

2020 ISU Land Value Survey

Dr. Wendong Zhang

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Assistant Professor of Economics and Extension Economist

ISU CARD Farmland Portal: www.card.iastate.edu/farmland

December 15, 2020

A Quick Introduction: Dr. Wendong Zhang

- Grew up in a rural county in Shandong Province, China
- Attended college in Shanghai and Hong Kong
- Ph.D. in Ag Econ from Ohio State in 2015
- 2012 summer intern at USDA-ERS on farm economy and farmland values
- Research and extension interests:

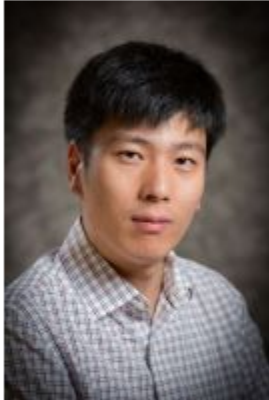
land value/ownership <https://www.card.iastate.edu/farmland>

agriculture and the environment (2019 Iowa Lakes Survey)

ISU China Ag Center <https://www.card.iastate.edu/china>

Ag Decision Maker December Webinar

Registration is required to join this event. If you have not registered, please do so now.



CARD Policy Briefs

Center for Agricultural
and Rural Development

IOWA STATE UNIVERSITY

December 2020

20-PB 30

Iowa Farmers' Business and Farm Transfer Plans: A Comparison between 2019 and 2006

Beatrice Maule, Wendong Zhang, and David Baker

Event status: Not started ([Register](#))

Date and time: Thursday, December 17, 2020 7:00 pm
Central Standard Time (Chicago, GMT-06:00)
[Change time zone](#)

Panelist(s) Info: Wendong Zhang

Duration: 1 hour 30 minutes

Description: **Iowa Land Value & Transfer Trends Update: Results from Two New Surveys**

A free one-hour live webinar featuring Wendong Zhang, extension economist with ISU Extension and Outreach
Topics to be discussed:

- State and county land values from the 2020 ISU Land Value Survey
- Positive & negative factors influencing Iowa and Midwest farmland values
- Farmland transfer trends from a new 2019 survey led by ISU Beginning Farmer Center
- Farmland market outlook for 2021 and beyond

Presentation will be 50 minutes with time for questions. Once registered, you will receive a confirmation e-mail with instructions and link for joining the webinar.

**Thursday December 17, 2020
7pm CT**

Registration:

<https://bit.ly/agdmdec20>

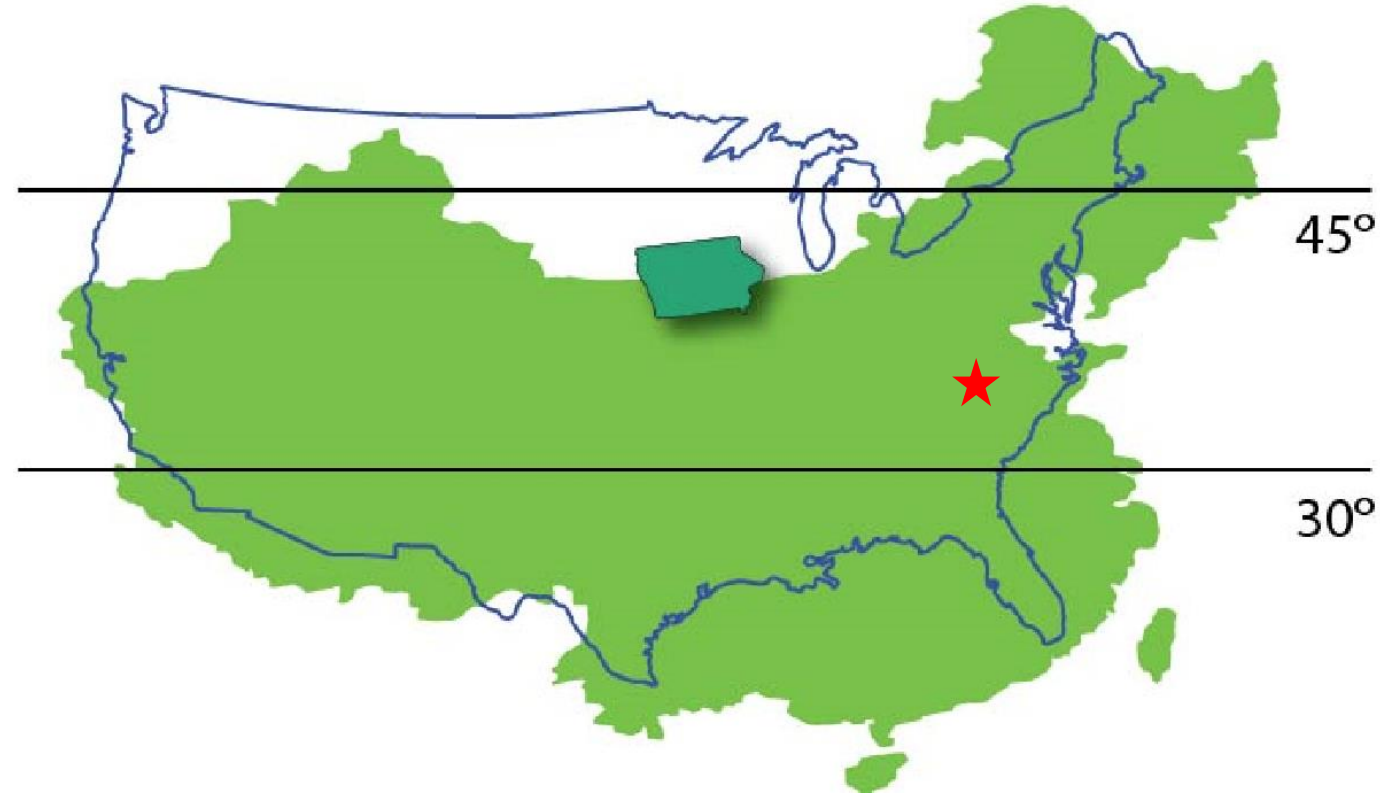


IOWA STATE UNIVERSITY
Extension and Outreach

More ISU Farm Management Webinars

[https://www.extension.iastate.edu/
agdm/info/meetings.html](https://www.extension.iastate.edu/agdm/info/meetings.html)

My Hometown: Shenxian, Shandong Province



ISU Land Value Survey – How to Interpret

- It is an opinion survey
- It is an expert opinion survey: respondents are ag professionals
- The first of its sort in the nation, started 1941
- The only survey that offers county-level land value estimates since 1950
- It is not designed to value individual parcels
- The percent change is more important than the actual dollar amount, and when comparing across surveys, compare the percent change
- To value individual parcels, consult appraisers or comparable sales

Number of Respondents and Responses by District and Mode, 2020

	Responses			Respondents		
	Paper PERCENT	Online PERCENT	Total Number	Paper PERCENT	Online PERCENT	Total Number
Northwest	35	65	79	37	63	65
North Central	33	67	86	35	63	63
Northeast	26	74	95	35	65	69
West Central	37	63	81	38	62	58
Central	31	69	102	38	68	63
East Central	30	70	71	30	77	47
Southwest	17	83	59	22	84	37
South Central	24	76	66	29	71	49
Southeast	28	72	68	30	82	33
STATE	30%	70%	707	33%	69%	484

Survey Respondents by Occupation, 2020

	Farm manager	Appraiser	Ag lender	Broker/Realtor	Farmer /Landowner	Government	Other
	PERCENT						
Northwest	20	0	45	20	8	8	0
North Central	16	10	37	11	13	11	3
Northeast	9	10	39	12	17	6	7
West Central	12	5	47	12	3	21	0
Central	17	11	19	24	14	13	2
East Central	15	11	36	26	6	2	4
Southwest	11	8	49	11	8	14	0
South Central	8	4	33	33	4	14	4
Southeast	12	12	39	9	15	9	3
STATE	14	8	38	18	10	11	3

Experience and Service Area by Occupation

Crop reporting district	Years of experience	Number of counties served	Occupation	Years of experience	Number of Counties Served
Northwest	29	7	Farm manager	29	10
North Central	31	10	Appraiser	25	15
Northeast	26	6	Ag lender	23	5
West Central	25	6	Brokers/Realtor	28	17
Central	28	15	Farmer/Landowner	39	5
East Central	24	7	Government	21	1
Southwest	26	5	Other	38	5
South Central	22	7			
Southeast	26	5			
STATE	27	8	STATE	27	8

STATEWIDE AVERAGE

\$7,559
Nov 2020



up 1.7%
up \$127

HIGH QUALITY LAND

\$9,068
Nov 2020



down 0.1%
down \$10

MEDIUM QUALITY LAND

\$7,119
Nov 2020

up 2.6%
up \$181



LOW QUALITY LAND

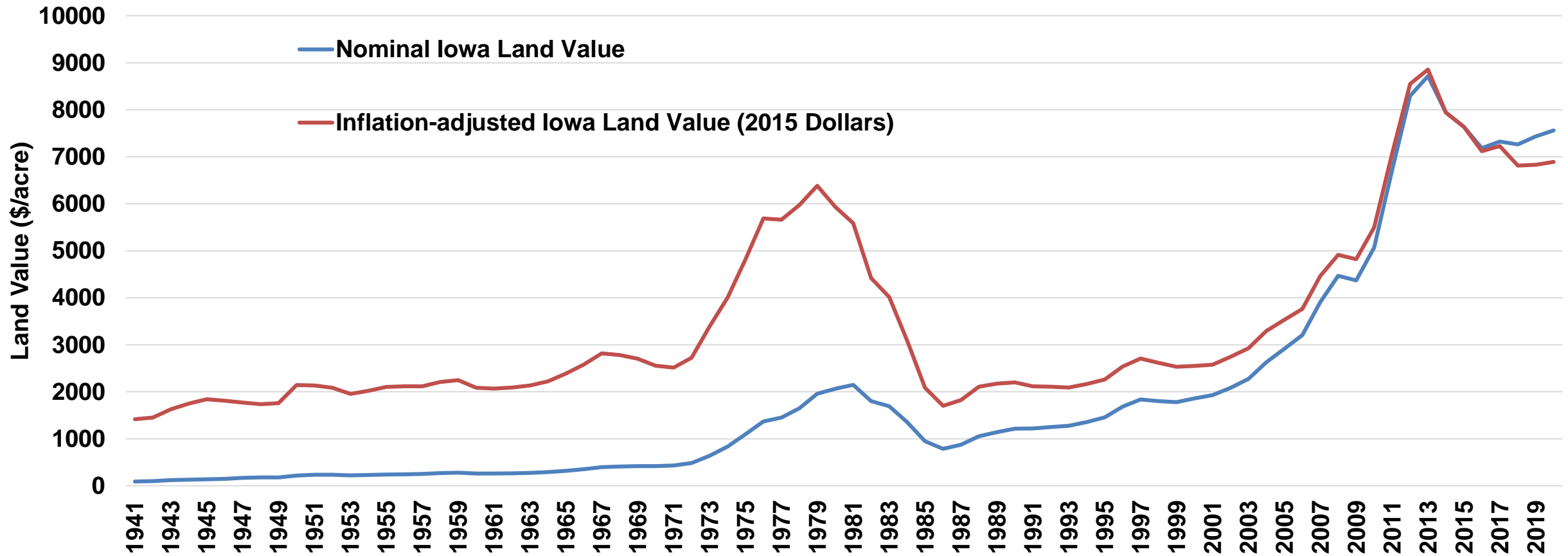
\$5,078
Nov 2020

up 6.7%
up \$319



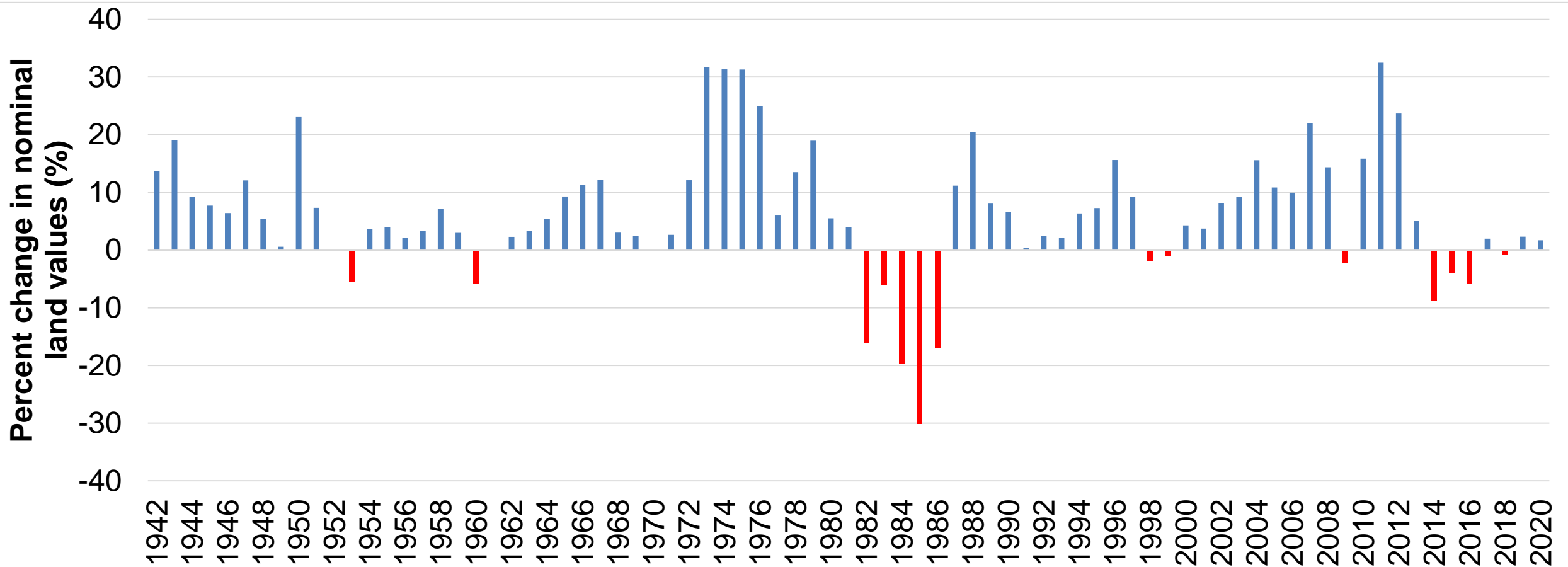
Average Iowa Land Values Saw a Modest 1.7% Rise

