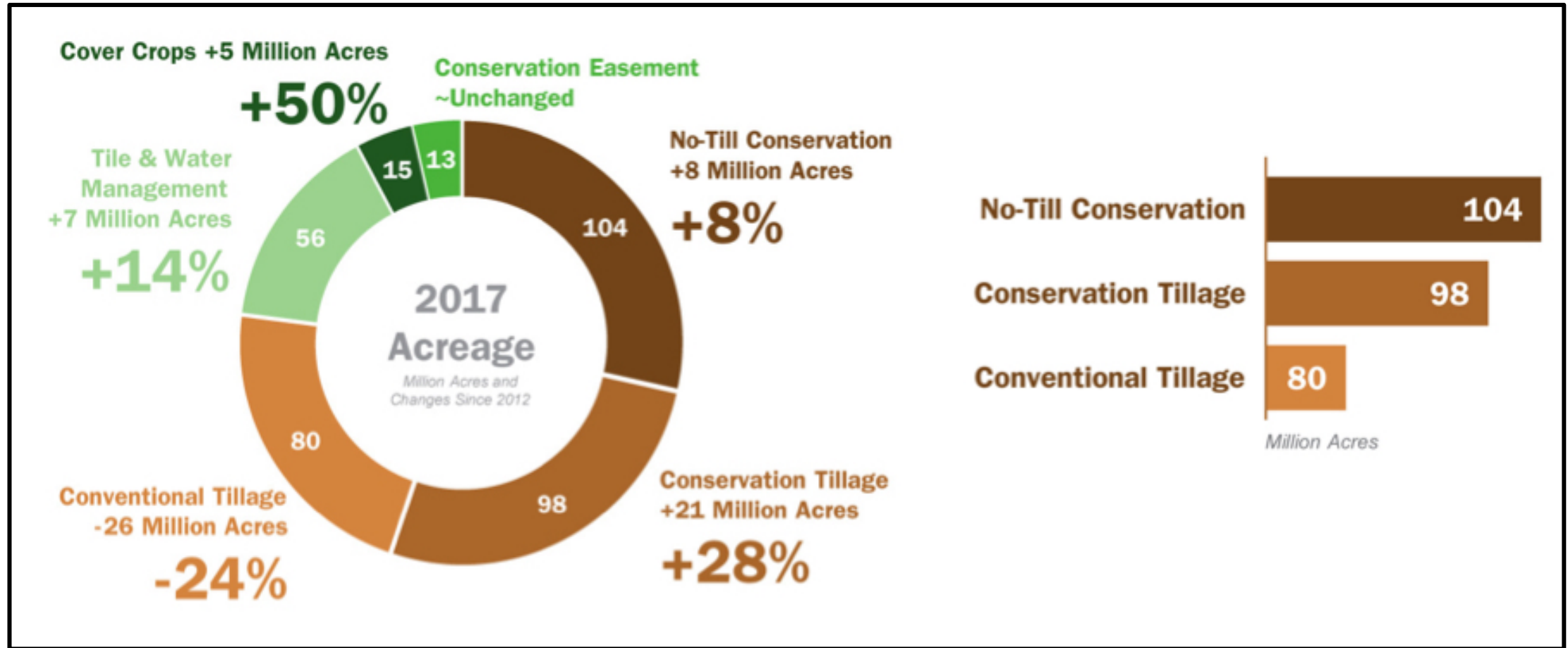


Image Source: American Farm Bureau Federation

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Agriculture's Carbon Impact

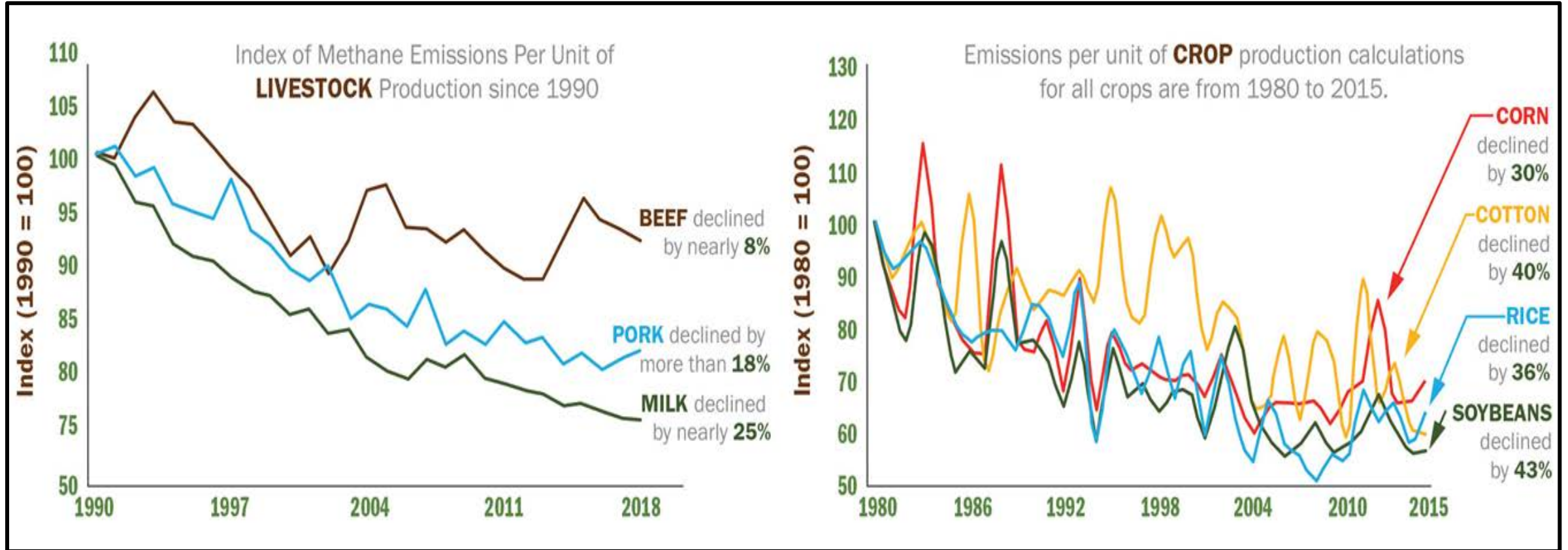


Image Source: American Farm Bureau Federation

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Carbon Cycle

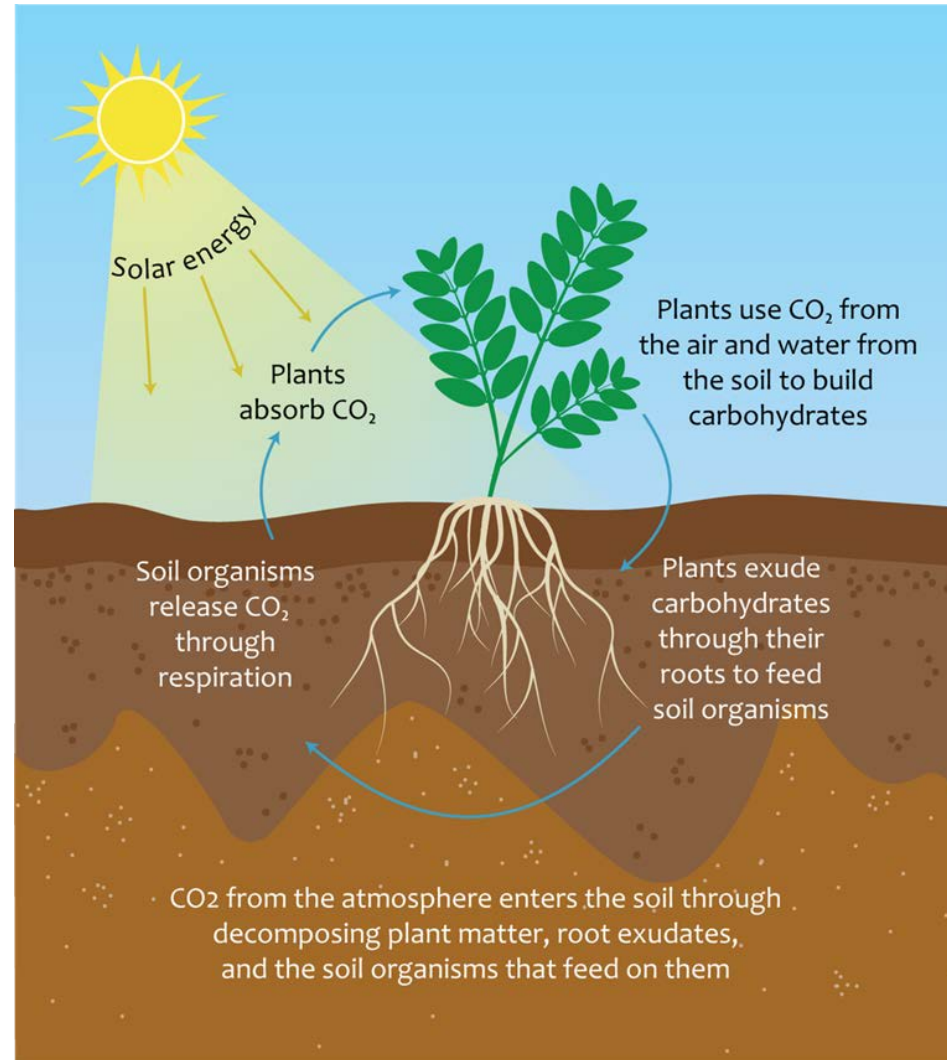


Image Source: Colorado State University

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Carbon Credits

- How do we build soil carbon?
 - Frequent living root systems below ground
 - Decomposing crop residue
 - Reducing soil disturbance
 - Changing crop rotations
 - Using manure for fertilizer



Carbon Credits

- Market structure
 - Farmers sign up with carbon “broker”
 - Carbon brokers estimate carbon sequestered
 - Corporate buyers purchase credits from broker to offset their emissions
