

# Iowa Farmland Market Update: What's Ahead?

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Ag Credit School, June 14<sup>th</sup>, 2017



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## The new Mike Duffy since Aug 2015

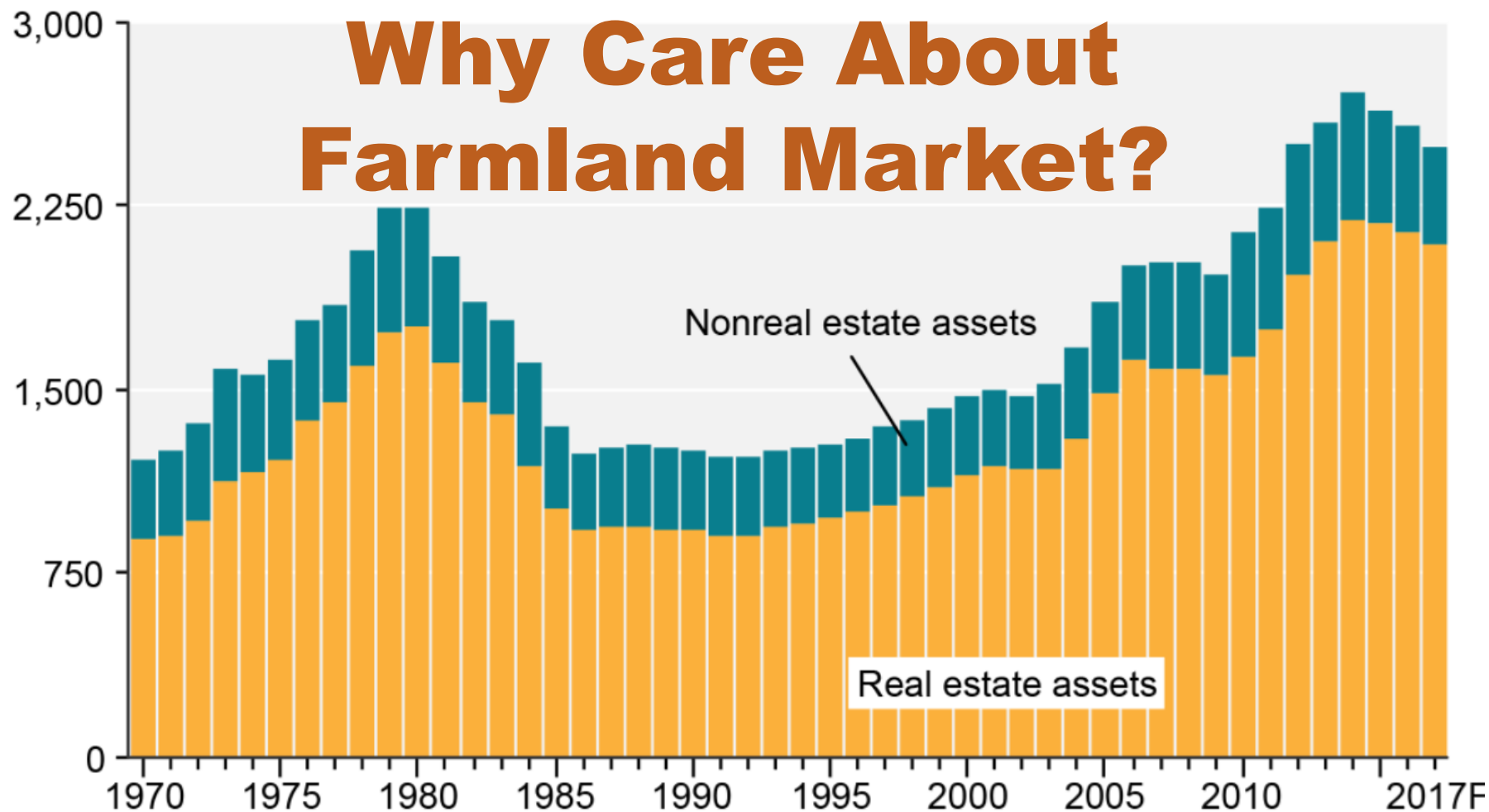


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# Farm sector assets, inflation adjusted, 1970-2017F

\$ billion (2009)

## Why Care About Farmland Market?



Note: F = forecast; data for 2016 and 2017 are forecasts. The GDP chain-type price index is used to convert the nominal (current-dollar) statistics to real (inflation adjusted) amounts (2009=100).

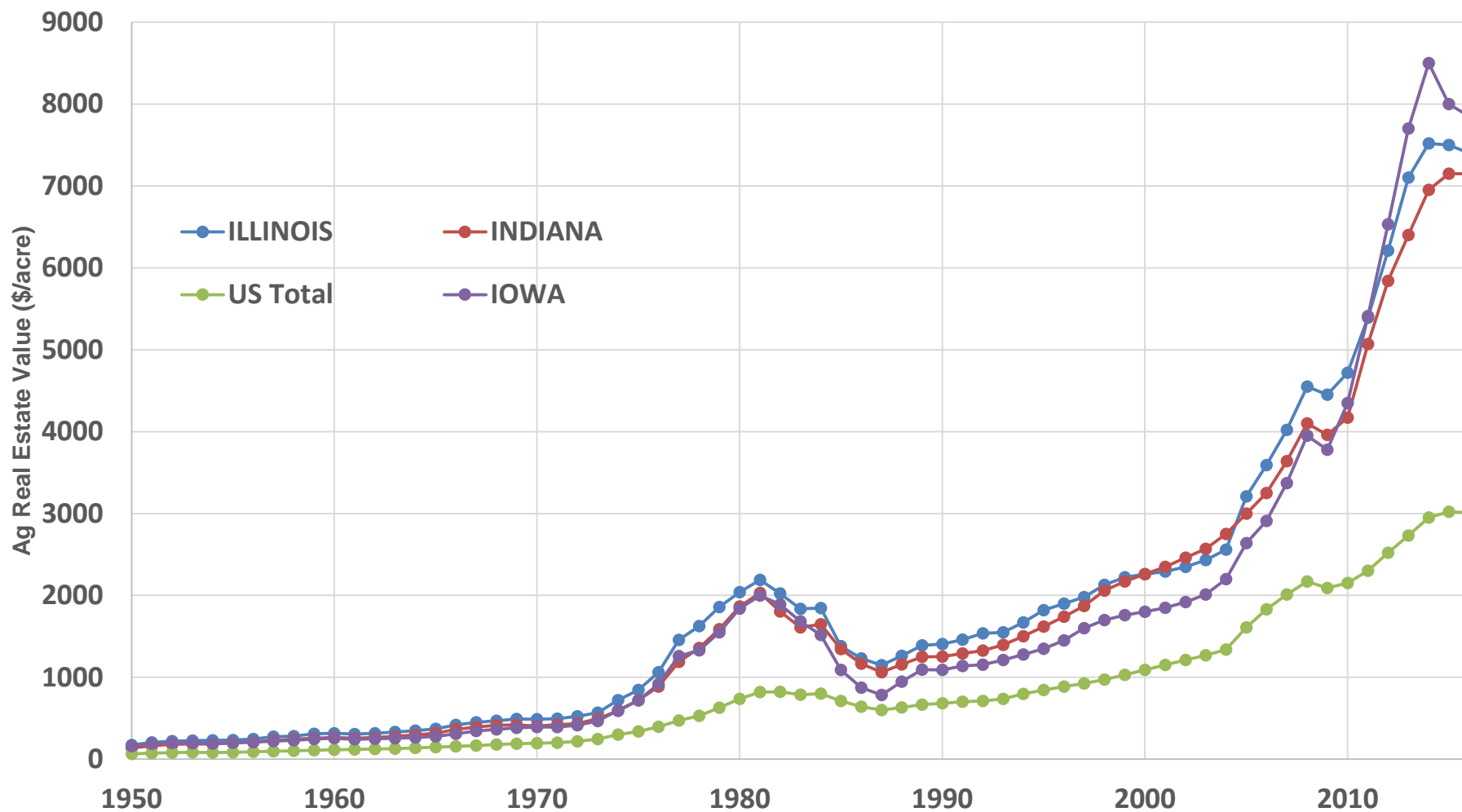
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.