Average values of all farmland 1942–2020

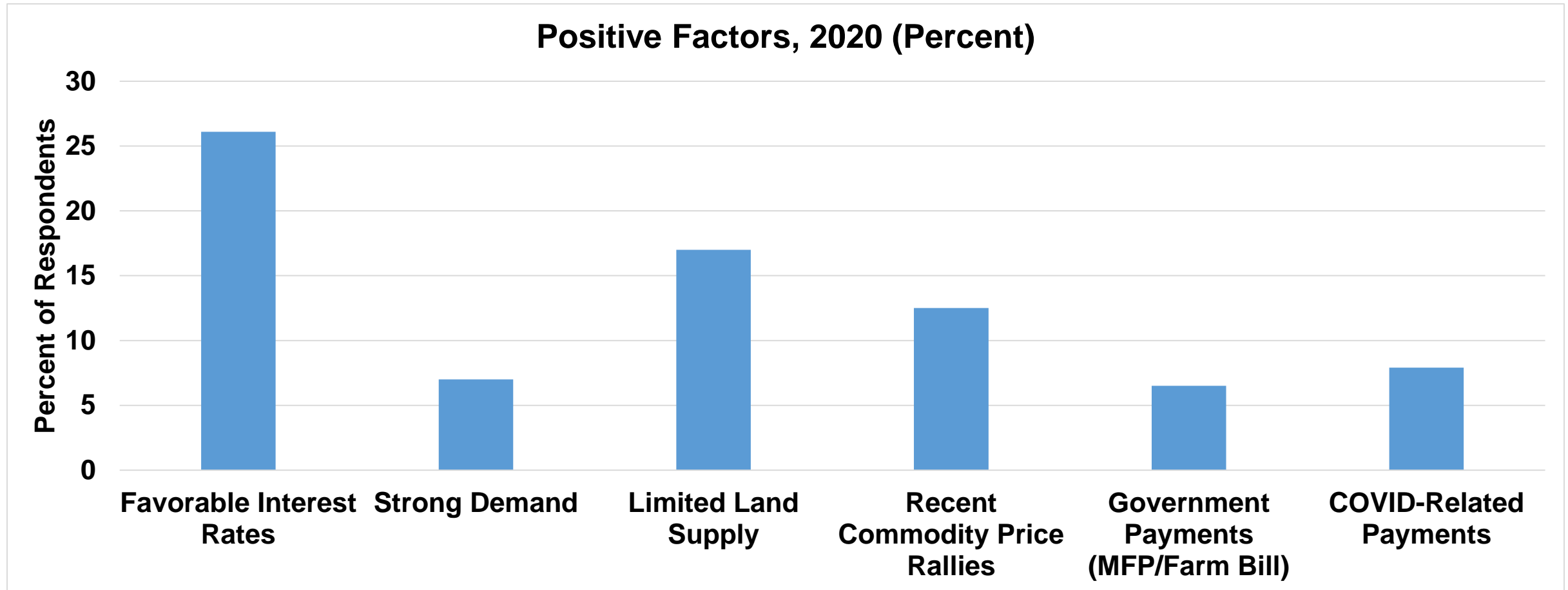


2020 hike represents 3rd rise in past 6 years

% Change in Nominal Iowa Farmland Values 1942–2020

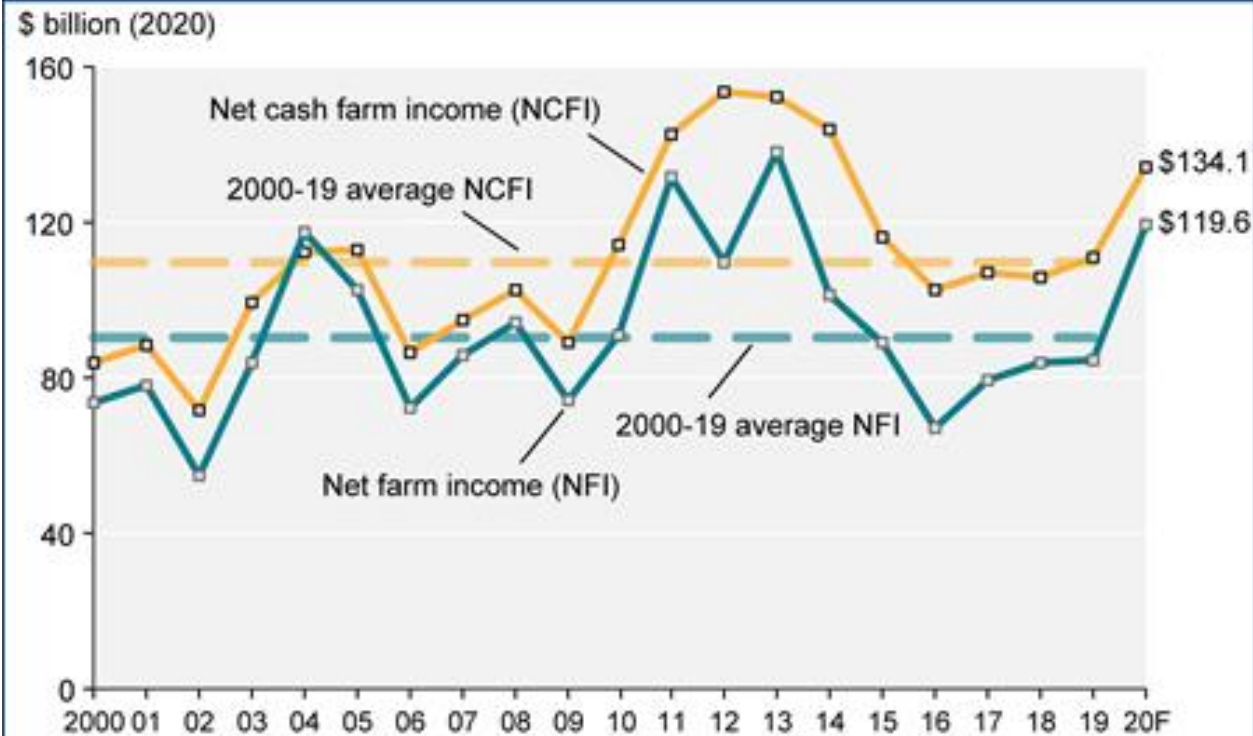


Major Positive Factors Affecting Iowa Farmland Market, 2020



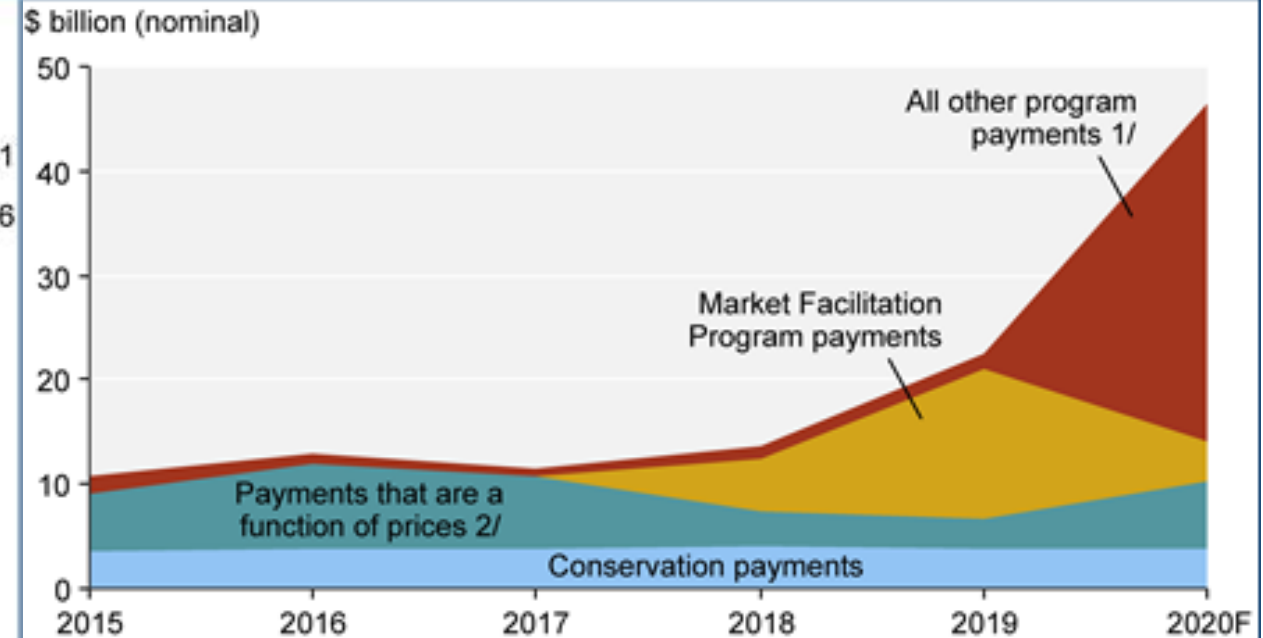
Record federal ad hoc government payments and lower interest rates provided support for land values

Net farm income and net cash farm income, 2000–20F



Note: F = forecast. Values are adjusted for inflation using the Gross Domestic Product chain-type price index, 2020=100.
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of December 2, 2020.

Direct government payments to farm producers, 2015-20F



Note: F = forecast. 1/ "All other program payments" includes supplemental and ad hoc disaster assistance, which in 2020 includes payments from Coronavirus Food Assistance Programs and the Paycheck Protection Program. 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 December 2, 2020.



Economic Research Service
United States Department of Agriculture

Federal Reserve slashes rates to zero, restarts QE in emergency Sunday announcement



Brian Cheung • Reporter

March 15, 2020 • 5 min read

Federal Funds Rate

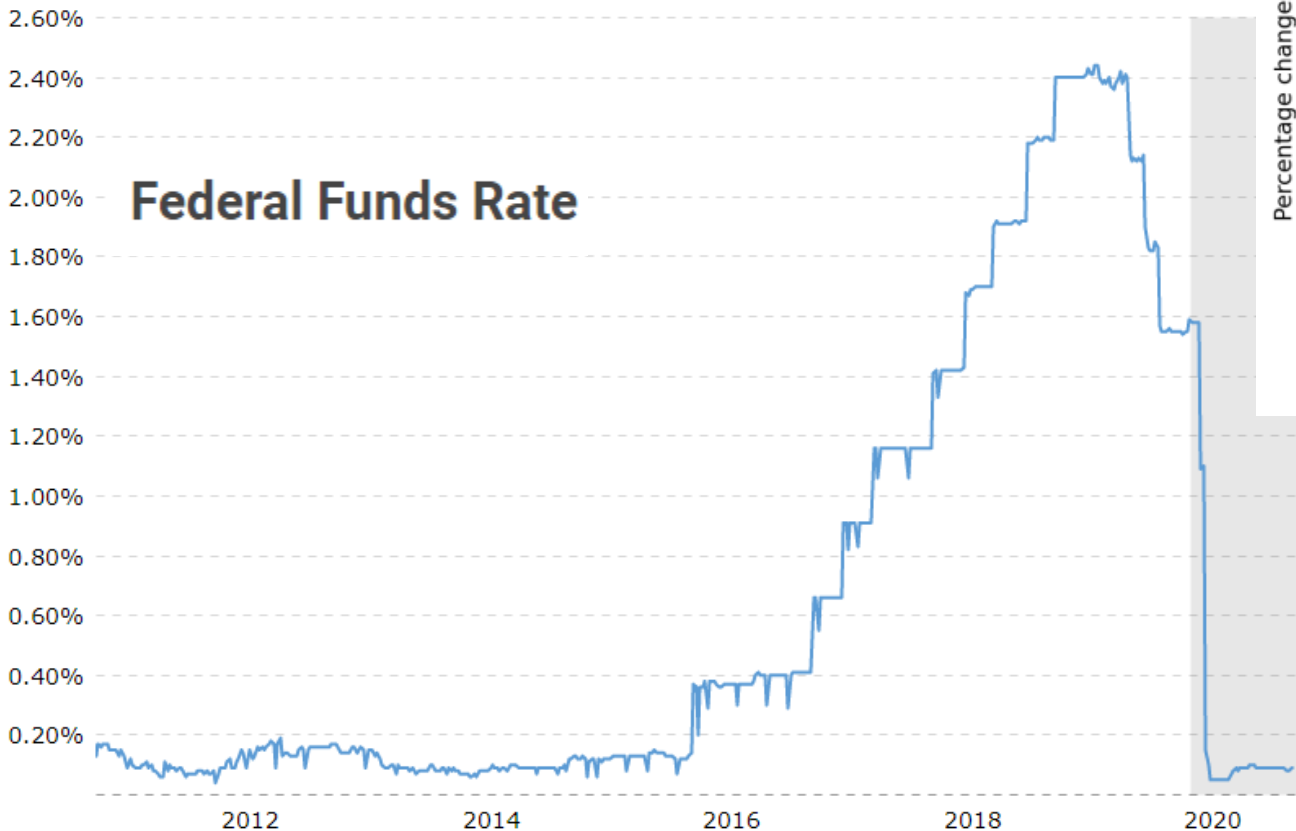
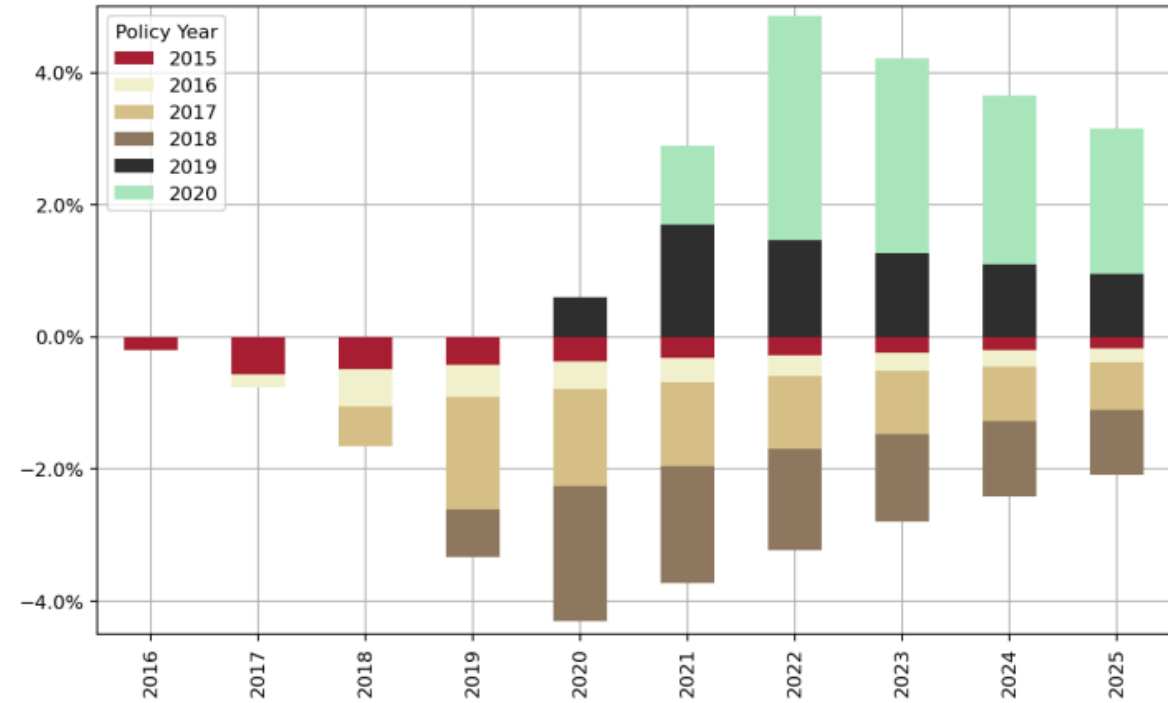