 - Carbon brokers pay farmers for credits earned
 - Brokers: Indigo Ag, Nori, CIBO, Nutrien, Land O’ Lakes, and others
 - Potential USDA involvement?



Carbon Credits

- Brand new market
 - Risk and uncertainty about contracts
 - Carbon calculations are vague
 - Estimate ½ ton carbon sequestered per acre
 - Early indications show payments of \$15-20 per ton of carbon sequestered
 - Can range from \$7-40 per acre depending on practices used and measurements taken
- Farm lease considerations
 - Who gets paid?
 - Who has the right to agree to a contract?



Farmland Values

Speaker:

Doug Hensley

President of Real Estate

Doug.Hensley@Hertz.ag





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Farmland Values



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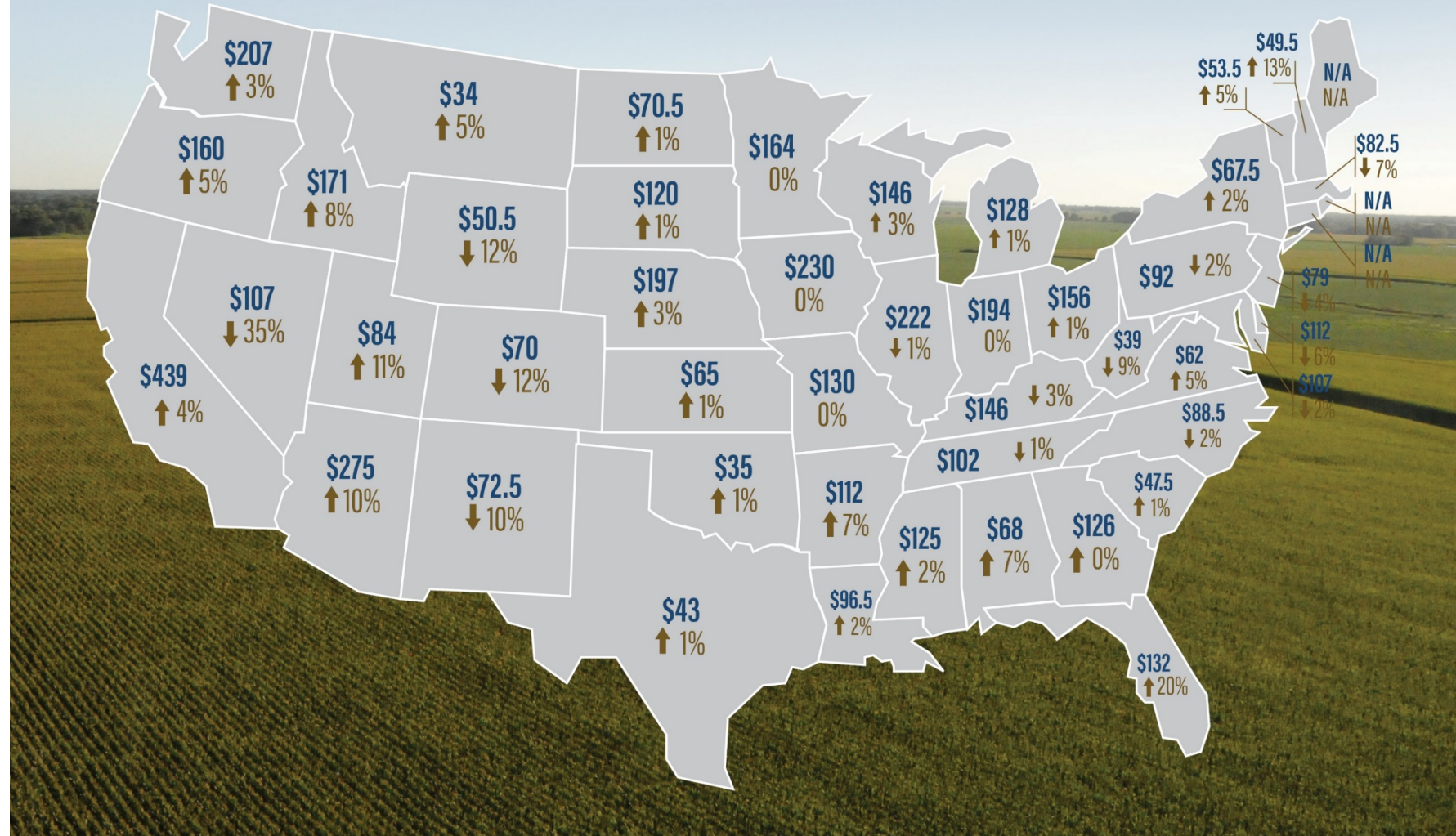
Farmland Values