Data as of February 7, 2017.

# Guiding Framework - Ricardian

$$\text{Land Value} = \frac{\text{localized net income}}{\text{universal interest rate}}$$

# Nominal Corn Belt vs. U.S. Farmland Values

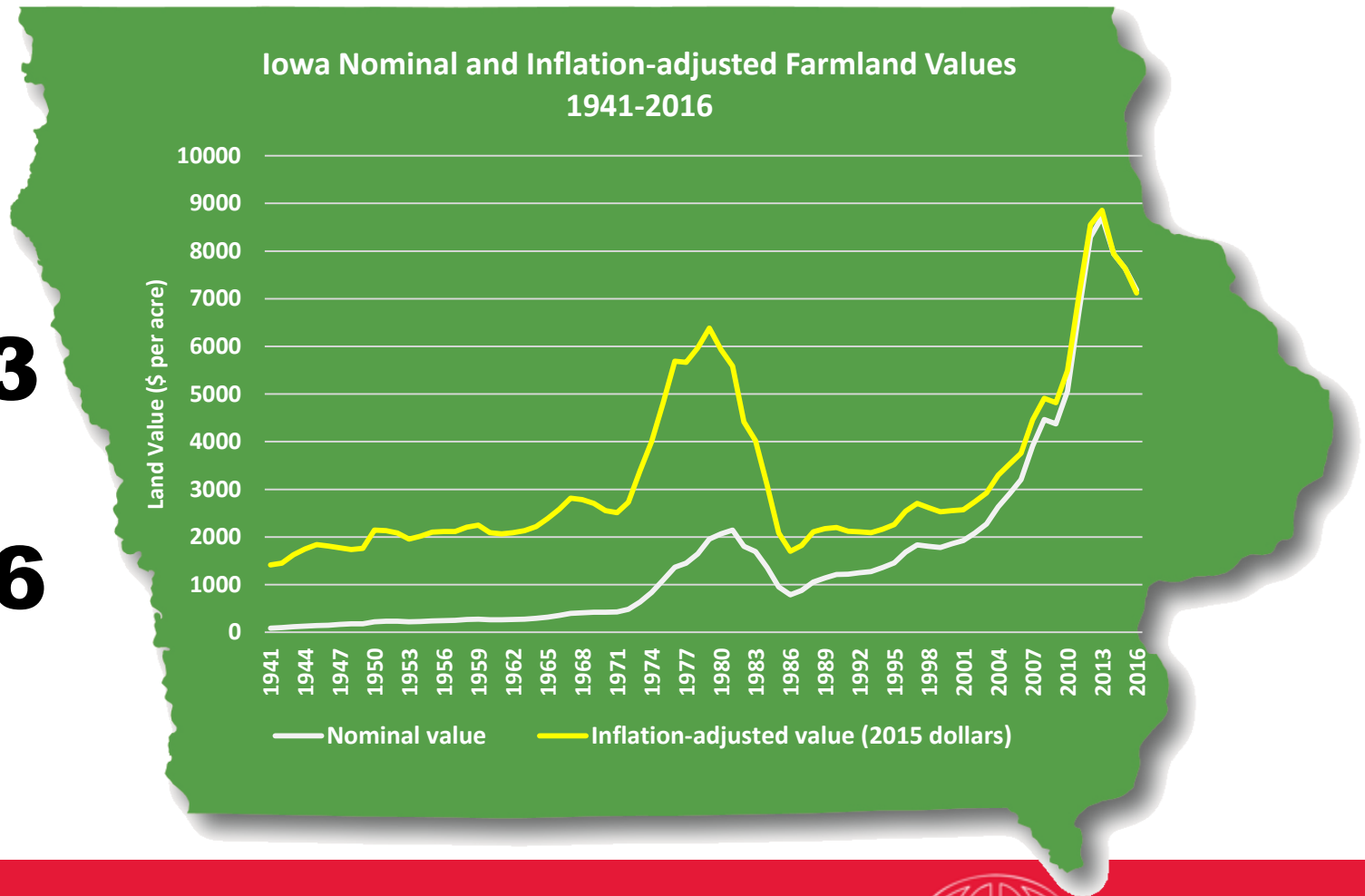


# AVERAGE VALUES

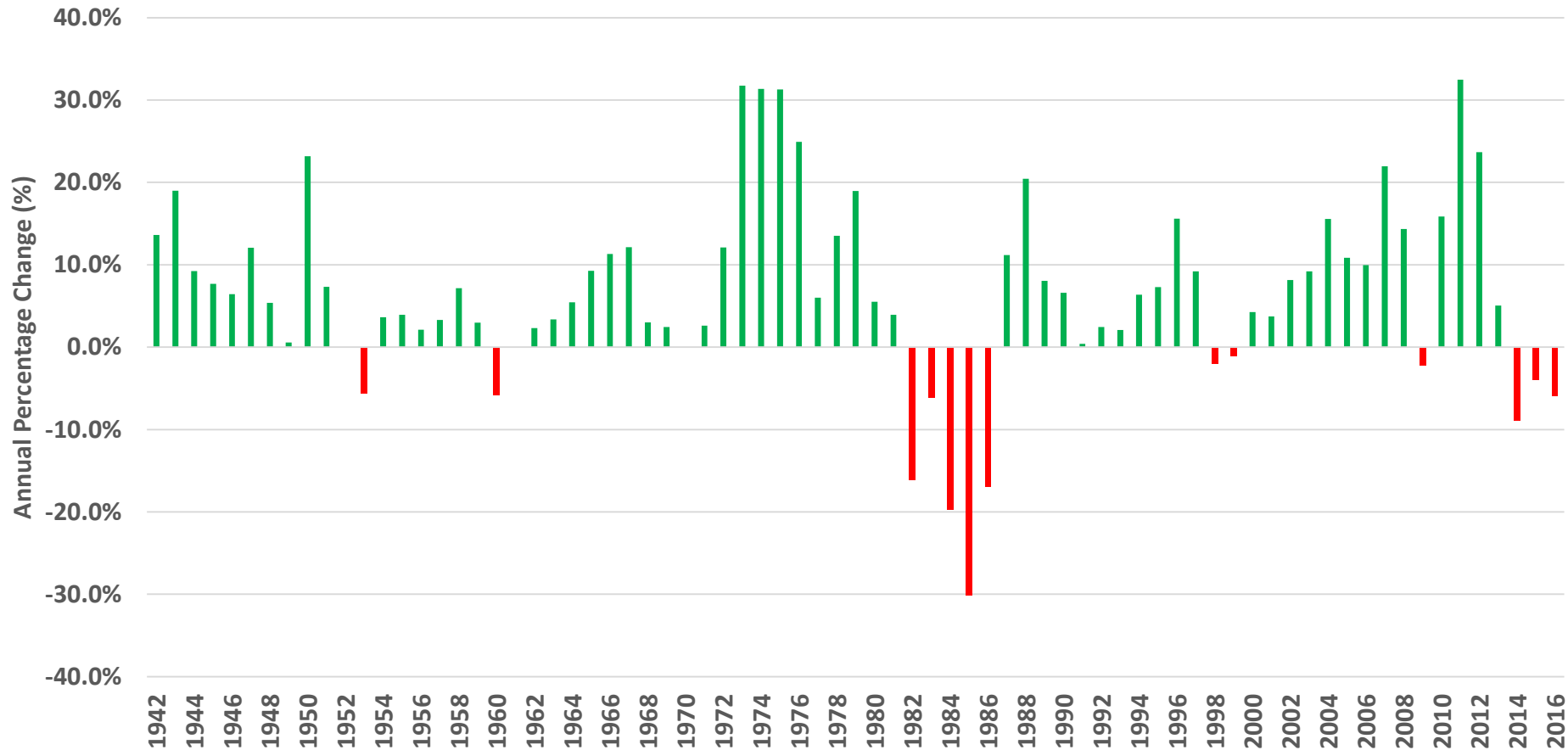
all farmland 1941-2016

**\$7,183**  
**As of**  
**Nov 16**

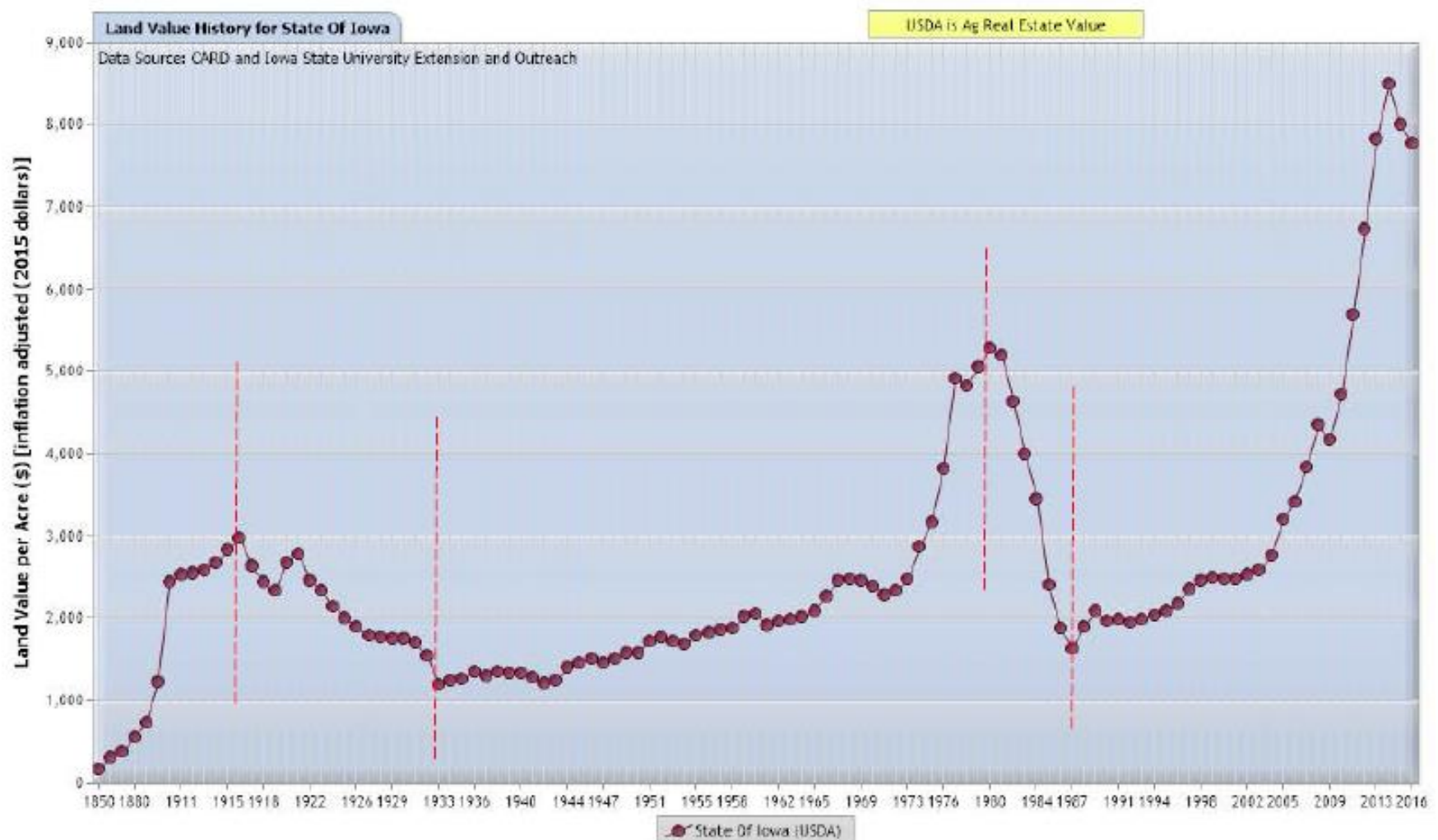
**-5.9%**



# % Change in Nominal Iowa Farmland Values 1942-2016



# Inflation-adjusted Iowa Ag Real Estate Values 1850-2016





# Farm Crises and this downturn

- Positives
  - High income in pre-crisis “golden” eras
  - Low interest rate environment
  - Prudence among ag lenders and bank regulators
  - Wider, stronger (?) gov’n’t safety net
- Concerns
  - Deteriorating farm income and ag credit
  - High reliance on ag exports, US \$
  - Uncertainty in farmland supply and turnover
- Looking Ahead

# Positive 1: Real Income Accumulation 2003-2013

**Average % change in inflation-adjusted values per year**

## Golden Eras

	<i>Land</i>	<i>Gross Income</i>	<i>Net Income</i>
<b>1910-1920</b>	1.2%	0.8%	0.2%
<b>1973-1981</b>	9.7%	0.9%	-3.2%
<b>2003-2013</b>	11.1%	4.5%	8.1%