Fig. 3: The short- and long-term impacts of recent Federal Reserve interest rate moves on I-states' farmland values



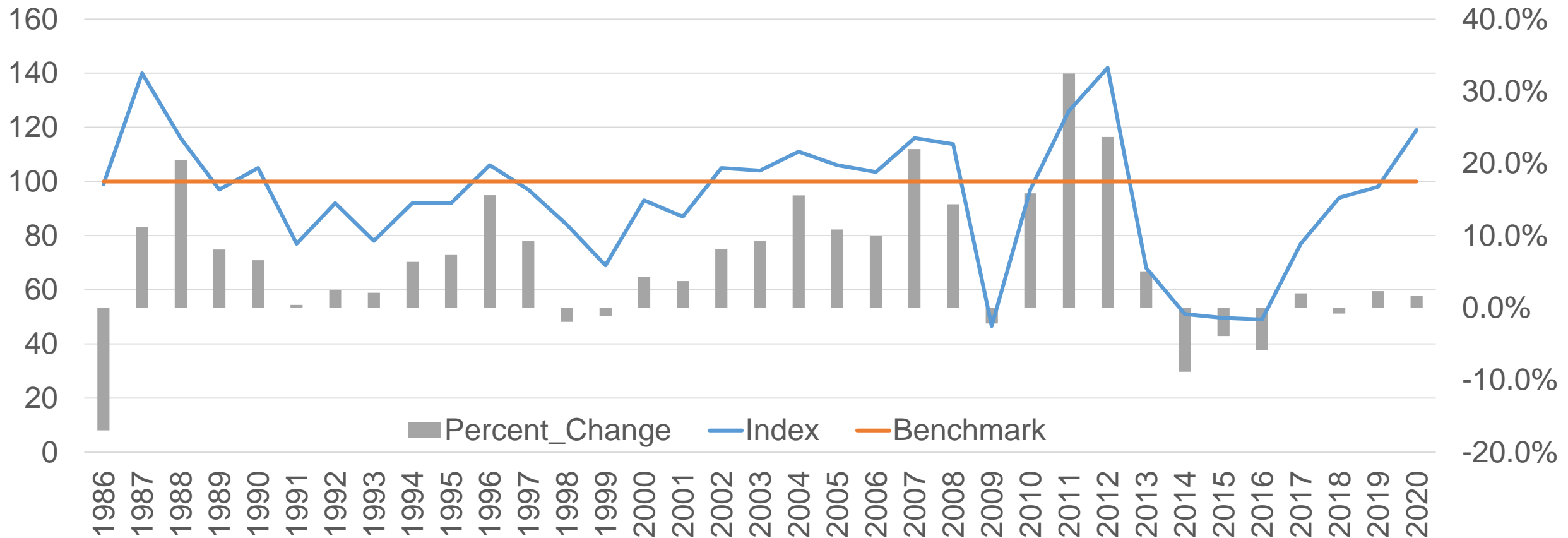
5. Basha, Albulena, Wendong Zhang, and Chad Hart, November 2020. [The Impacts of Interest Rate Changes on US Midwest Farmland Values](#) Revisions Requested at [Agricultural Finance Review](#).



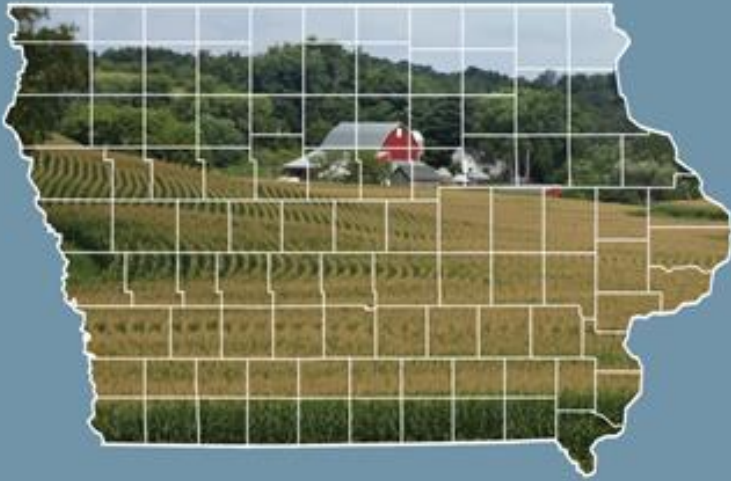
CARD

Center for Agricultural and Rural Development

Limited land supply still a key factor holding up land values



Iowa Farmland Ownership and
Tenure Survey, 1982-2017:
A Thirty-Five Year Perspective



FM 1883 August 2018

IOWA STATE UNIVERSITY
Extension and Outreach

- **82% of Iowa land is debt-free**
- 60% of land owned by owners 65+ years old, one-third of land owned by 75+ years old, 13% of land owned by women landowner 80+ years old
- Ownership continues to shift from sole ownership to trusts and corporations
- **53% of Iowa land rented out – mainly cash rent**
- 34% of Iowa land owned by landlords with no farming experience, 23% of land owned by retired farmers who do not currently farm
- **29% of Iowa land owned primarily for family/sentimental reasons**

(\$5 each print copy!)

<https://store.extension.iastate.edu/product/6492>

Unconventional rallies buoyed by surging exports to China

Daily Commodity Futures Price Chart: Jan. 2021

Soybeans (Globex) (CBOT)

TFC Commodity Charts

Ameritrade

ZSF21 - Soybeans (Globex) - Daily Chart

09/04/2020 O: 970 H: 975 L: 966.25 C: 973.5 Vol: 37231 OI: 116017

Session Change: -5.000



Daily Commodity Futures Price Chart: Dec. 2020

Corn (Globex) (CBOT)

TFC Commodity Charts

Ameritrade

ZCZ20 - Corn (Globex) - Daily Chart

12/04/2020 O: 422.25 H: 422.75 L: 415.75 C: 417 Vol: 1675 OI: 5746

Session Change: -5.250





A brief argument for healthy US-China agricultural trade relations despite deglobalization pressures

By Wendong Zhang, extension economist, 515-294-2536, wdzhang@iastate.edu

<https://www.extension.iastate.edu/agdm/articles/zhang/ZhaNov20.html>

APPLIED ECONOMIC
PERSPECTIVES
AND POLICY

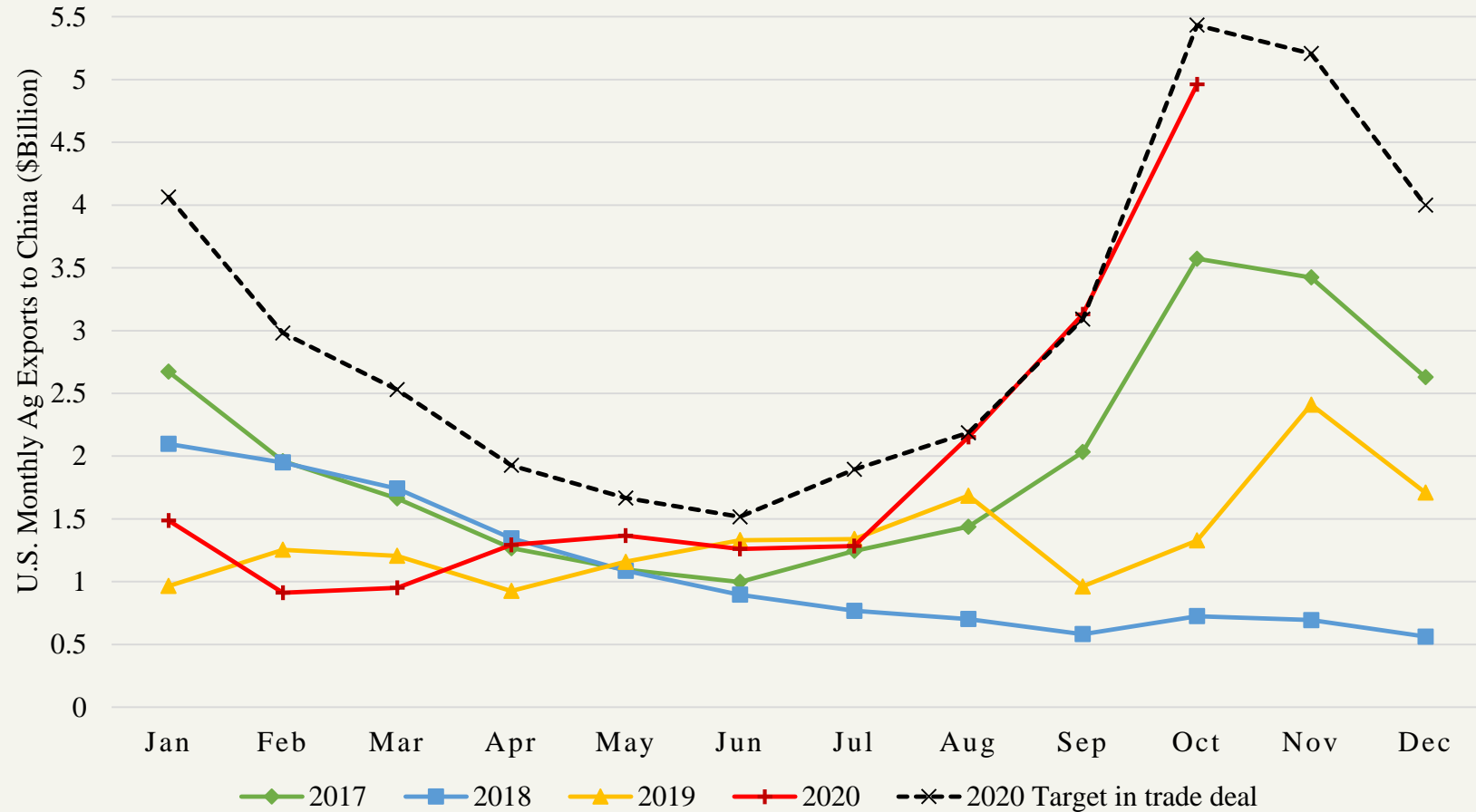


Featured Article

The Case for Healthy U.S.-China Agricultural Trade Relations Despite Deglobalization Pressures†