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



2020 Cropland Cash Rents and Change from 2019

(\$/acre)



Source: AgWeb.com / Farm Journal – USDA data

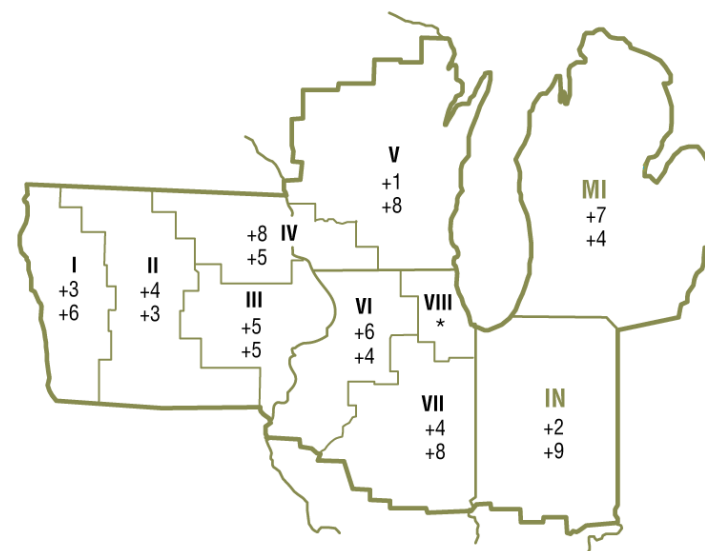
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Chicago Federal Reserve Study

Percent Change in Dollar Value of “Good” Farmland

	October 1, 2020 to January 1, 2021	January 1, 2020 to January 1, 2021
Illinois	+4	+6
Indiana	+2	+9
Iowa	+6	+5
Michigan	+7	+4
Wisconsin	+2	+7
Seventh District	+4	+6



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

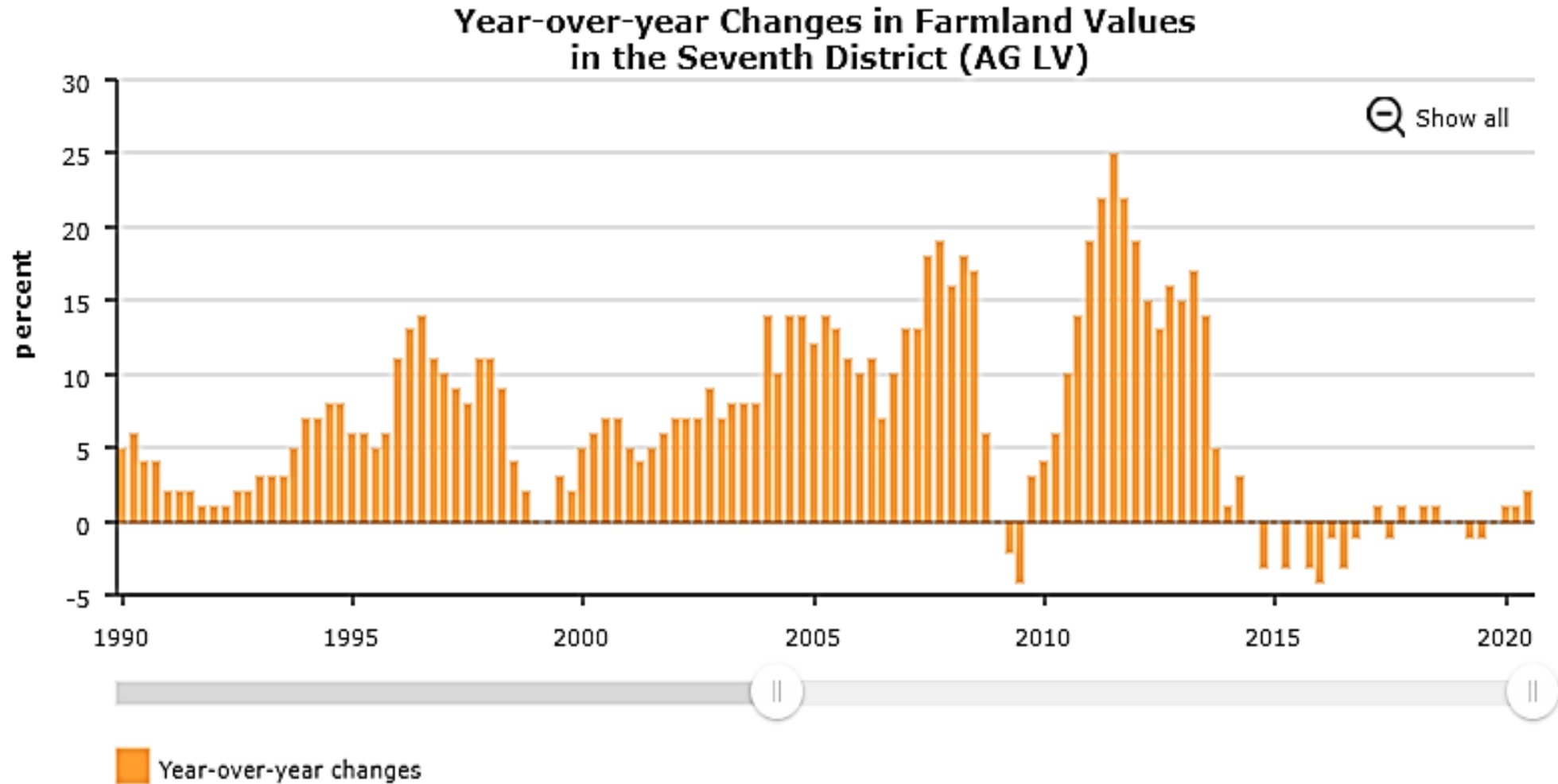


Source: Federal Reserve Bank of Chicago, AgLetter, No. 1991, February 2021

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Chicago Fed – Land Values Over Time