## Crises and Declines

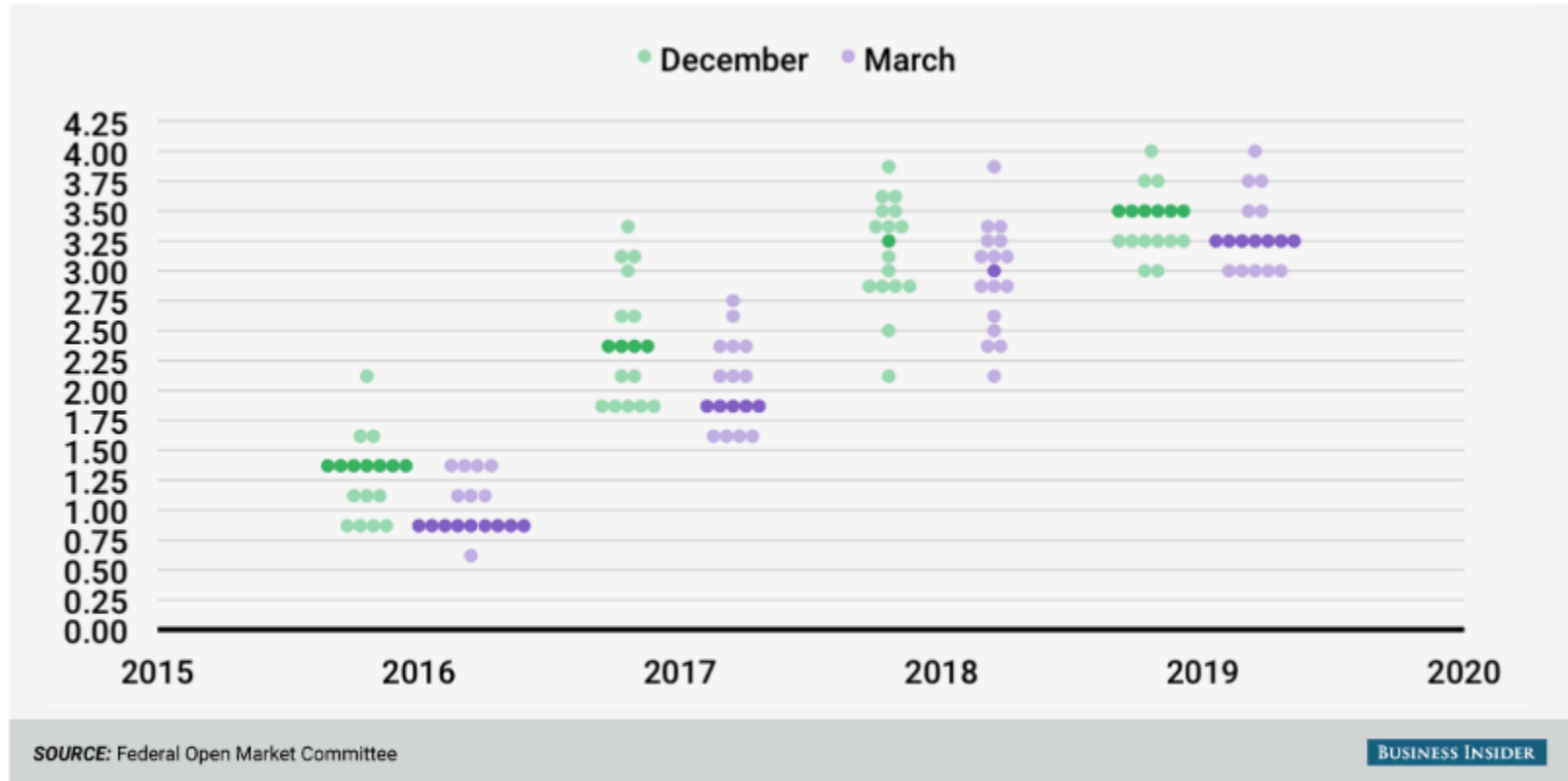
	<i>Land</i>	<i>Gross Income</i>	<i>Net Income</i>
<b>1921-1933</b>	-5.8%	-1.9%	-1.0%
<b>1981-1987</b>	-15.0%	-2.5%	2.6%
<b>2013-2016</b>	-6.0%*	-2.7%	-9.5%

# Positive 2: Historically low interest rates



# Expect at least two interest rate hikes in 2017

## What the Fed Reserve thinks the interest rate should be

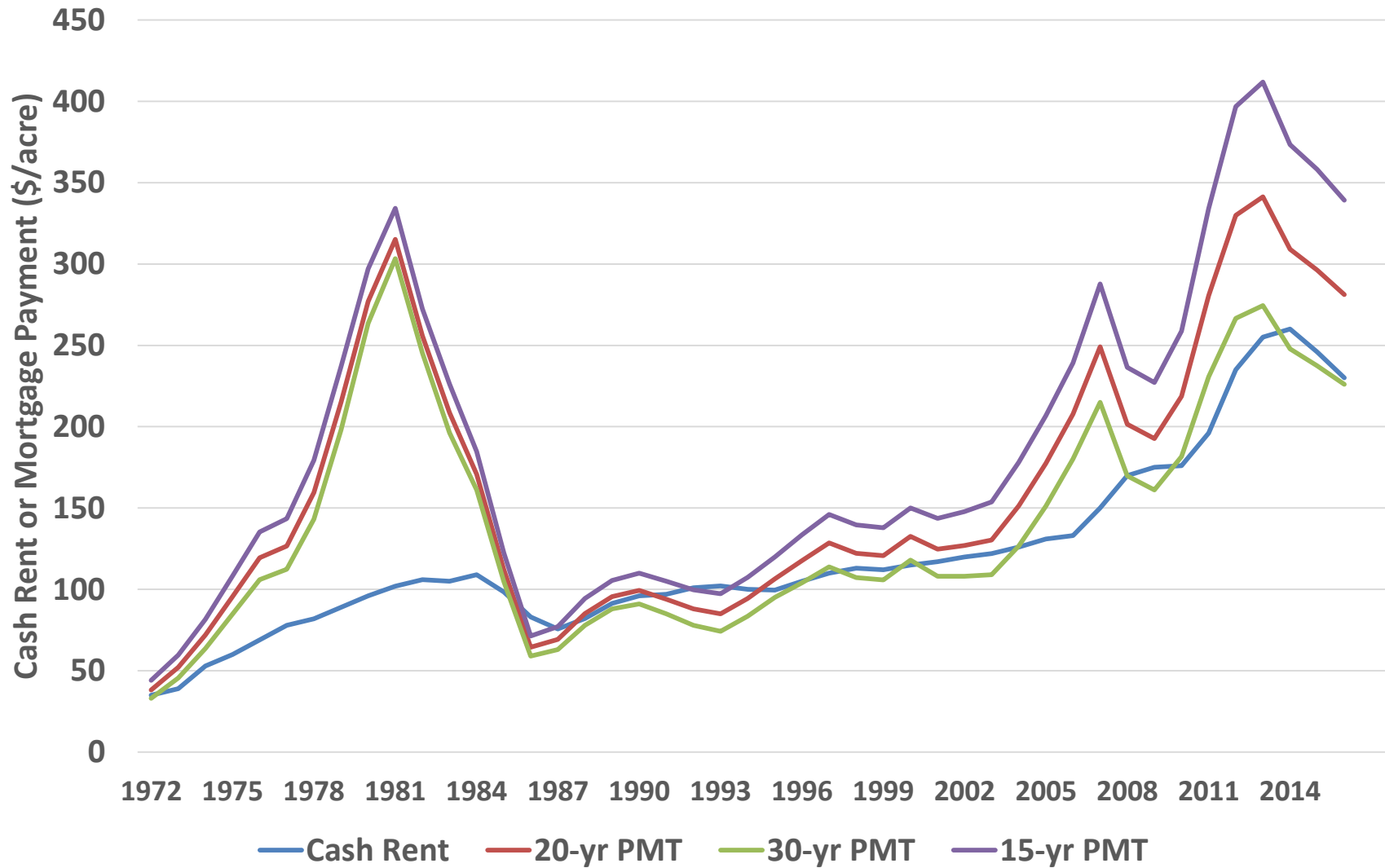


The Fed moved its dots down in March, which the markets interpreted as a signal only two rate hikes would happen this year. Business Insider/Andy Kiersz, data from FOMC