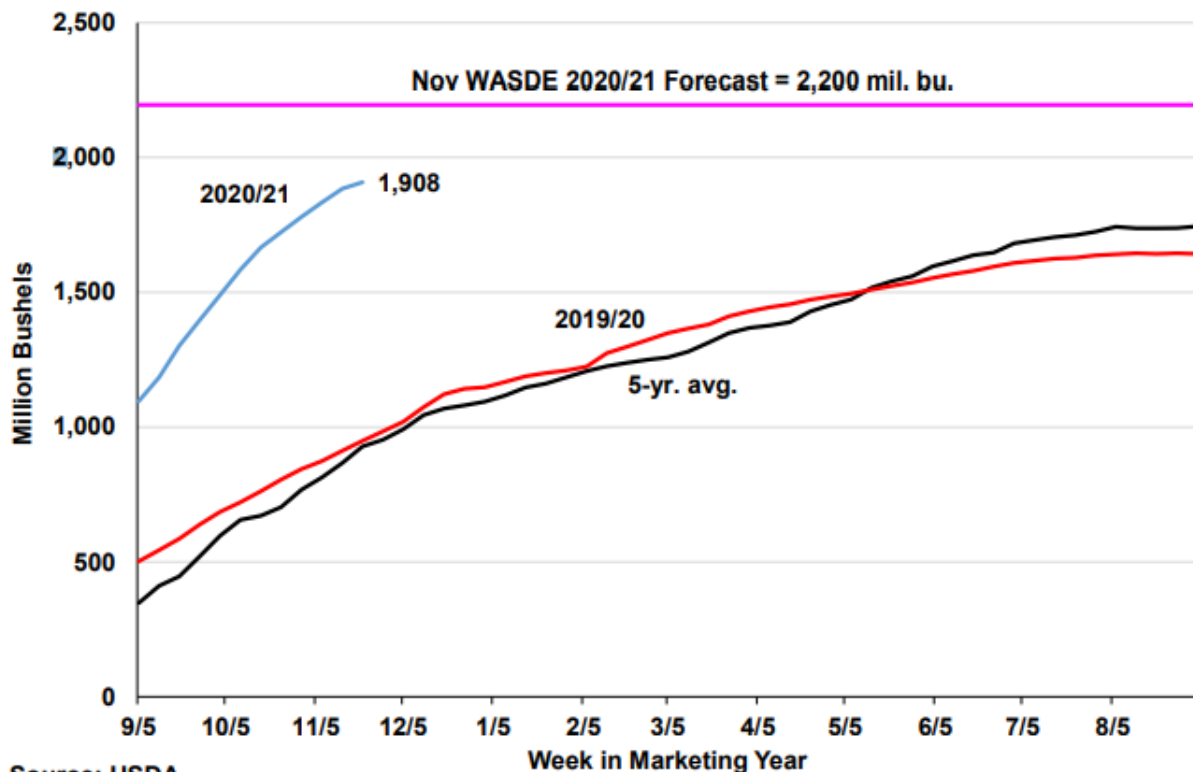
Wendong Zhang✉

First published: 13 October 2020 | <https://doi.org/10.1002/aepp.13115>

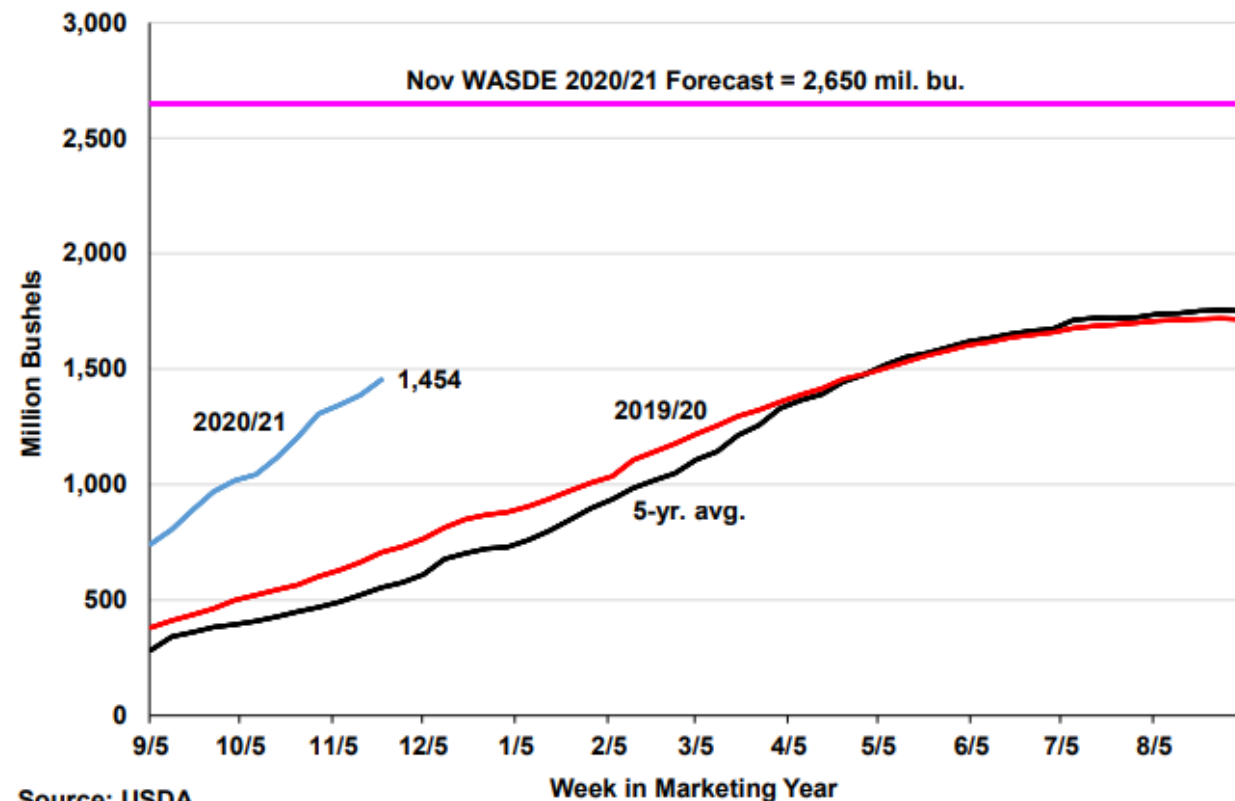


China remains an indispensable trading partner of US agriculture

Total Export Commitments for Soybeans (Exports + Outstanding Sales) by Week of the 2020/21 Marketing Year



Total Export Commitments for Corn (Exports + Outstanding Sales) by Week of the 2020/21 Marketing Year



CARD Policy Briefs

IOWA STATE UNIVERSITY

November 2020 20-PB 29

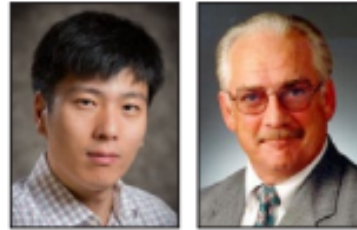
China's Agricultural Imports under the Phase One Deal: Is Success Possible?

Xi He
Dermot Hayes
Wendong Zhang

Table 3. China's Predicted Agricultural Imports of Key Commodities from February 15, 2020, to February 14, 2021

Commodity	Imports from US 2020 (Feb 15, 2020-Feb 14, 2021) Value (\$Million)	Imports from US 2017 Value (\$Million)	Imports from All Countries 2020 Value (\$Million)
Corn	1,486	142	2,506
Soybeans	11,030	12,224	39,040
Cotton	1,757	978	4,624
Sorghum	1,187	838	1,283
Pork	2,686	662	12,013
Beef	1,135	31	85,370
Ethanol	15	83	82
Poultry	465	36	3,855
Dairy	532	576	12,620
Fruits	153	360	11,074
Vegetables	71	118	1,121
Total ag	31,150	23,997	180,446

Note: Author's estimation based on 2017 seasonal patterns and China's most recent agricultural purchases from the United States, which includes advanced corn and soybeans sales until October 29, 2020. We assume the advanced corn and soybean sales until November 5 would be delivered in the first year of the trade deal.



Comparing the stock market and Iowa land values: A question of timing

By Wendong Zhang, extension economist, 515-294-2536, wdzhang@iastate.edu
and Mike Duffy, retired extension economist

Market Summary > VIX
INDEXCBOE: VIX

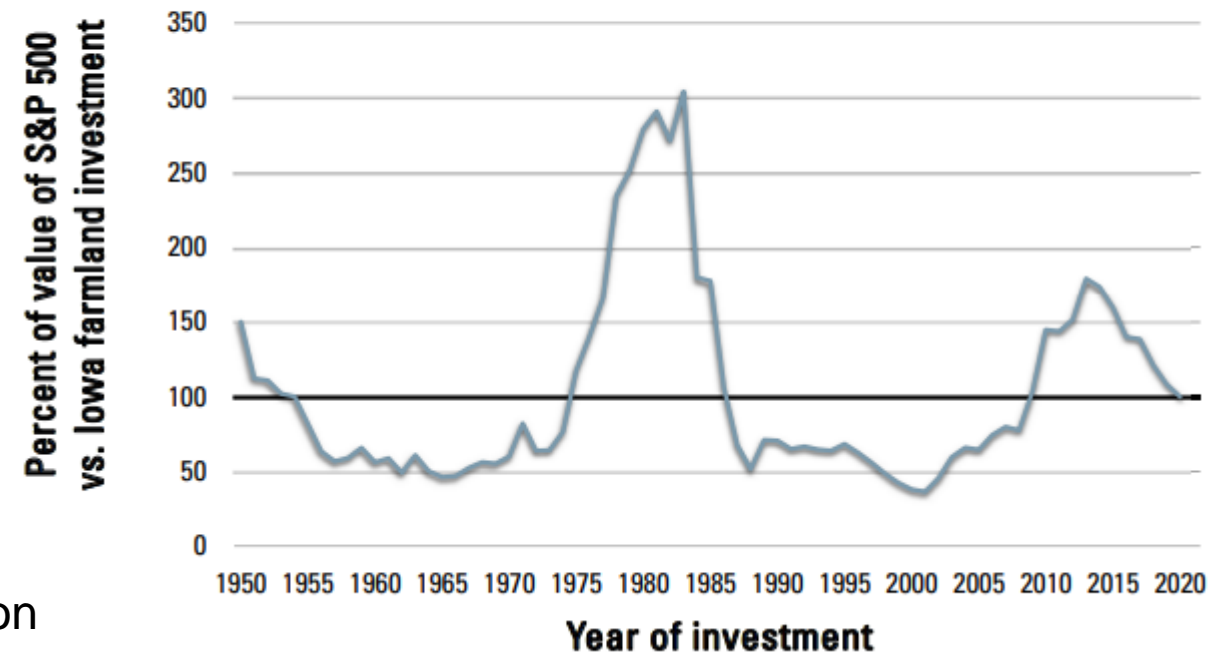
23.31 +0.79 (3.51%) ↑

Dec 11, 3:14 PM CST · Disclaimer

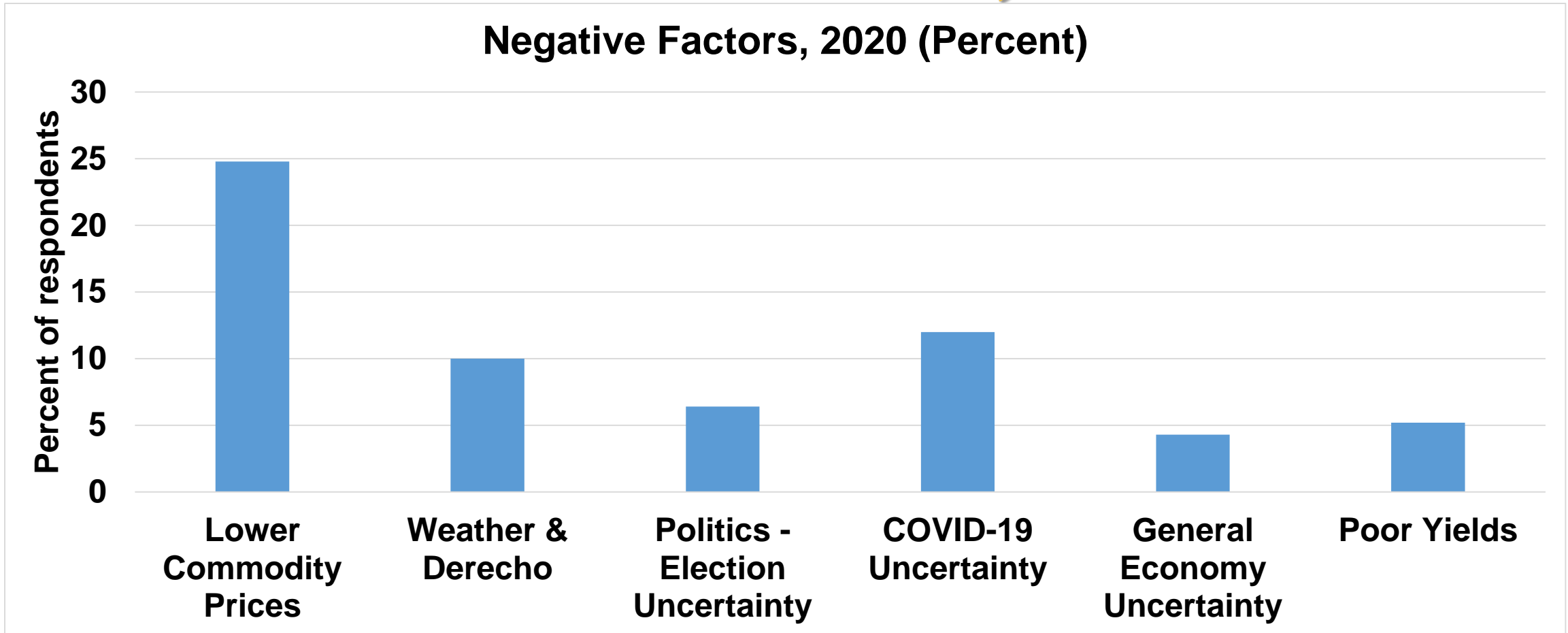


High Stock Market Volatility due to COVID-19 and Election

Figure 4. Return to an investment in the S&P 500 relative to an investment made in Iowa farmland by year of investment



Major Negative Factors Affecting Iowa Farmland Market, 2020



Land Values by District and Quality, Nov 2020

District	Average Value	% Change	High Quality	% Change	Medium Quality	% Change	Low Quality	% Change
Northwest	\$9,536	2.0%	\$10,780	0.2%	\$8,993	4.2%	\$6,486	6.4%
North Central	\$7,927	0.2%	\$8,889	0.3%	\$7,350	1.4%	\$5,297	-0.5%
Northeast	\$7,525	2.7%	\$9,182	1.5%	\$6,980	2.2%	\$5,213	8.5%
West Central	\$7,859	3.9%	\$9,159	1.6%	\$7,433	5.0%	\$5,492	11.0%
Central	\$8,485	1.8%	\$9,800	0.5%	\$7,883	3.1%	\$5,793	6.0%
East Central	\$8,524	0.6%	\$10,199	-2.1%	\$7,959	1.7%	\$5,599	6.1%
Southwest	\$6,112	-0.9%	\$7,484	-3.7%	\$5,843	0.0%	\$4,055	5.5%
South Central	\$4,658	3.8%	\$6,408	-0.1%	\$4,563	4.4%	\$3,262	10.4%
Southeast	\$6,935	1.0%	\$9,299	-0.4%	\$6,639	0.3%	\$4,134	9.1%
Iowa Avg.	\$7,559	1.7%	\$9,068	-0.1%	\$7,119	2.6%	\$5,078	6.7%

Local Land Supply and Demand Explain Variations in Land Market

**Land Value = localized net
income / universal interest rate**



[membership](#) [ALC Designation](#) [LANDU Education](#) [Find a Land Consultant](#) [Find A P](#)

Are Buyers Moving To Recreational Land In The Age Of COVID-19?