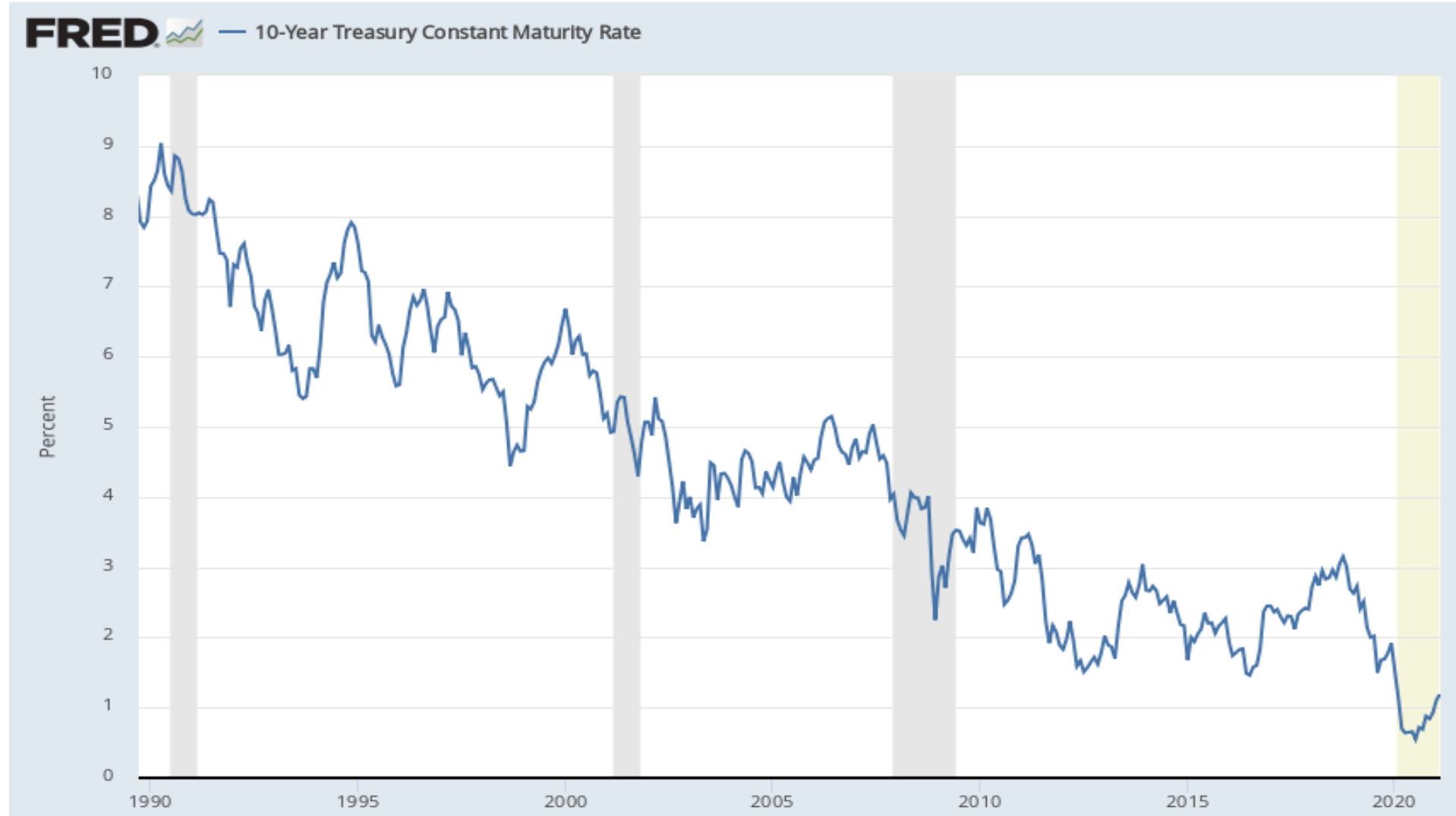


Source: Federal Reserve Bank of Chicago

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Interest Rates

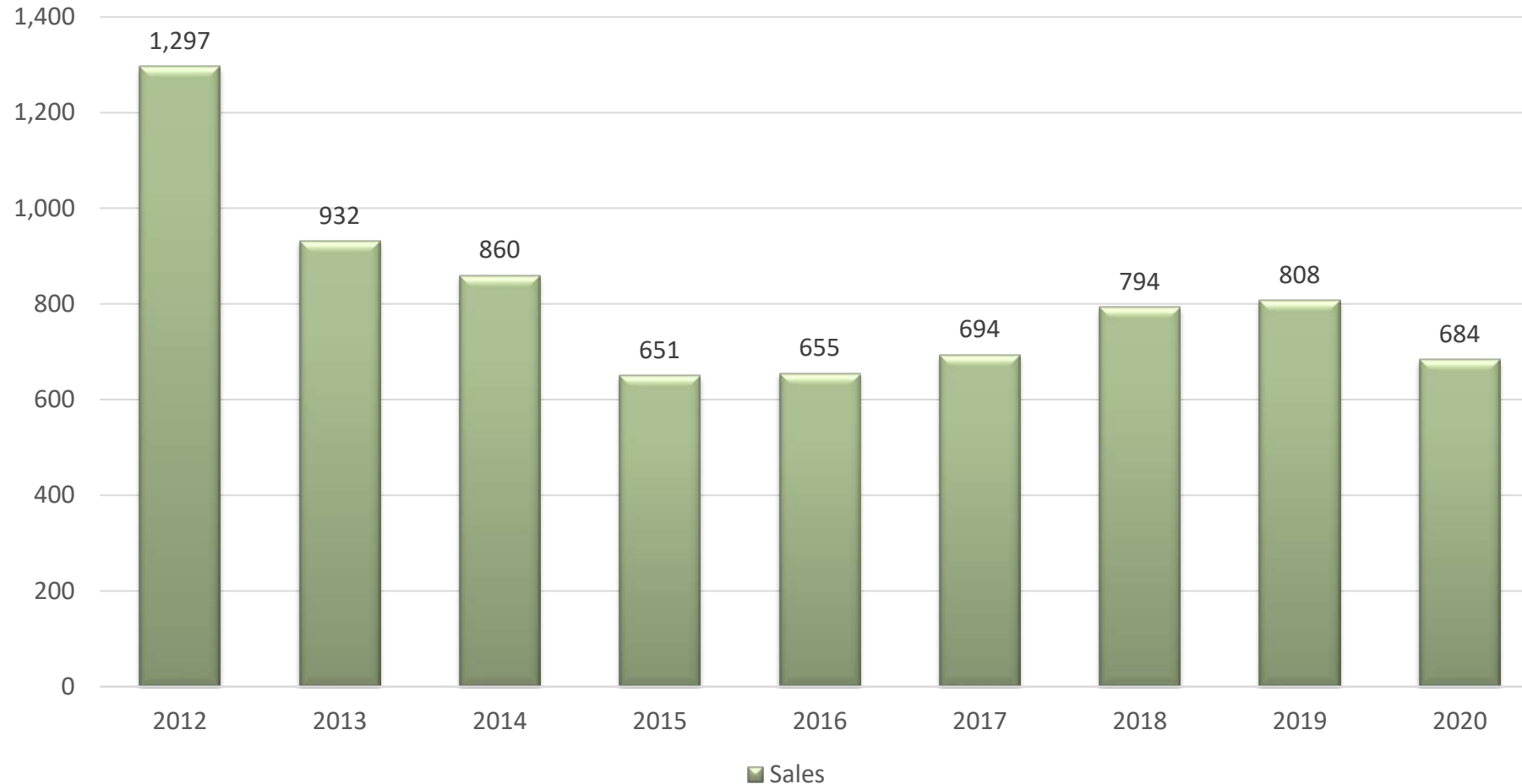


Source: St. Louis Federal Reserve Bank

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Iowa Farmland Market Sales