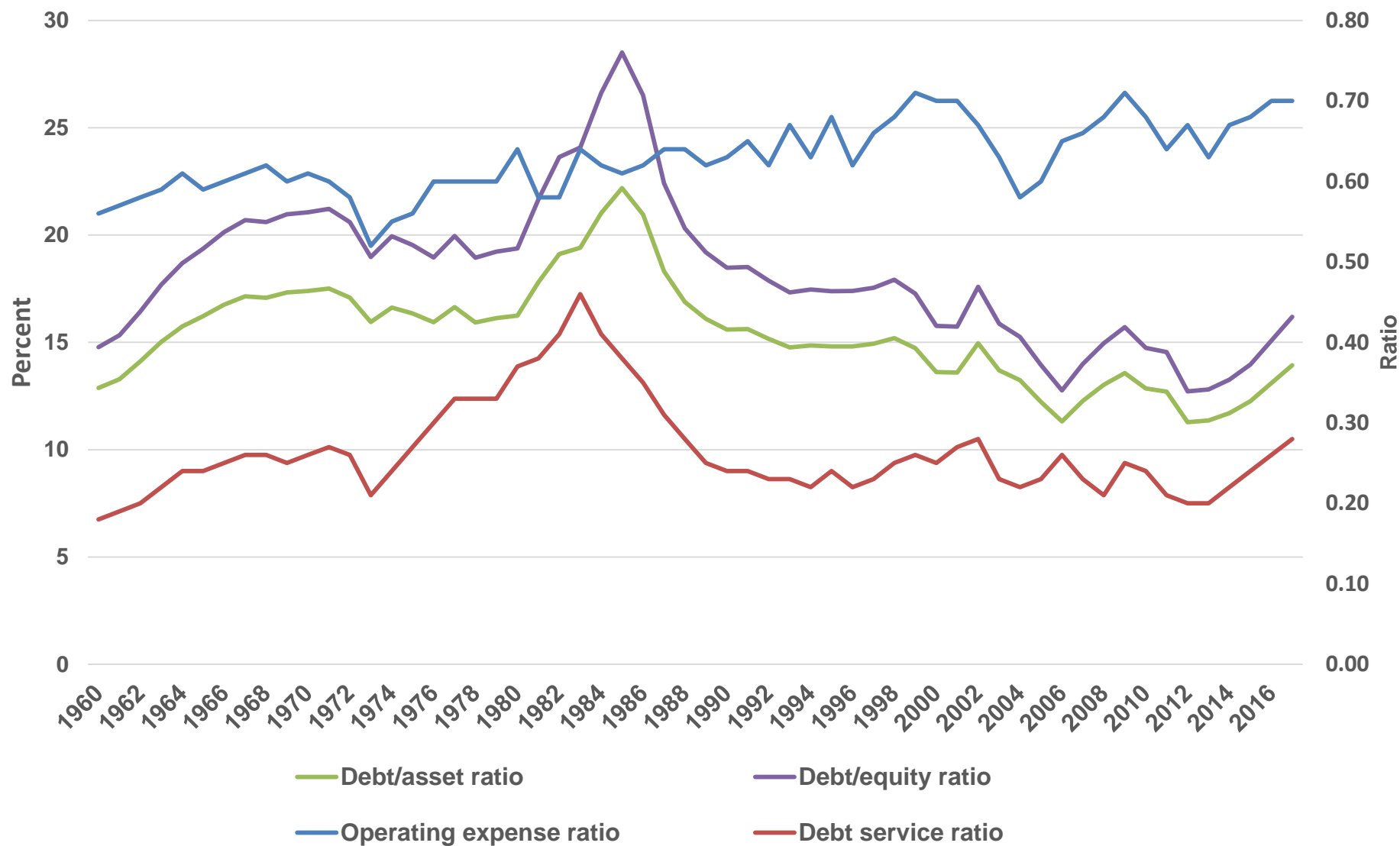
# Positive 3: Prudence in Ag Lenders/Regulators

- Banking Regulations
  - More stringent, frequent stress-test
  - BASEL III, liquidity requirements for banks
  - (Ron Hansen – Iowa Division of Banking Superintendent) walk into this “with eyes wide open”
- Changes in Loan Practices (FCS, Iowa)
  - Before 1987: loan to value ratio is 85%
  - 1987-2008: loan to value ratio is 65%
  - After 2008: use cash-flow method for collateral (\$4 corn, \$10 bean) and 50% of cash flow value

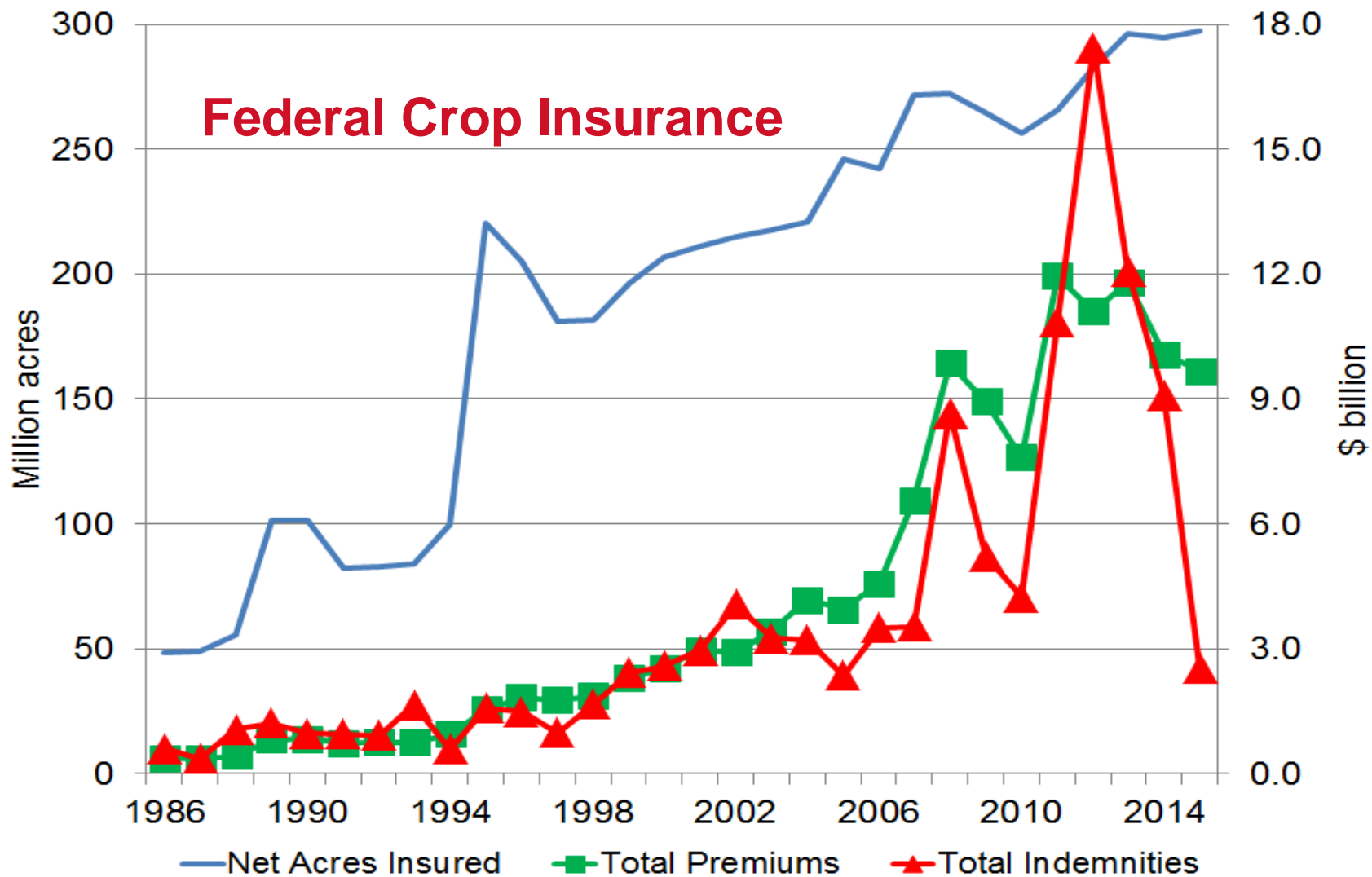
## Annual Mortgage Payments vs. Cash Rents for Iowa Farmland Loan