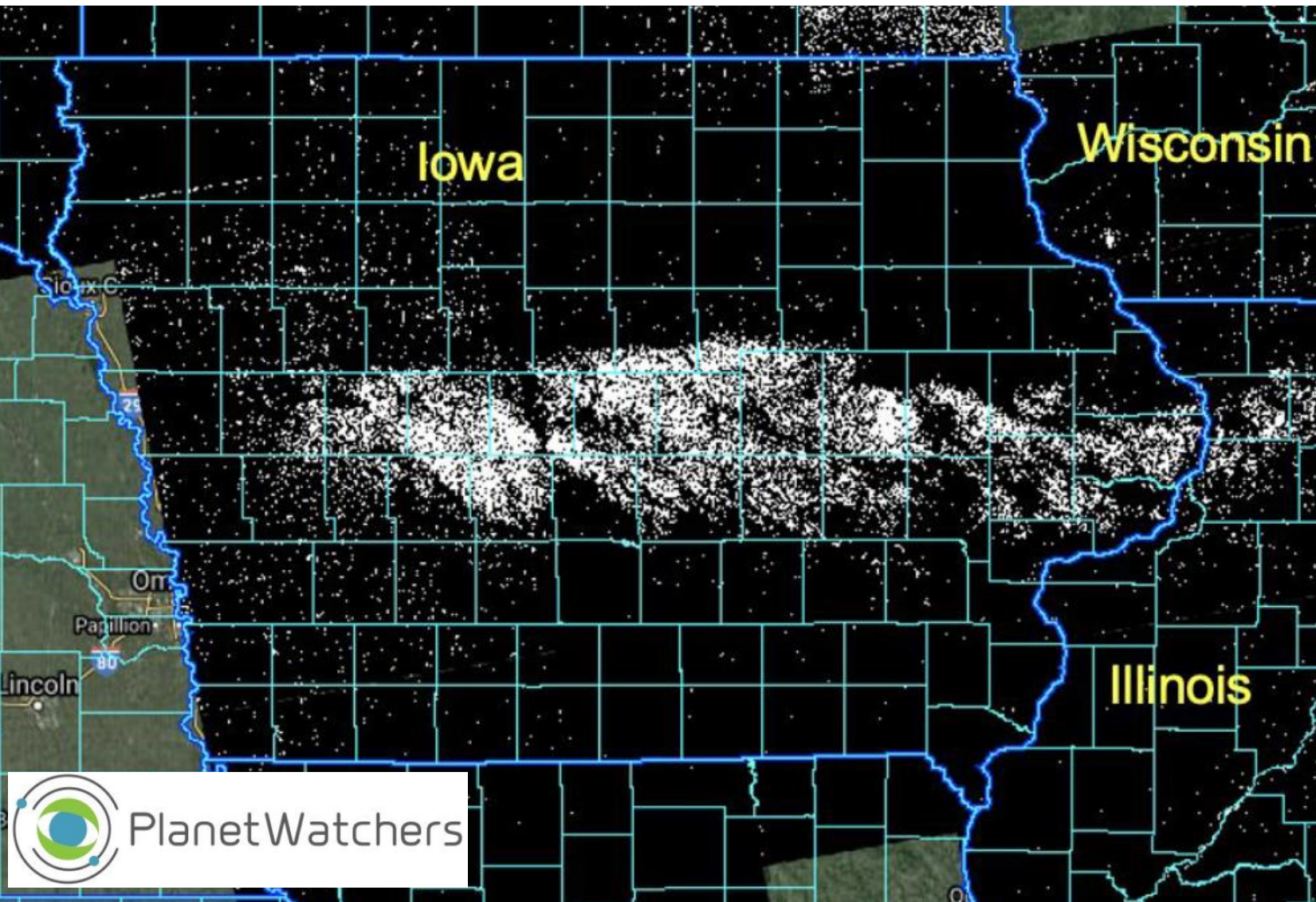
Opportunities

April 23, 2020 / 8 Comments / in [Your] Land Blog

Livestock and Crop Inventory by Crop Reporting District

District	Livestock Inventory - 2017			Acres 2017		Harvested Acres 2018	
	Hogs	Milk Cows	Cattle	Pasture	Timber	Corn	Soybean
Northwest	27%	36%	26%	6%	2%	14%	16%
North Central	13%	3%	5%	3%	4%	14%	13%
Northeast	11%	51%	17%	11%	23%	12%	8%
West Central	12%	0%	12%	10%	7%	15%	15%
Central	13%	0%	7%	8%	7%	15%	14%
East Central	6%	6%	11%	12%	14%	11%	10%
Southwest	1%	0%	7%	11%	5%	8%	10%
South Central	3%	0%	9%	27%	20%	4%	6%
Southeast	12%	2%	5%	12%	18%	7%	8%
Iowa Total	22.5 million	0.17 million	3.9 million	2.4 million	1.2 million	12.8 million	9.9 million

Satellite and aerial images show how a derecho destroyed 10 million acres of Iowa's corn crops



INSIDER



Jim Smith, Ph.D.
@JimSmith87

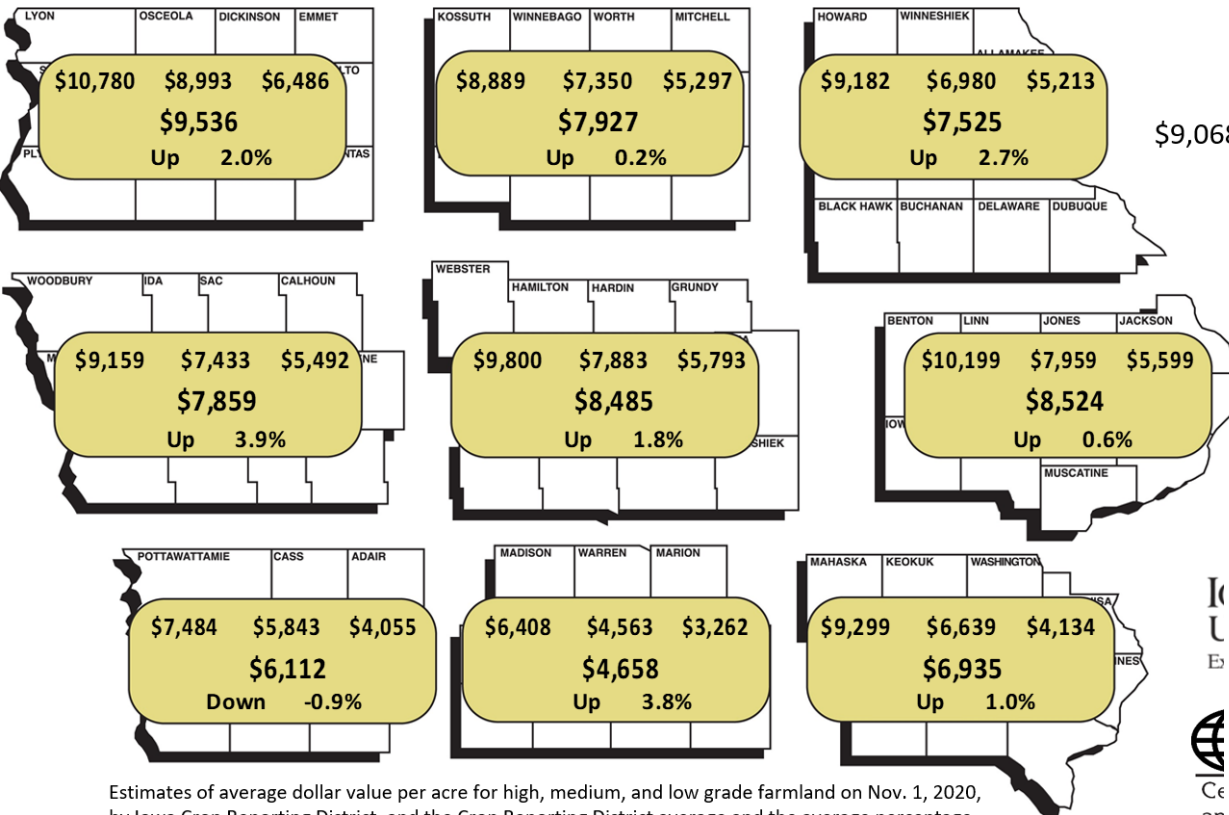


This is from around in Greene County, Iowa just NW of Perry

Jim Smith the corn was suffering from the drought. Then we got a little rain last week. And now this. All eight of my corn fields look this flat and quite a bit of it snapped not just leaning. 1/2



2020 Iowa Land Values by Crop Reporting District



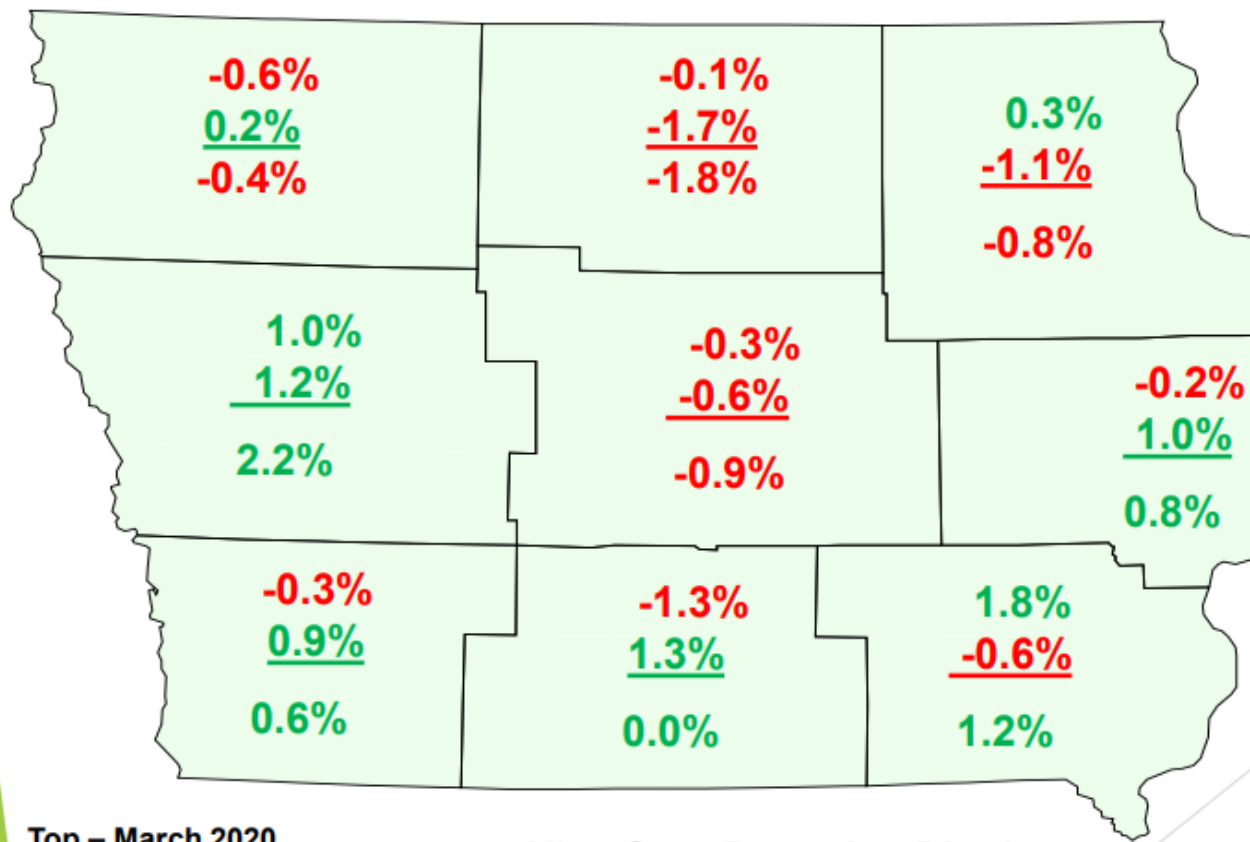
Estimates of average dollar value per acre for high, medium, and low grade farmland on Nov. 1, 2020, by Iowa Crop Reporting District, and the Crop Reporting District average and the average percentage change from Nov. 1, 2019. The estimates are based on a survey conducted by Iowa State University, Center for Agricultural and Rural Development and Iowa State University Extension and Outreach.

ISU 2020 Survey Results More Positive due to Recent Commodity Price Rallies & Export Surges

September 2019 – March 2020 **0.1%**
March 2020 – September 2020 **0.0%**
0.1%

REALTORS® Land Institute- Iowa Chapter
September 1, 2020

September 2019– September 2020



Top – March 2020
Bottom – September 2020

Nine Crop Reporting Districts

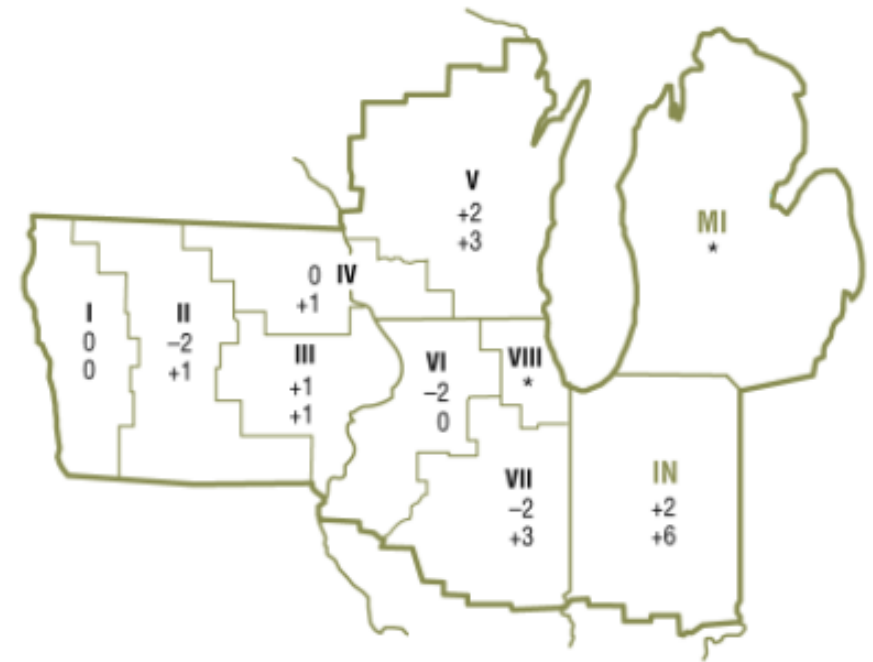
AgLetter: November 2020

By David Oppedahl

FEDERAL RESERVE BANK of CHICAGO

Percent change in dollar value of "good" farmland

	July 1, 2020 to October 1, 2020	October 1, 2019 to October 1, 2020
Illinois	-2	+2
Indiana	+2	+6
Iowa	0	+1
Michigan	*	*
Wisconsin	+1	+3
Seventh District	0	+2



Top: July 1, 2020 to October 1, 2020

Bottom: October 1, 2019 to October 1, 2020

*Insufficient response.