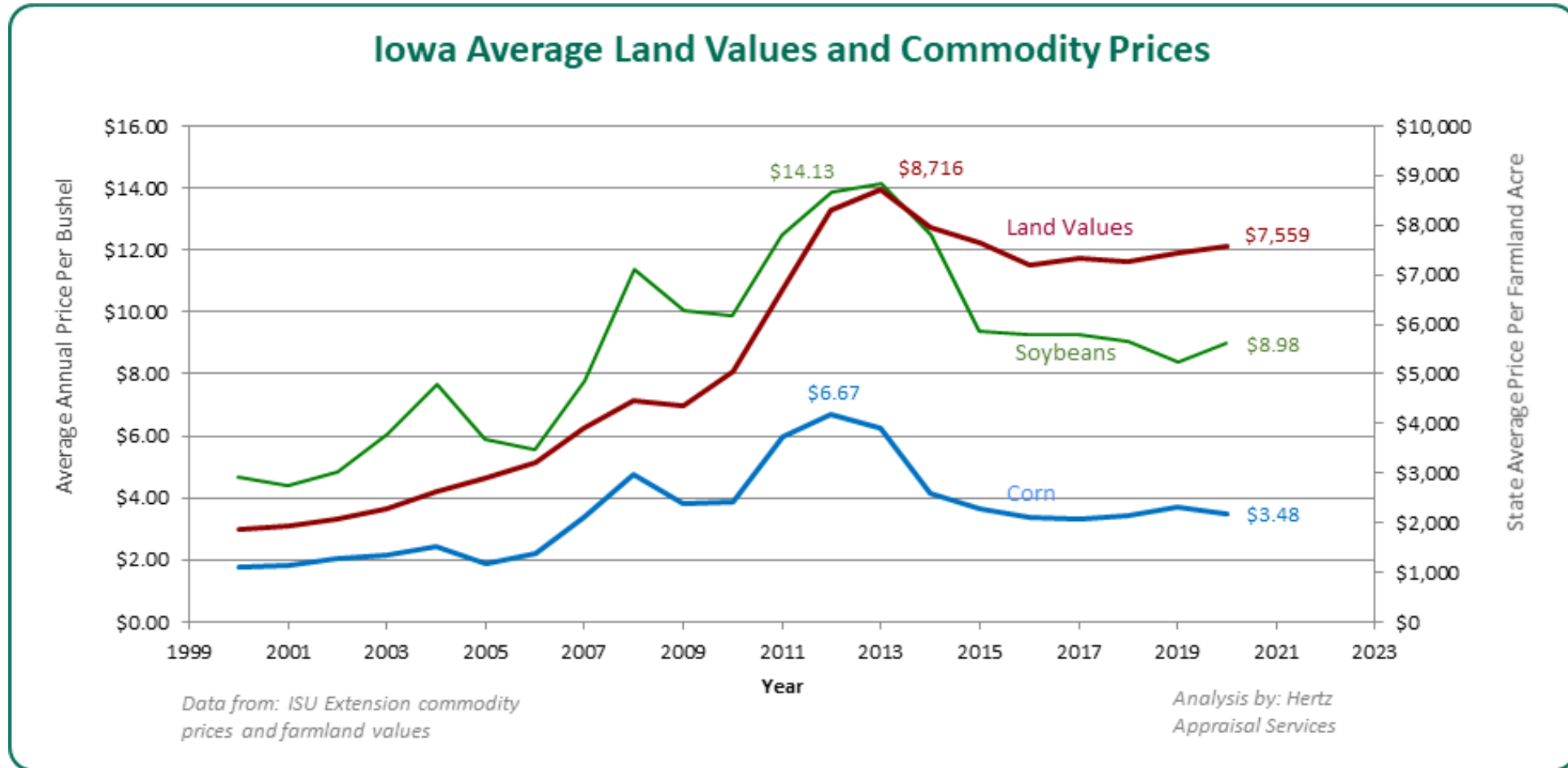


Source: Farm Credit Services of America

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Land Values & Commodities



Source: ISU Extension

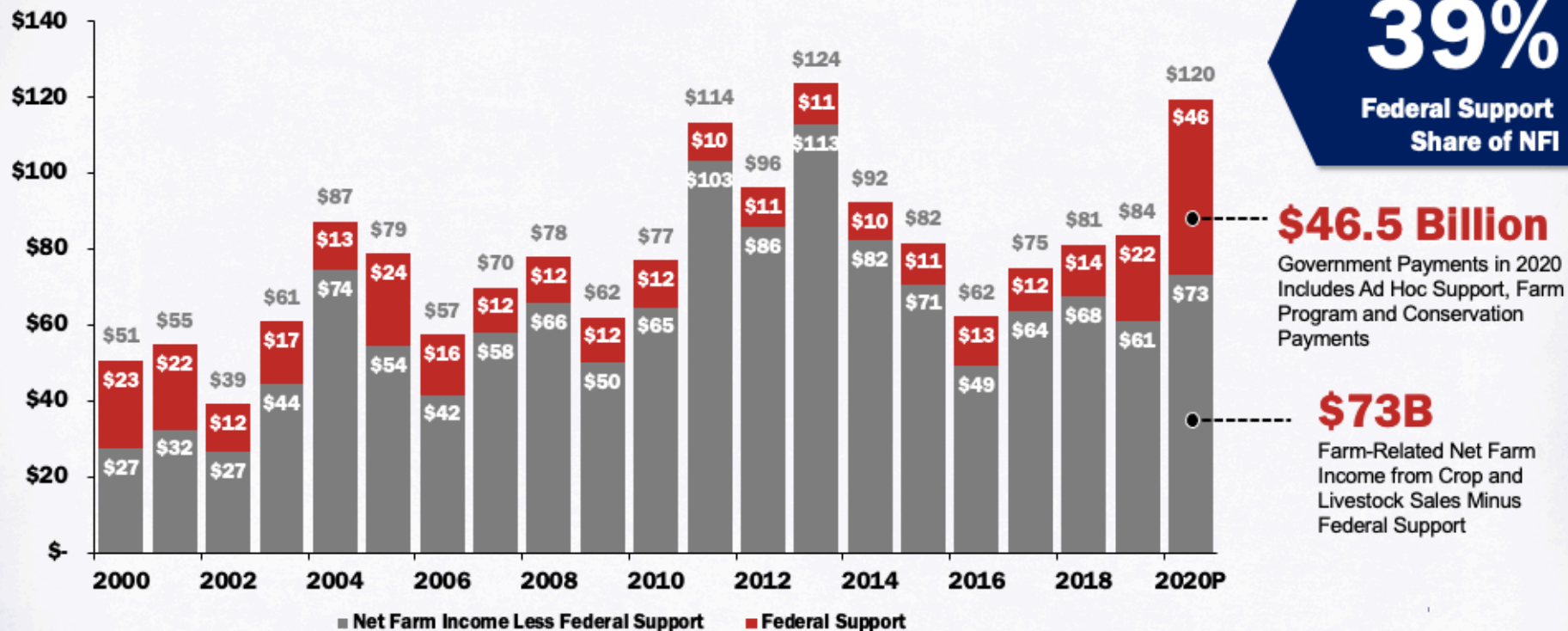
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U.S. Net Farm Income