# Agricultural Financial Ratios for the US 1960 - 2016



# Positive 4: Stronger Govn't Safety Net





**Farmland market tends  
to be localized**

**Local Land Value =  
local net income /  
universal interest  
rate**

# Land Values by District and Land Quality, Nov 2016

District	Average Value	% Change	High Quality	% Change	Medium Quality	% Change	Low Quality	% Change
Northwest	\$9,243	-4.6%	\$10,650	-5.2%	\$8,468	-4.1%	\$6,019	-3.7%
North Central	\$7,562	-5.0%	\$8,442	-5.9%	\$6,992	-4.9%	\$5,164	-3.9%
Northeast	\$7,313	-7.0%	\$8,892	-7.1%	\$6,994	-6.2%	\$4,847	-7.5%
West Central	\$7,358	-8.7%	\$8,874	-8.4%	\$6,870	-9.4%	\$4,577	-9.9%
Central	\$7,841	-7.8%	\$9,299	-7.8%	\$7,186	-7.4%	\$5,158	-2.5%
East Central	\$7,917	-6.9%	\$9,502	-7.6%	\$7,396	-6.8%	\$5,153	-4.0%
Southwest	\$6,060	-4.9%	\$7,527	-6.3%	\$5,683	-5.9%	\$4,189	2.9%
South Central	\$4,241	-3.6%	\$5,980	-7.2%	\$4,128	-3.6%	\$2,892	5.2%
Southeast	\$6,716	-2.6%	\$9,265	-2.8%	\$6,283	-3.7%	\$3,783	-0.4%
Iowa Avg.	\$7,183	-5.9%	\$8,758	-6.5%	\$6,705	-5.9%	\$4,665	-3.5%

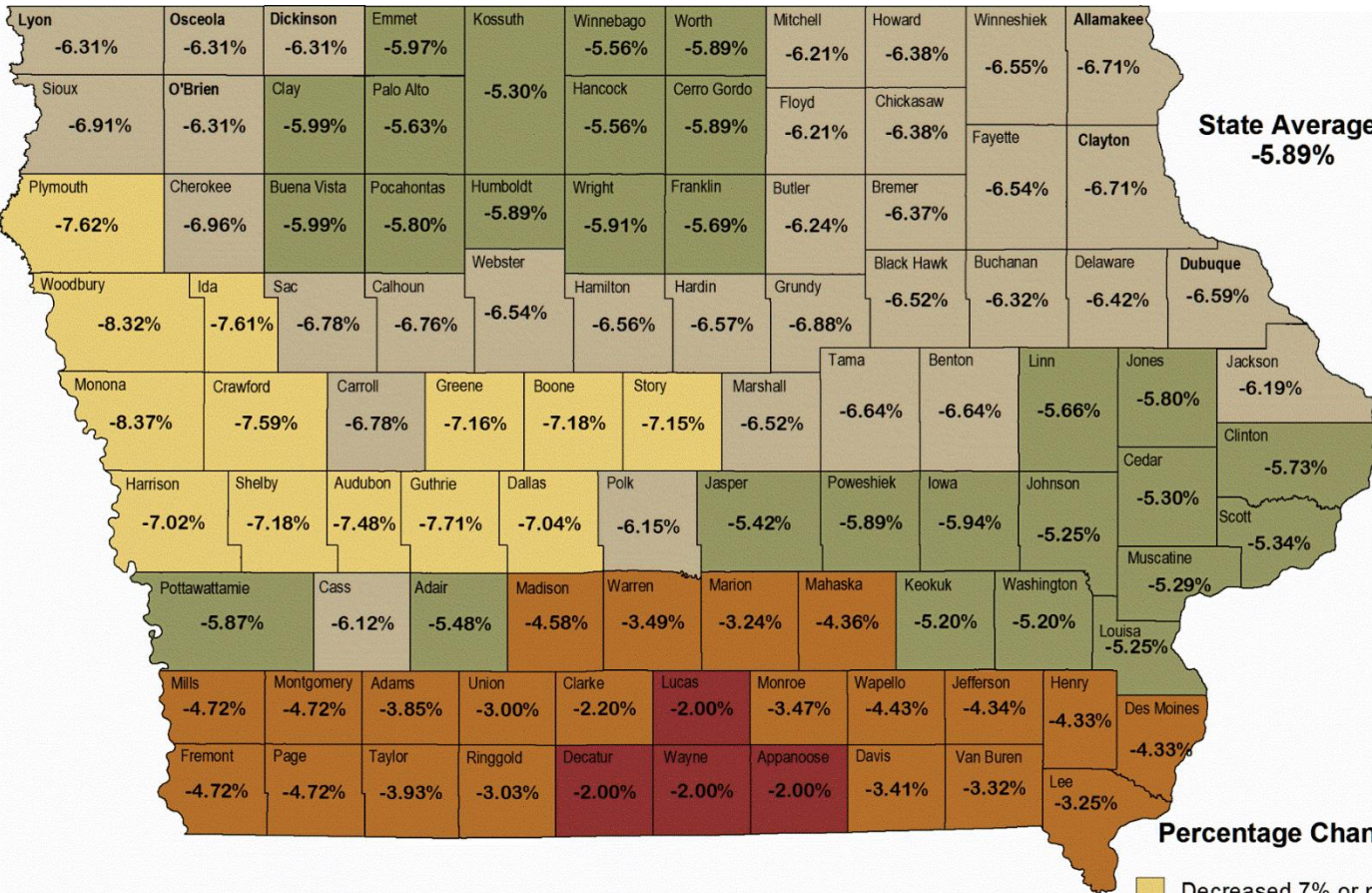
# Livestock and Crop Inventory by District

	Inventory 2012				Harvested Acres 2015	
	Chickens, Layers	Hogs	Milk Cows	Cattle	Corn	Soybean
Northwest	30%	26%	29%	22%	15%	16%
North Central	64%	16%	4%	6%	14%	13%
Northeast	1%	12%	51%	16%	12%	8%
West Central	0%	13%	1%	13%	15%	16%
Central	3%	13%	1%	7%	15%	14%
East Central	1%	5%	10%	11%	10%	10%
Southwest	0%	2%	0%	9%	7%	9%
South Central	0%	2%	1%	9%	4%	5%
Southeast	1%	11%	3%	6%	7%	8%
State Inventory	20.4 million	20.4 million	0.17 million	2.34 million	13.2 million	9.8 million