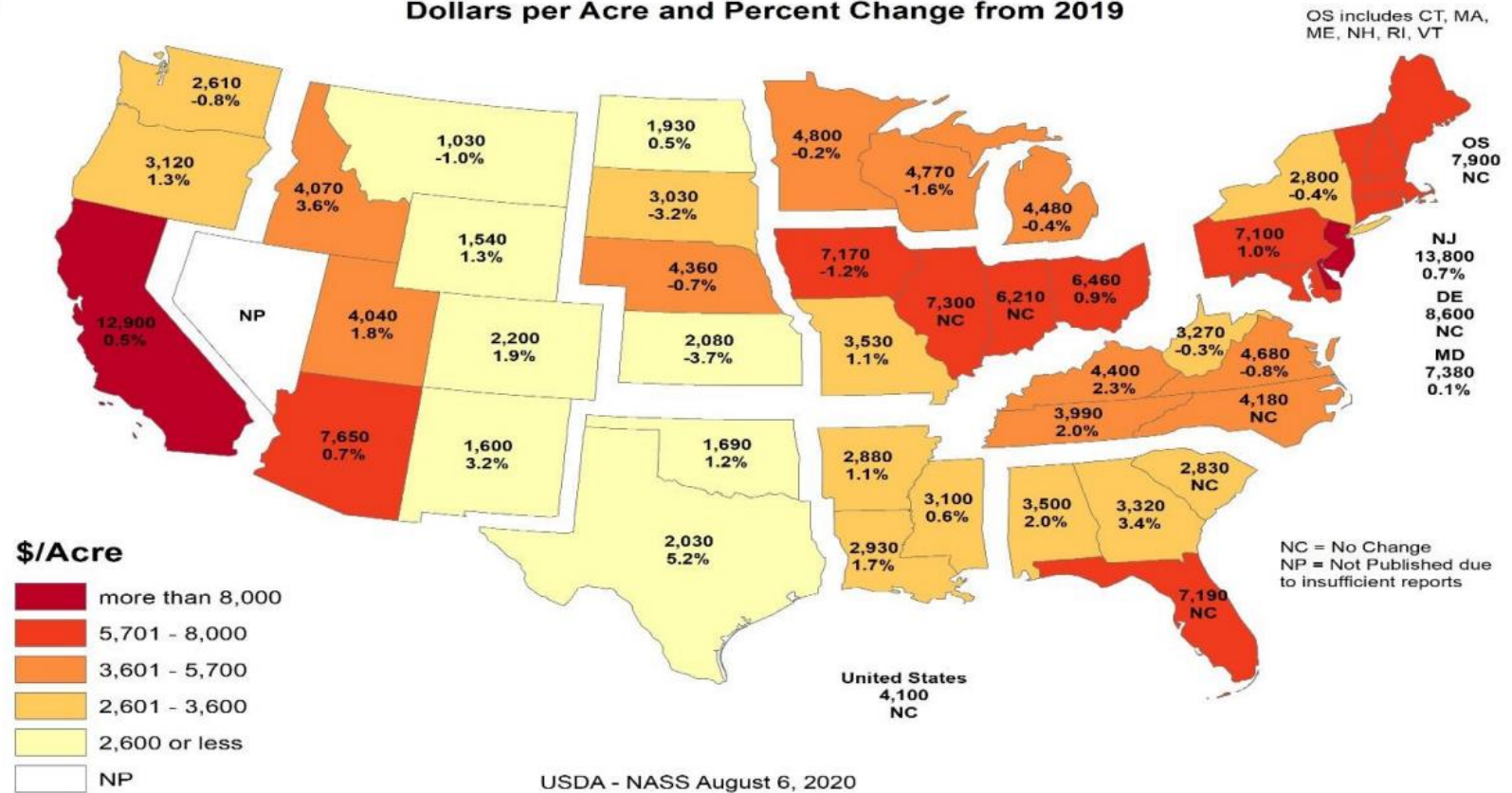
Dollars per Acre and Percent Change from 2019



USDA - NASS August 6, 2020

IA Ag Real Estate Values: -1.7%
IA Cropland Values: -1.2%
IA Pasture Values: -1.1%

Dollars per Acre and Percent Change from 2019



Midwest Farmland Value Trends

State	USDA Farm Real Estate Values, June 2019–June 2020	Land Grant University Surveys or Sales Price Analysis	Chicago/Kansas City Fed, October 2019–October 2020	Farm Credit Services of America, January–June 2020 benchmark land prices
Iowa	-1.7%	0.1% (RLI – September 2019 to 2020)	+1%	+0.3%
Illinois	+1.6%	-1% (Good quality)	+2%	
Indiana	+3%	+3.2% (Avg quality, June 2019 to June 2020)	+6%	
Wisconsin	-2%	-3.1% (2018 to 2019, avg sales prices)	+3%	
Minnesota	0	-2.5% (2018 to 2019, avg sales prices)	+3%	-0.4%
Nebraska	-2.1%	+3% (reported in March)	0%	

Land Values by County, 2020

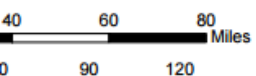
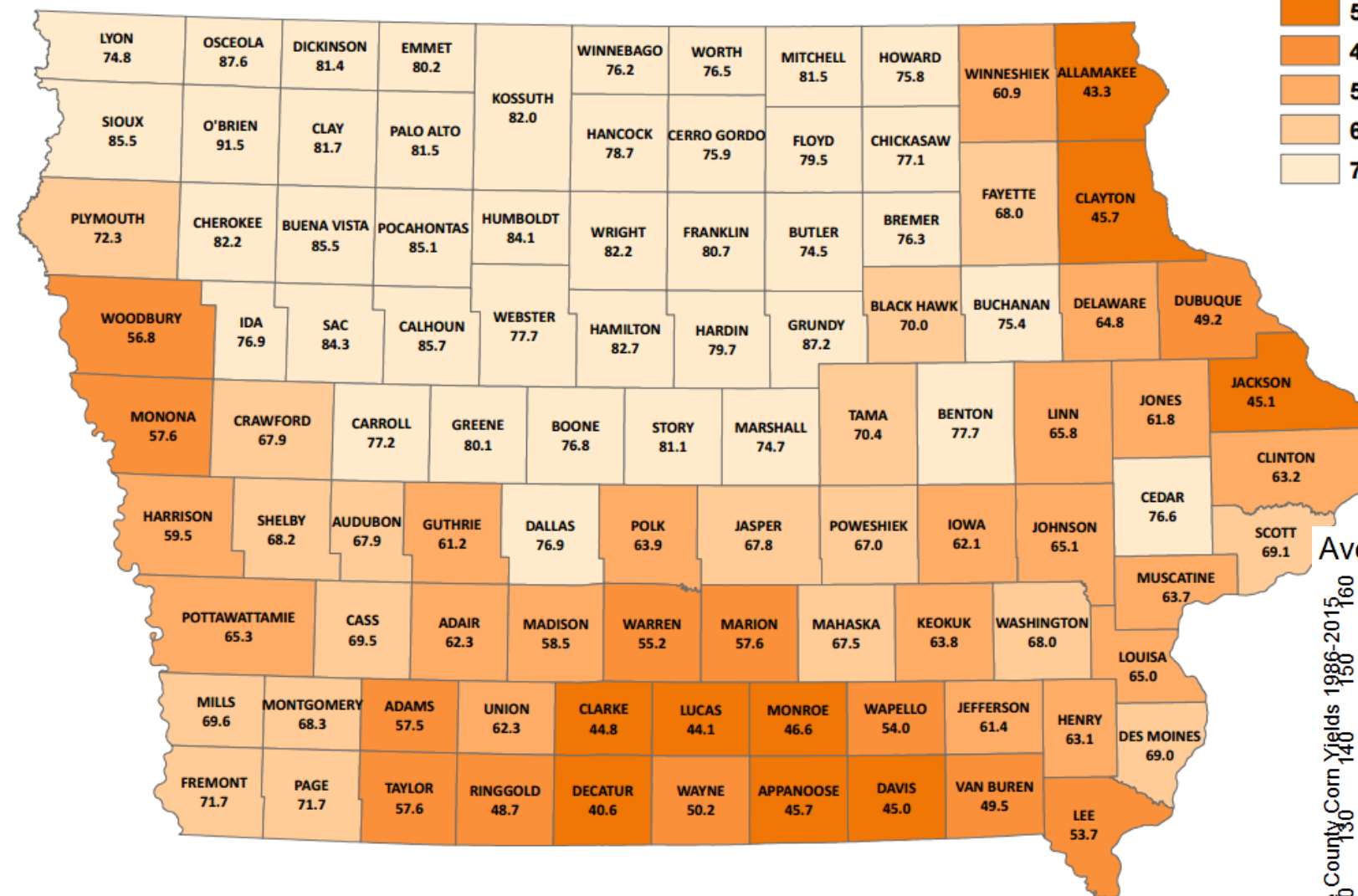
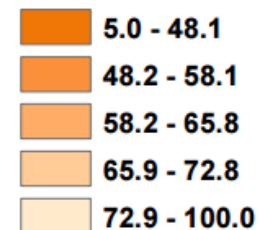


Dollar Values

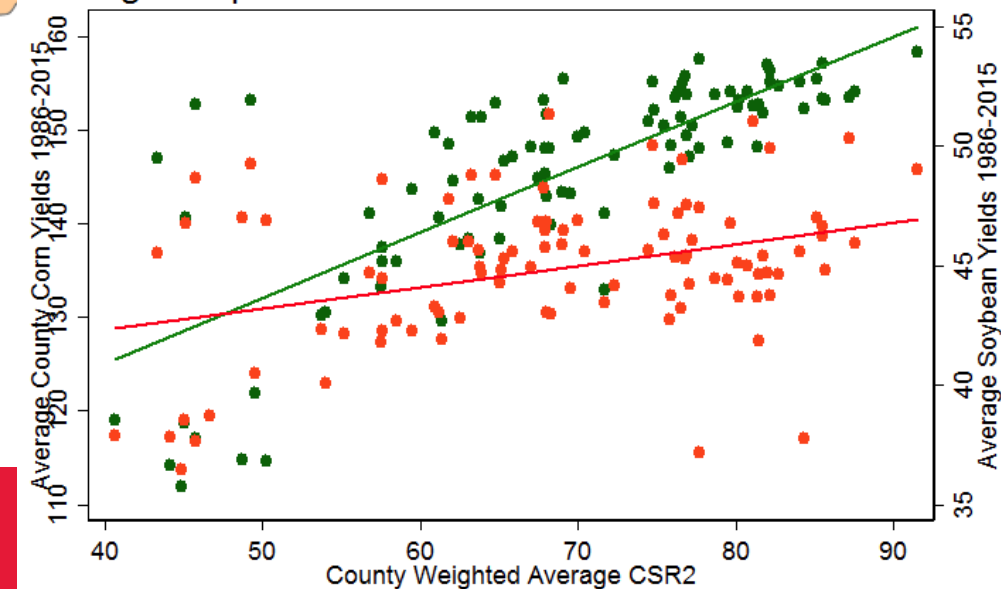
- | | |
|---|-----------------|
|  | \$5,000 or less |
|  | \$5,000–\$7,000 |
|  | \$7,000–\$8,000 |
|  | \$8,000–\$9,000 |
|  | \$9,000 or more |

CSR2 – Corn Suitability Rating

Weighted Mean CSR2



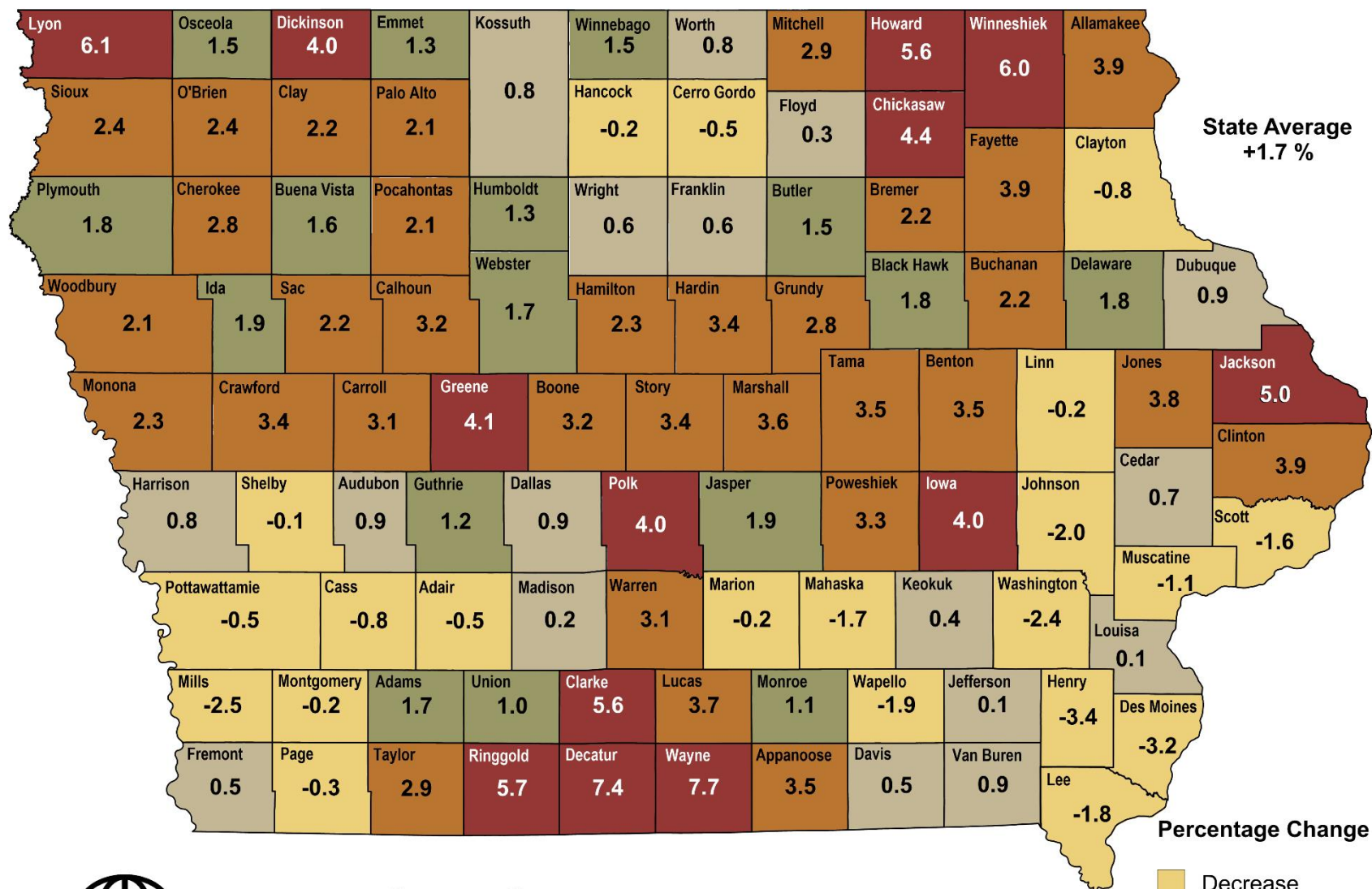
Average Crop Yields 1986-2015 vs. CSR2 for Iowa Counties