Net Farm Income w/ and w/o Federal Support

U.S. Farm Sector Net Farm Income, Billion Dollars



AMERICAN FARM BUREAU FEDERATION®

Source: USDA ERS, Farm Bureau Calculations



Source: USDA on Data, AFBF on Table

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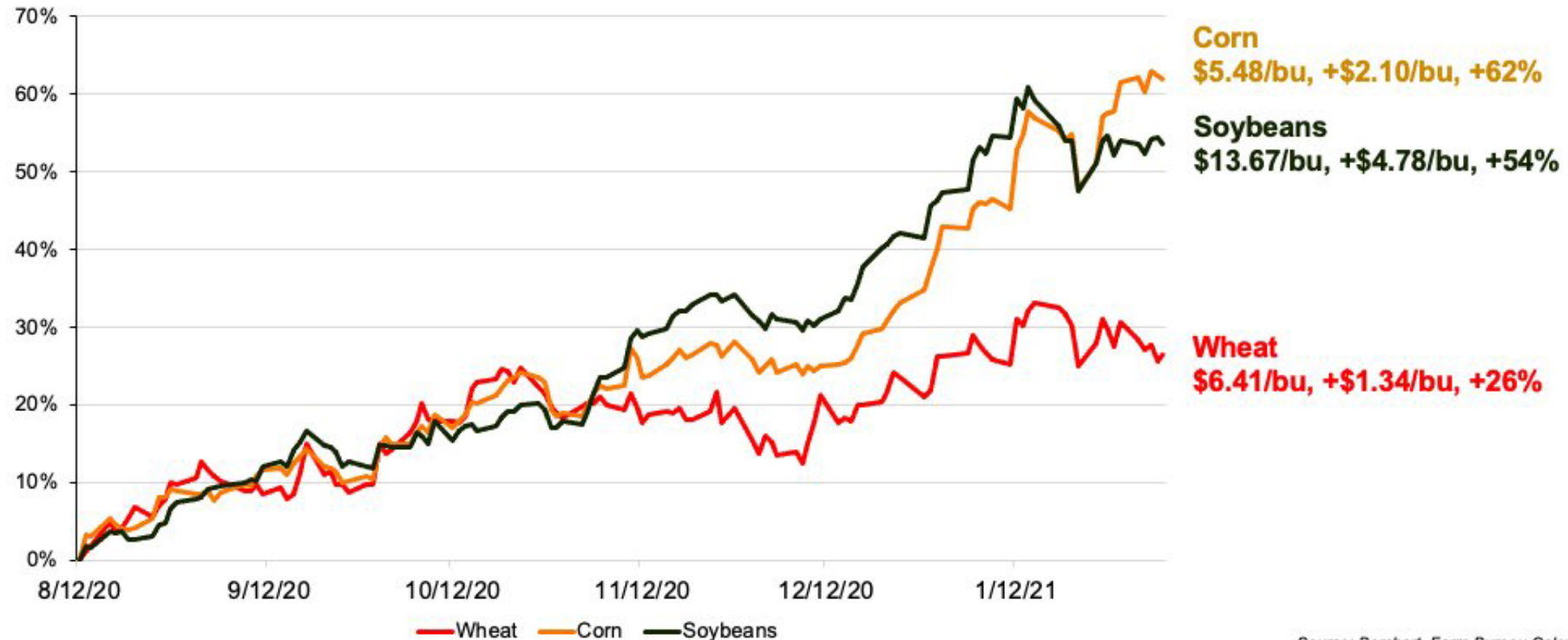


Increasing Farm Income...

COMMODITY PRICES SINCE AUGUST WASDE

AUGUST '20 TO FEBRUARY '21, MARCH FUTURES CONTRACT

Cumulative % Change in Corn, Soybeans and Wheat



Source: Barchart, Farm Bureau Calculations



Source: American Farm Bureau

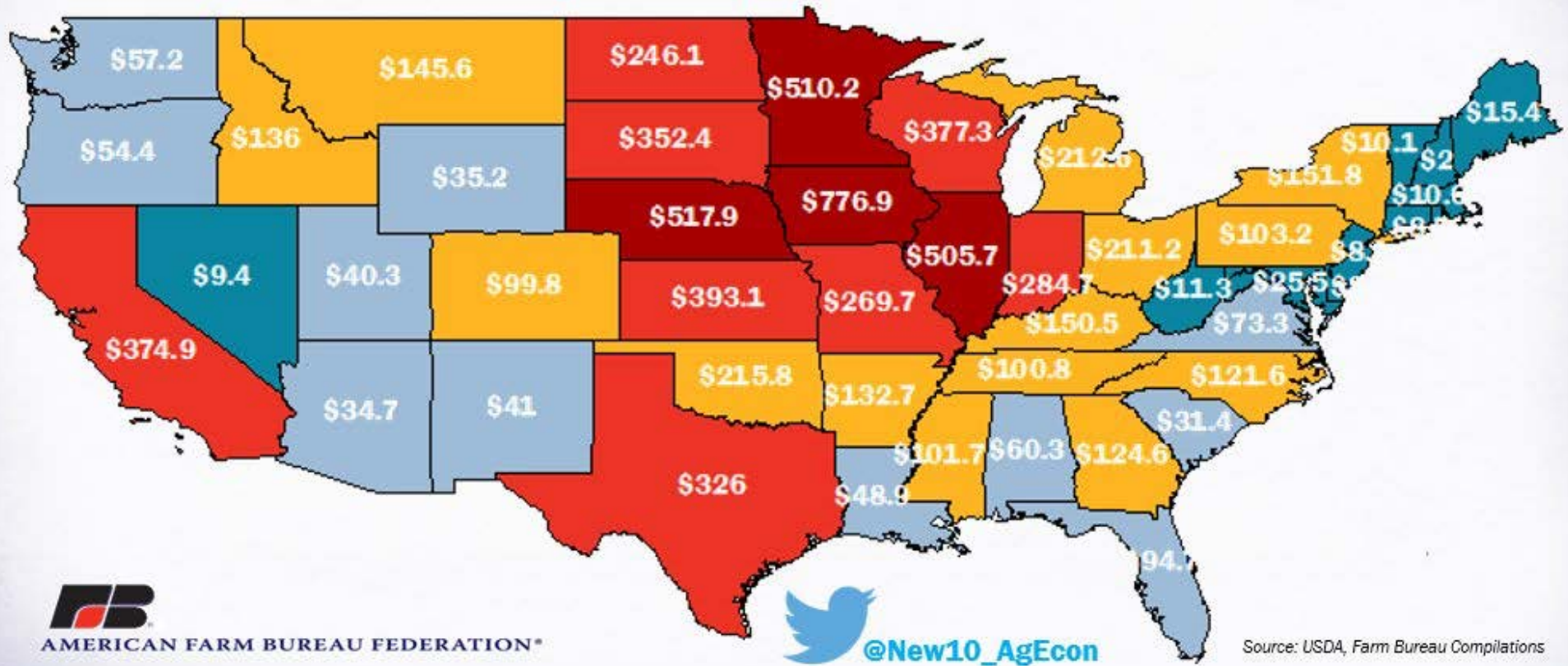
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Gov't Support - CFAP