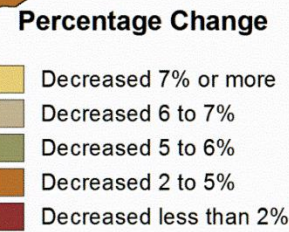
**Dollar Values**

- \$6,500 or less
- \$6,501 to \$7,500
- \$7,501 to \$8,000
- \$8,001 to \$9,000
- \$9,001 or more



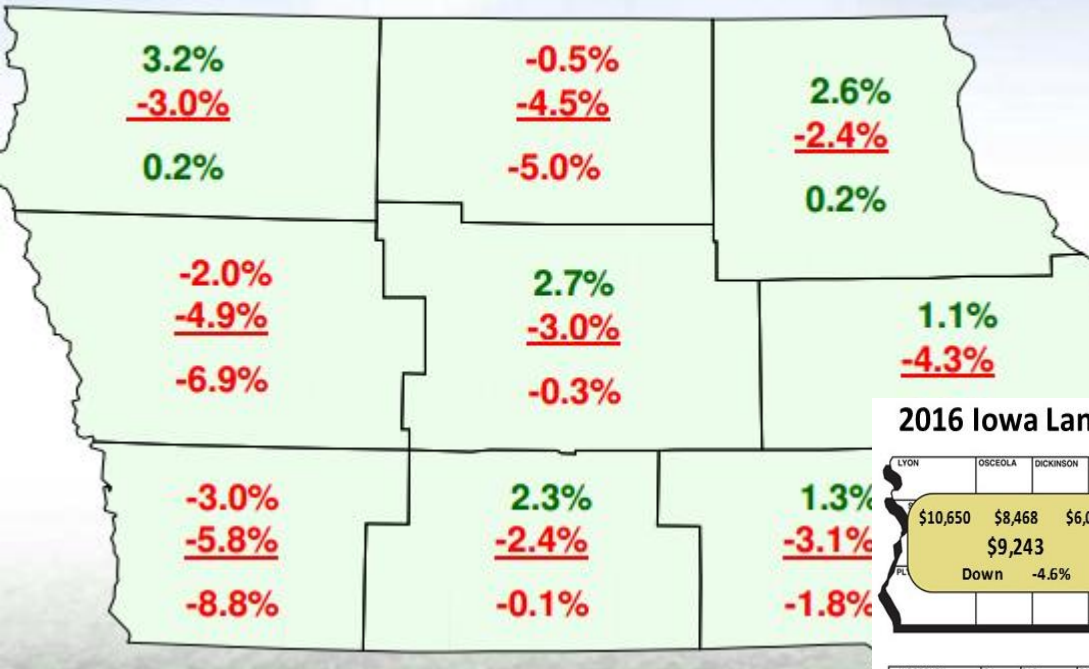


# Percent Changes in Land Values from Nov 2015

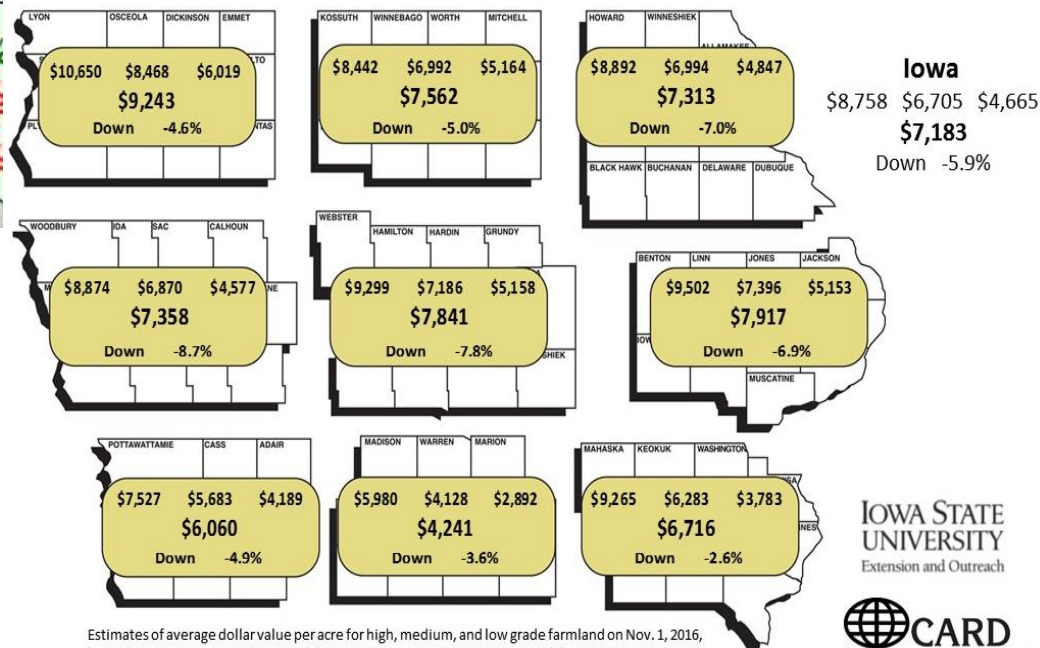


March 1, 2017

# ISU survey results echo other surveys



## 2016 Iowa Land Values by Crop Reporting District



Estimates of average dollar value per acre for high, medium, and low grade farmland on Nov. 1, 2016, by Iowa Crop Reporting District, and the Crop Reporting District average and the average percentage change from Nov. 1, 2015. 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.

IOWA STATE  
UNIVERSITY  
Extension and Outreach

 **CARD**  
Center for Agricultural  
and Rural Development

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## Percent change in dollar value of "good" farmland

Top: October 1, 2016 to January 1, 2017

Bottom: January 1, 2016 to January 1, 2017

	October 1, 2016 to January 1, 2017	January 1, 2016 to January 1, 2017
Illinois	-1	-2
Indiana	-2	+2
Iowa	0	-2
Michigan	-1	-8
Wisconsin	-2	+3
Seventh District	-1	-1