Corn: $\text{Avg_corn_yield} = 97.19 + 0.70 \text{ CSR2}$ ($R^2 = 59.6\%$)

Soybean: $\text{Avg_soy_yield} = 38.71 + 0.09 \text{ CSR2}$ ($R^2 = 12.9\%$)

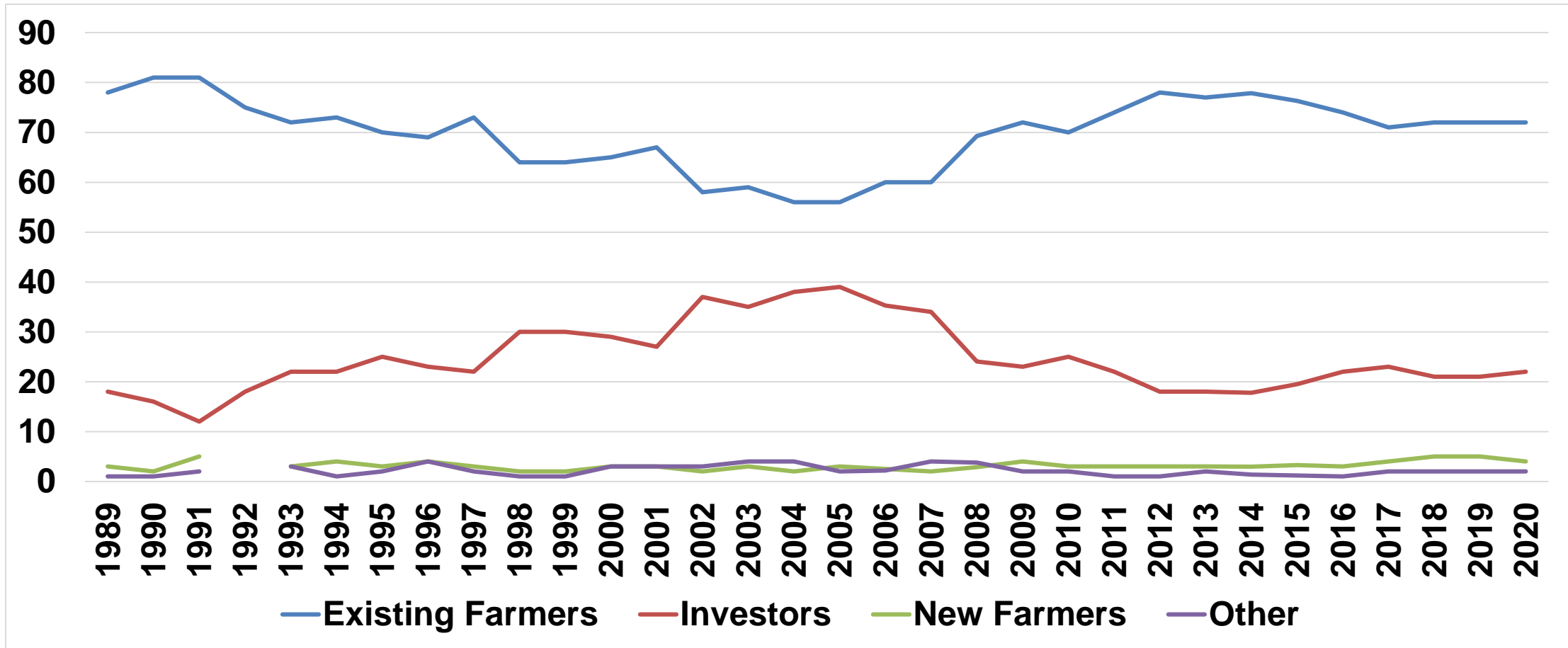
Percentage Change in Iowa Land Values 2019 to 2020



Percent
Changes in
Land
Values
from Nov
2019

- Percentage Change
- Decrease
 - Increase less than 1%
 - Increase 1%–1.9%
 - Increase 2%–3.9%
 - Increase 4% or more

Iowa Farmland Purchases by Buyer Types 1989–2020



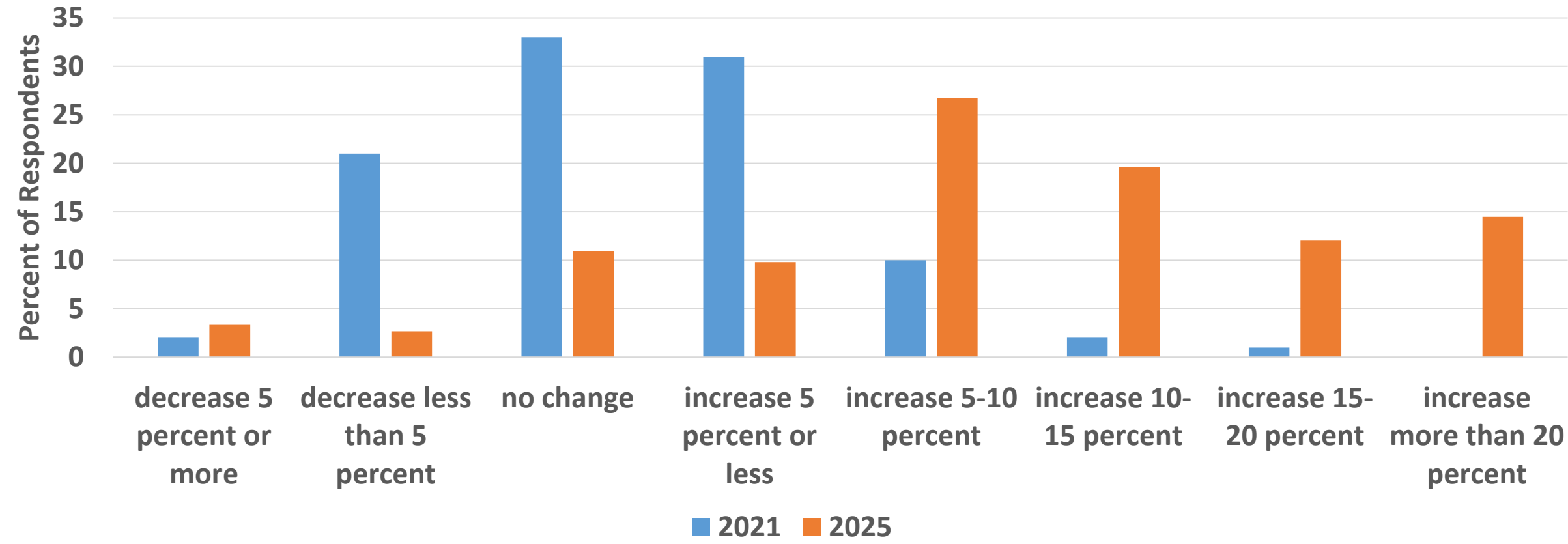
Iowa Farmland Purchases by Seller Types, 2020

	Active Farmers	Retired Farmers	Estate Sales	Investors	Other
	PERCENT				
Northwest	14	14	64	7	1
North Central	15	15	59	10	1
Northeast	14	28	50	6	2
West Central	14	20	59	6	1
Central	14	21	52	10	3
East Central	20	25	46	8	1
Southwest	15	28	44	11	2
South Central	18	27	33	20	2
Southeast	11	30	52	4	3
STATE	16	23	51	9	1

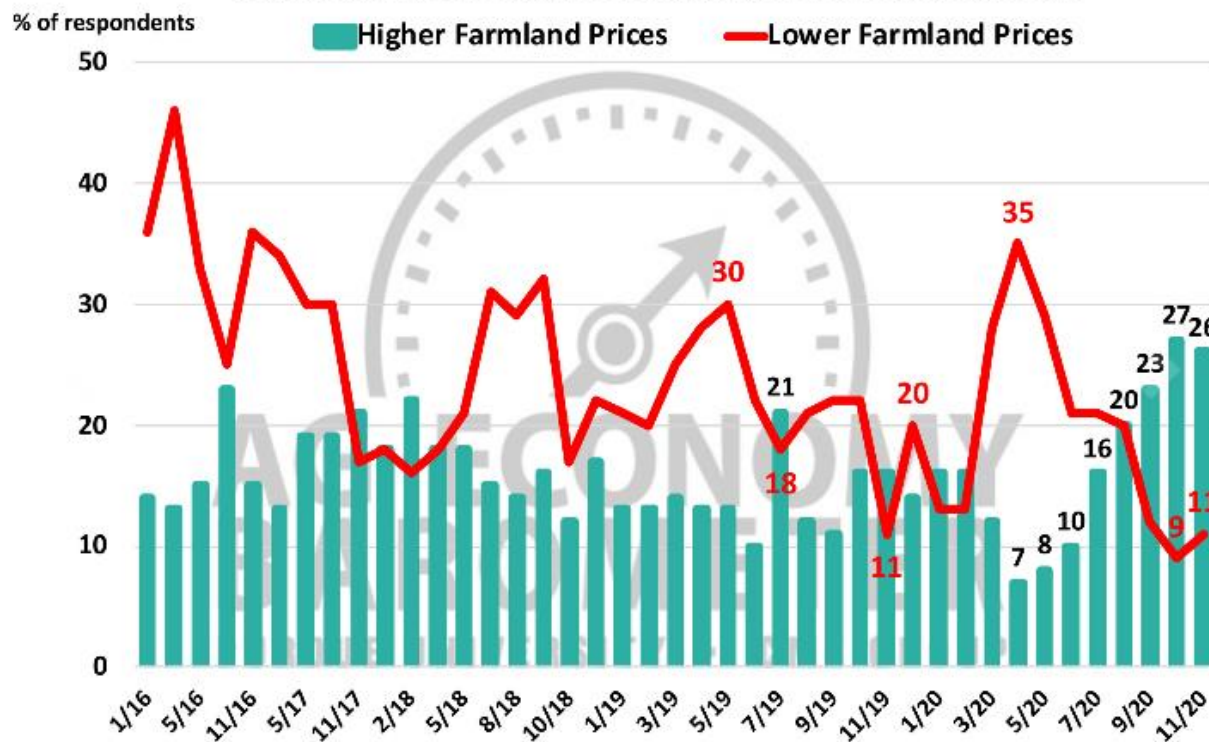
One and Five Year Cash Crop Price Predictions, 2020

	Predicted Cash Corn Prices		Predicted Cash Soybean Prices	
	One Year Later	Five Years Later	One Year Later	Five Years Later
Northwest	\$3.88	\$4.09	\$9.84	\$10.19
North Central	\$3.91	\$4.14	\$10.00	\$10.28
Northeast	\$3.94	\$4.21	\$9.96	\$10.69
West Central	\$3.93	\$4.18	\$9.91	\$10.28
Central	\$3.93	\$4.31	\$10.01	\$10.83
East Central	\$3.97	\$4.35	\$10.05	\$10.73
Southwest	\$3.90	\$4.30	\$9.90	\$10.70
South Central	\$3.86	\$4.31	\$10.00	\$11.03
Southeast	\$4.04	\$4.39	\$10.22	\$11.04
STATE (2020 Prediction)	\$3.92	\$4.24	\$9.97	\$10.59
2019 Prediction	\$3.51	\$4.10	\$8.50	\$9.79
2017 Prediction	\$3.32	\$3.98	\$9.21	\$10.25