\$7.6 Billion in Total CFAP 2 Support

As of October 25, 2020, Million Dollars



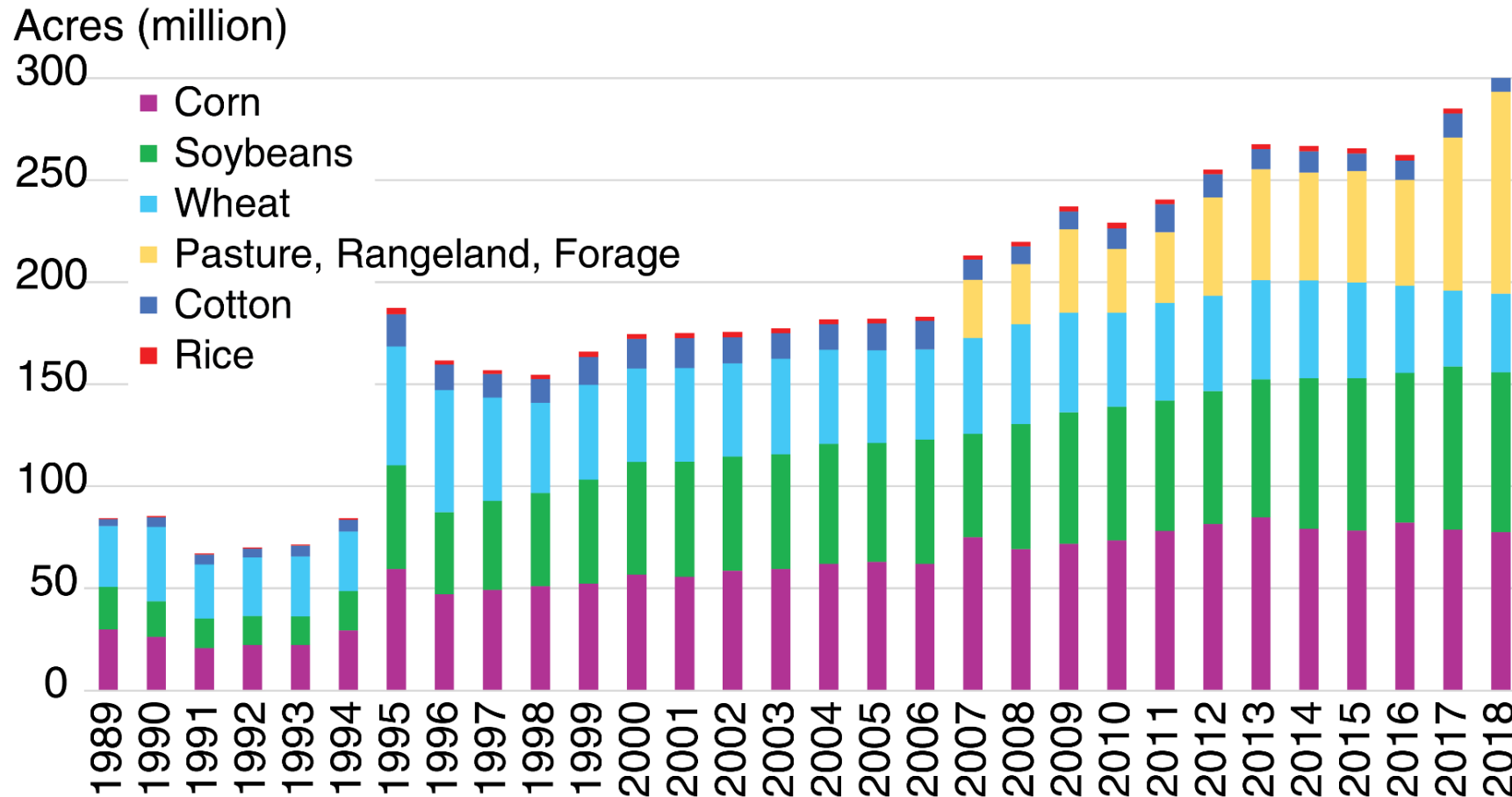
Source: USDA on Data, AFBR on Table

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Gov't Support – Crop Insurance

Insured Acres for Selected Commodities, 1989-2017

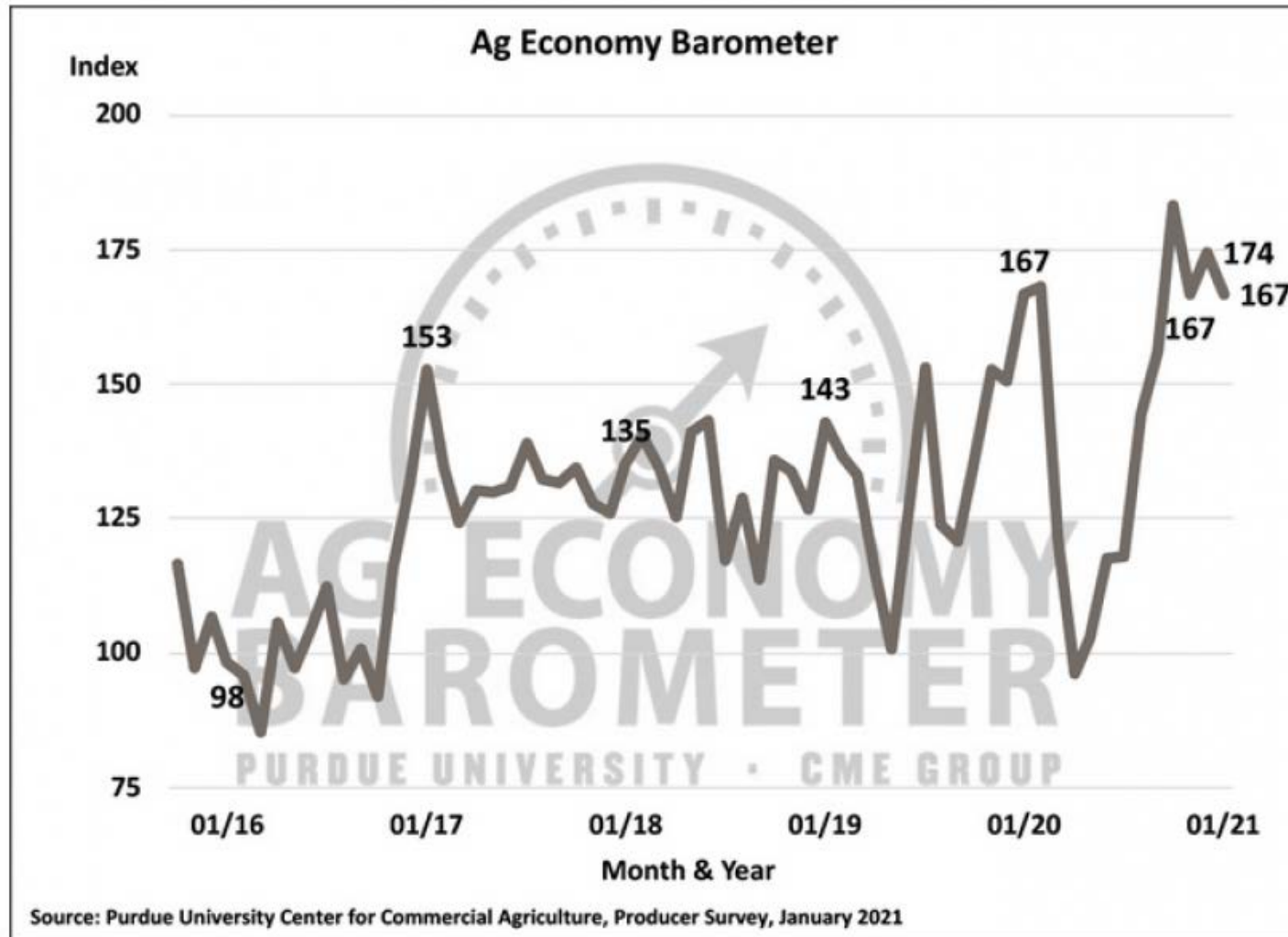


Source: USDA Economic Research Service

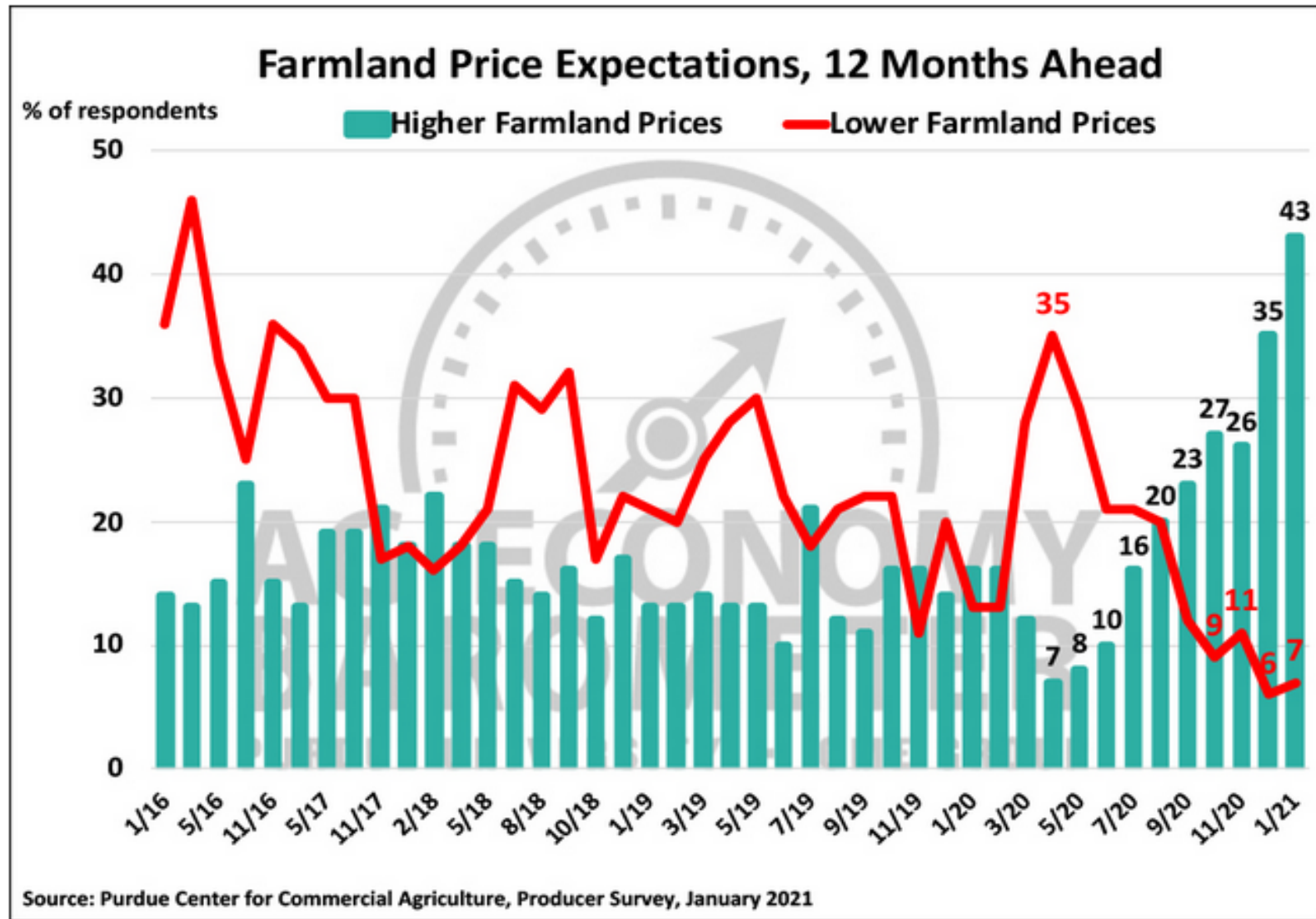
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Attitudes Have Improved Quickly...



Attitudes Have Improved Quickly...



Farmland: Financial Performance 1990-2019

Asset/Index	Annual Ave. Return	Standard Deviation	Coefficient of Variation	US Ag 32 States Correlation	Minimum Return	Maximum Return
----- 1990 - 2019 -----						
US Ag 32 States	8.8%	3.65%	0.415	1	-1.2%	19.3%
NCREIF Total Farmland	11.2%	6.57%	0.584	0.655	2.0%	33.9%
Indiana	9.1%	4.97%	0.545	0.647	-1.0%	22.0%
Illinois	9.3%	5.57%	0.597	0.791	0.9%	26.0%
Iowa	10.9%	7.17%	0.657	0.641	-5.2%	24.9%
Minnesota	10.7%	5.38%	0.503	0.783	-1.8%	20.3%
Dow Jones	7.8%	14.56%	1.867	-0.110	-41.3%	28.9%
CompositeREITS	9.7%	18.20%	1.879	-0.106	-47.5%	32.5%
AAA	5.9%	1.66%	0.281	0.252	3.4%	9.3%
TCM10Y	4.5%	1.89%	0.419	0.319	1.8%	8.6%
Mort30F	5.8%	2.54%	0.442	0.401	0.0%	10.1%
CD6M	3.56%	2.34%	0.656	0.316	0.2%	8.2%
Gold	4.45%	13.86%	3.114	0.038	-31.9%	27.7%
PPI	1.89%	3.96%	2.094	0.142	-7.4%	8.2%
CPI	2.37%	1.08%	0.455	0.240	0.1%	5.9%



Source: University of Illinois, TIAA
Center for Farmland Research
www.Hertz.ag



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?)





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