Land value predictions one & five years from now, more optimism over time, 2020

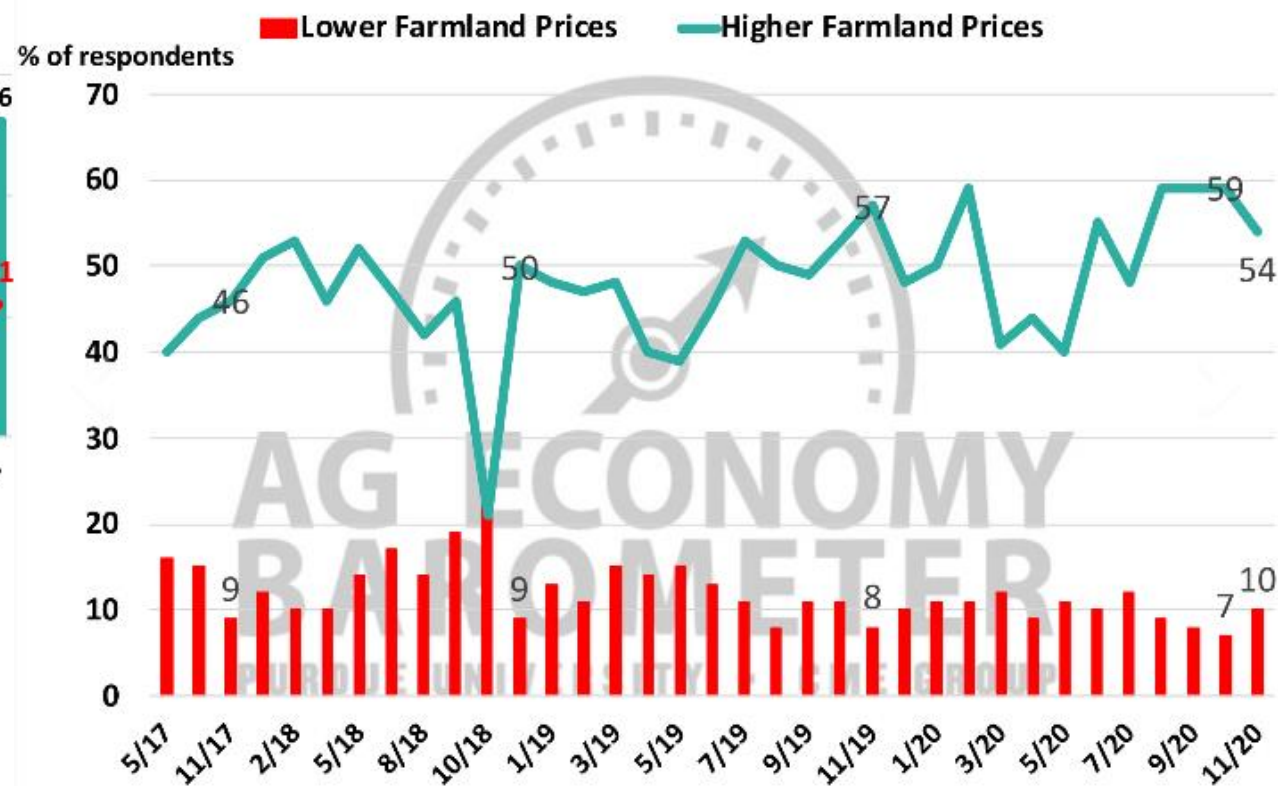


Farmland Price Expectations, 12 Months Ahead



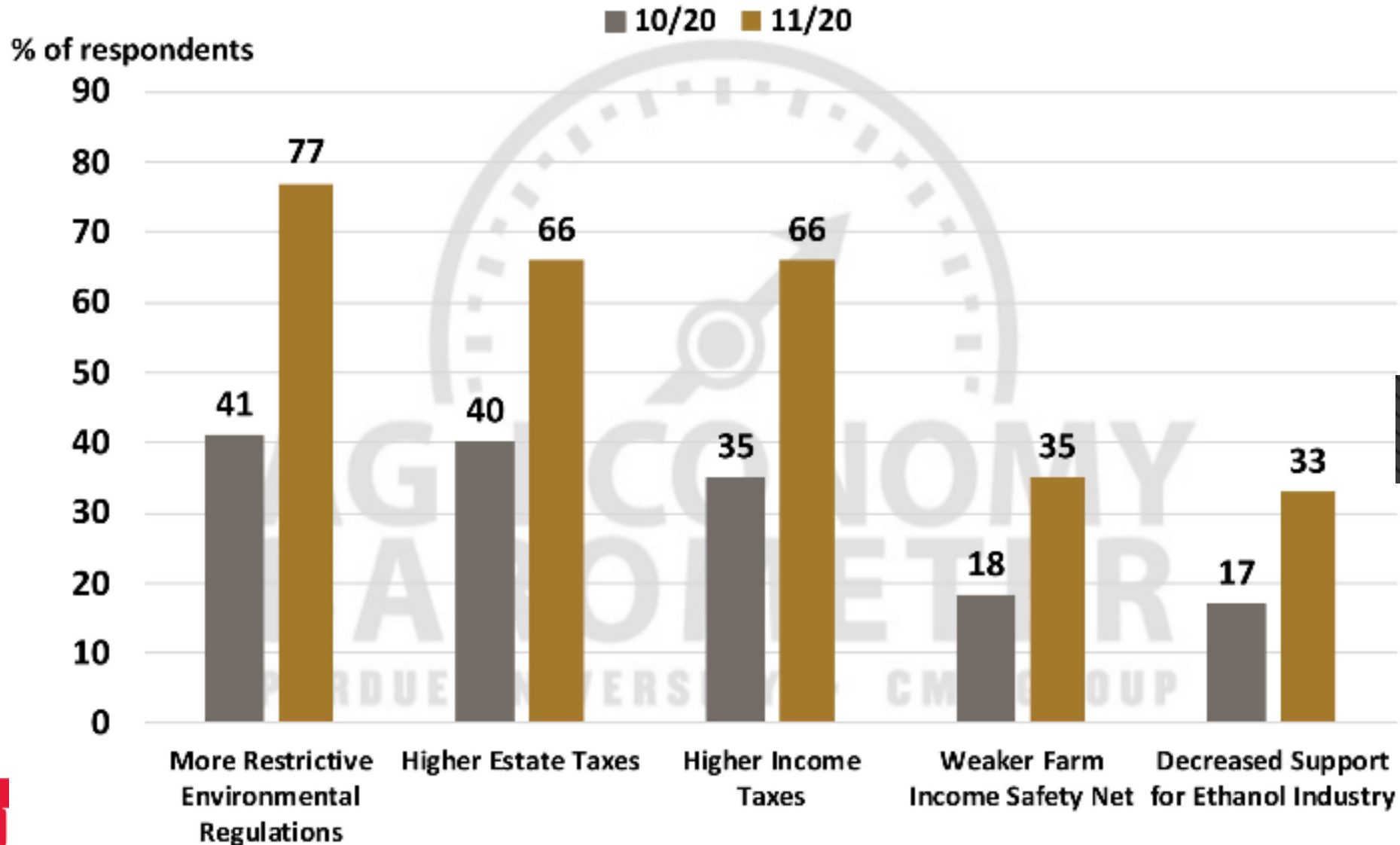
Source: Purdue Center for Commercial Agriculture, Producer Survey, November 2020

Farmland Price Expectations, 5 Years From Now



Source: Purdue Center for Commercial Agriculture, Producer Survey, November 2020

Farmer Expectations Regarding Changes in Policies Affecting U.S. Agriculture in Next 5 Years, October vs. November 2020

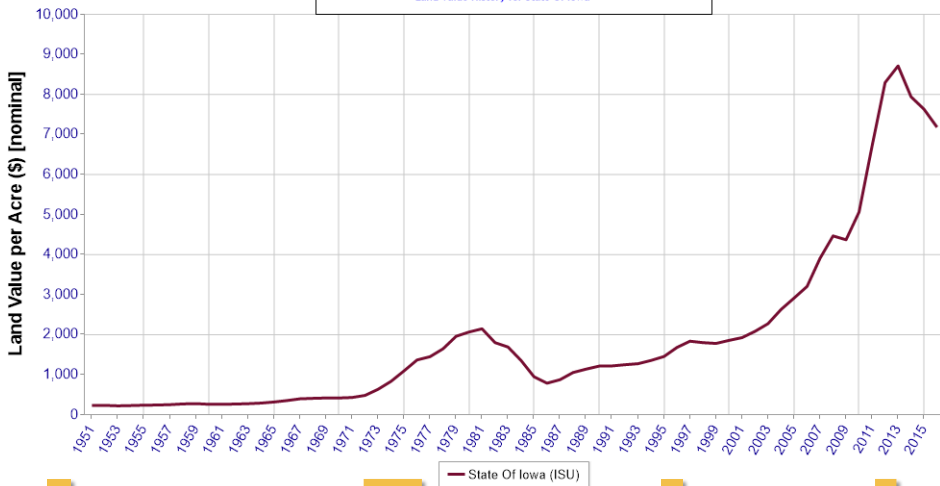


Source: Purdue Center for Commercial Agriculture, Producer Survey, October-November 2020

Conjecturing Trade Policy under Biden

- **Trade policy likely not an immediate priority** (compared to COVID-19 response & international coordination, Paris Accord, potentially Iran)
- **Lower your expectations on tariff rollbacks**, will remain tough on China
 - Biden in 2019: *“If we don't set the rules, we in fact are going to find ourselves with China setting the rules, and that's why we need to organize the world to stop China to stop the corrupt practices that are under way”*
- More likely to embrace allies & **multilateral** approaches & Intl. organizations
- The tone will be more **polite** & regular dialogue channels will resume
- RCEP (SE Asia, China, Japan, Korea, Australia, New Zealand) will put pressure on Biden to consider rejoining TPP (now called CPTPP) – CPTPP has higher standards on tariff removals, labor and environmental standards
- New sources of tensions with China on human rights, Hong Kong, S China Sea
- Biden voted for NAFTA & China joining WTO & met 4th generations of Chinese leaders

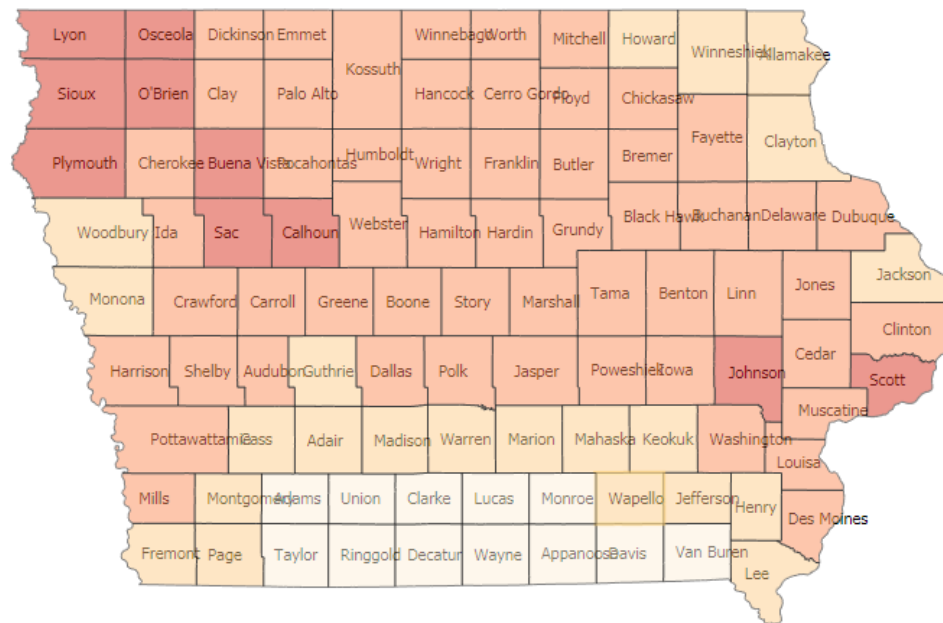
<https://www.card.iastate.edu/farmland>



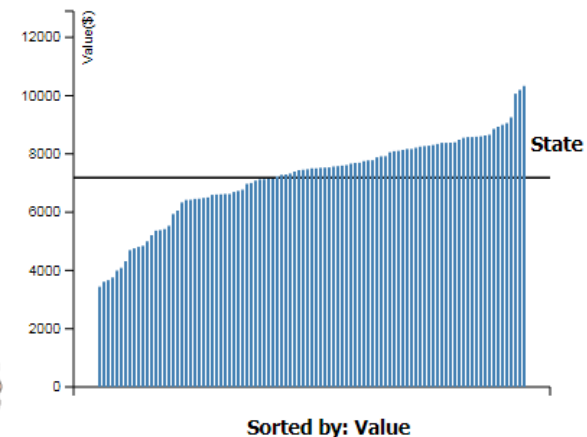
Iowa Farmland Portal



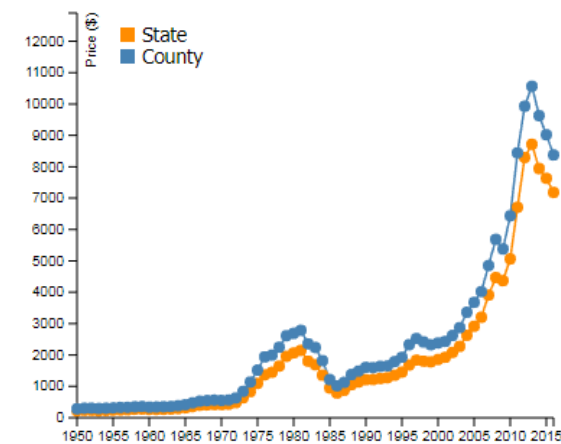
#ISUlandvalue



Iowa County Land Value in 2016



Land Value Trend in County: Story



Thank You!



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2019 ISU Land Value Survey

2019 ISU Land Value Survey
The 2019 ISU Land Value Survey shows a 2.3 percent increase in average Iowa farmland values from November 2018 to November 2019. The average statewide value of an acre of farmland is now estimated at \$7,432. This modest increase, which barely exceeds the pace of inflation, is the second rise over the past six years, but still represents a 15 percent decrease from the 2013 peak in nominal land values, or a 23 percent drop in inflation-adjusted values.

2017 Iowa Farmland Ownership & Tenure Survey Paper Copy Available for Order (\$5 Only)

The new, 60-page [2017 Iowa Farmland Ownership and Tenure Survey report](#) is available for order at the [Extension Store](#) for only \$5 each paper copy. This is a unique survey across the nation which provides statistically representative information on many aspects of land ownership, tenure and transitions in Iowa. For example, the survey finds that 60% of Iowa land is owned by people 65 years or older, 82% of Iowa land is owned free of debt, and 29% of all acres is primarily owned for family or sentimental reasons.

1. What are you interested in?

- [2019 ISU survey results](#)
- [find more land value data](#)
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China Ag Center · Publications

Xi He and Wendong Zhang, 2020. "Implications of Hong Kong's Special Status Revocation for Agricultural Trade between the United States, Hong Kong, and Mainland China." *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

In 1992, the United States granted Hong Kong status as a customs territory separate from mainland China. On June 29, 2020, however, the US Department of Commerce withdrew that status due to recent tensions between China and the United States. Hong Kong, as the world's largest re-exporting port, plays a large intermediary role in US-China trade, and the revocation of its special status may provoke China into taking retaliatory economic and/or political actions. He and Zhang examine trends in Hong Kong's import/export of US agricultural products and how that trade may be affected. They find that the revocation itself is not likely to directly affect US-China agricultural trade prospects much if neither China nor the United States responds with further actions.

Chen-Ti Chen, Tao Xiong, and Wendong Zhang, 2020. "Large Hog Companies Gain from China's Ongoing African Swine Fever." *Agricultural Policy Review*. Center for Agricultural and Rural Development, Iowa State University.

Since November 2018, China has reduced its hog and sow inventory by almost 32% due to ongoing outbreaks of African Swine Fever (ASF).

www.card.iastate.edu/china

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Extension and Outreach

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