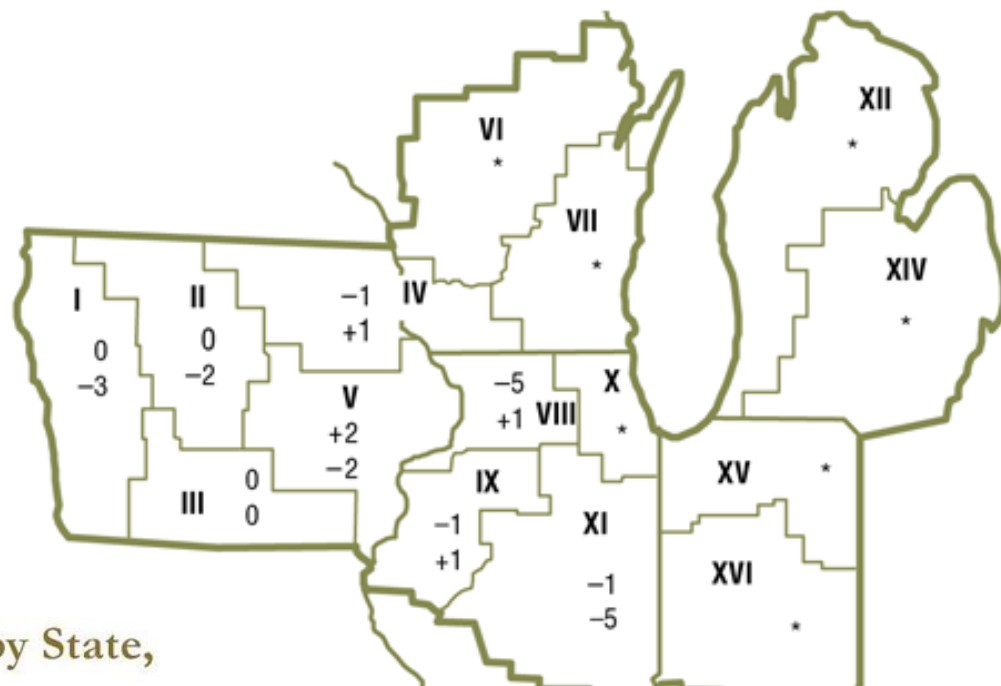


Table 1: Tenth District Farmland Value by State, Fourth Quarter 2016

Percent change from previous year \*

	Nonirrigated	Irrigated	Ranchland
Kansas	- 13	- 4	- 10
Western Missouri	1	n/a**	- 5
Mountain States***	- 7	- 5	0
Nebraska	- 4	- 8	- 10
Oklahoma	- 4	- 6	- 2
Tenth District	- 6	- 6	- 7

## FARM OPERATION

# Land value survey indicates "bleeding" has stopped

Iowa farmland values appear to be taking a breather to identify future direction.

Rod Swoboda 1 | Mar 27, 2017

**Realtor Land Institute**  
**March 2017 Iowa Survey**  
**+0.9% since Sept 16**

Federal Reserve  
Bank of Chicago,  
Kansas City  
Feb 2017 Ag  
Letter

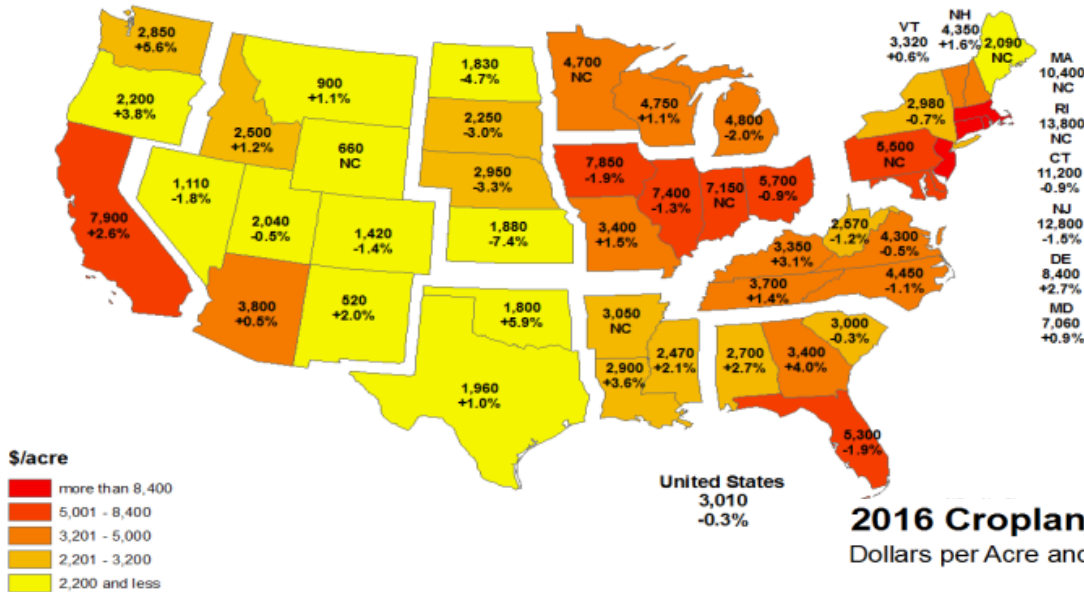


**CARD**

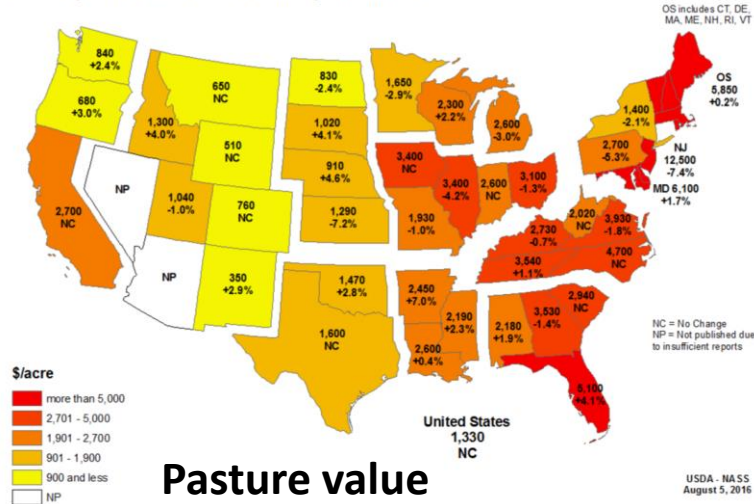
Center for Agricultural and Rural Development

## 2016 Farm Real Estate Value by State

Dollars per Acre and Percent Change from 2015



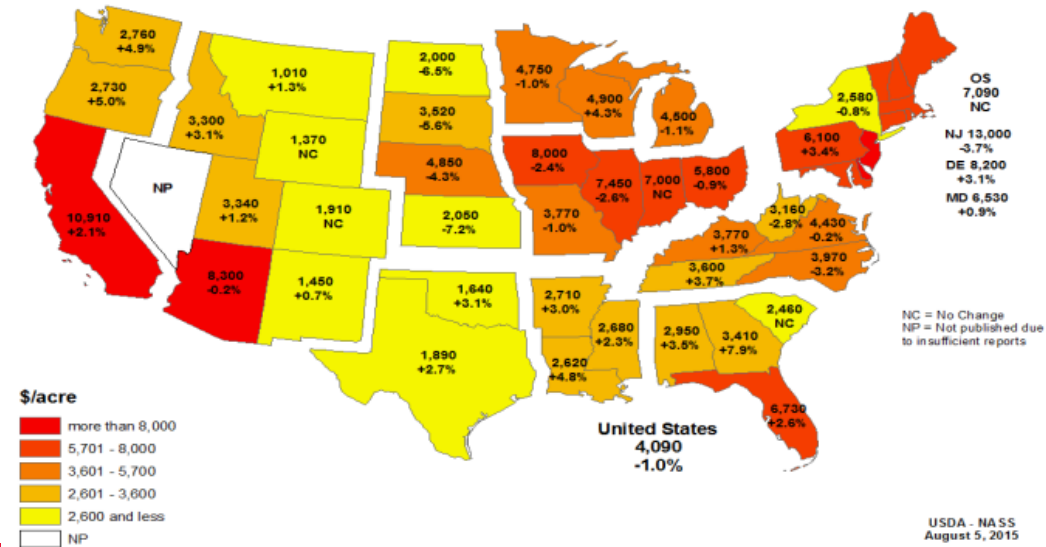
Dollars per Acre and Percent Change from 2015



## Pasture value

## 2016 Cropland Value by State

Dollars per Acre and Percent Change from 2015



ISU survey  
results echo  
other surveys





# 2016 – Results at a Glance

*Farm profits and soil quality are important!*

Lower commodity prices affect values.

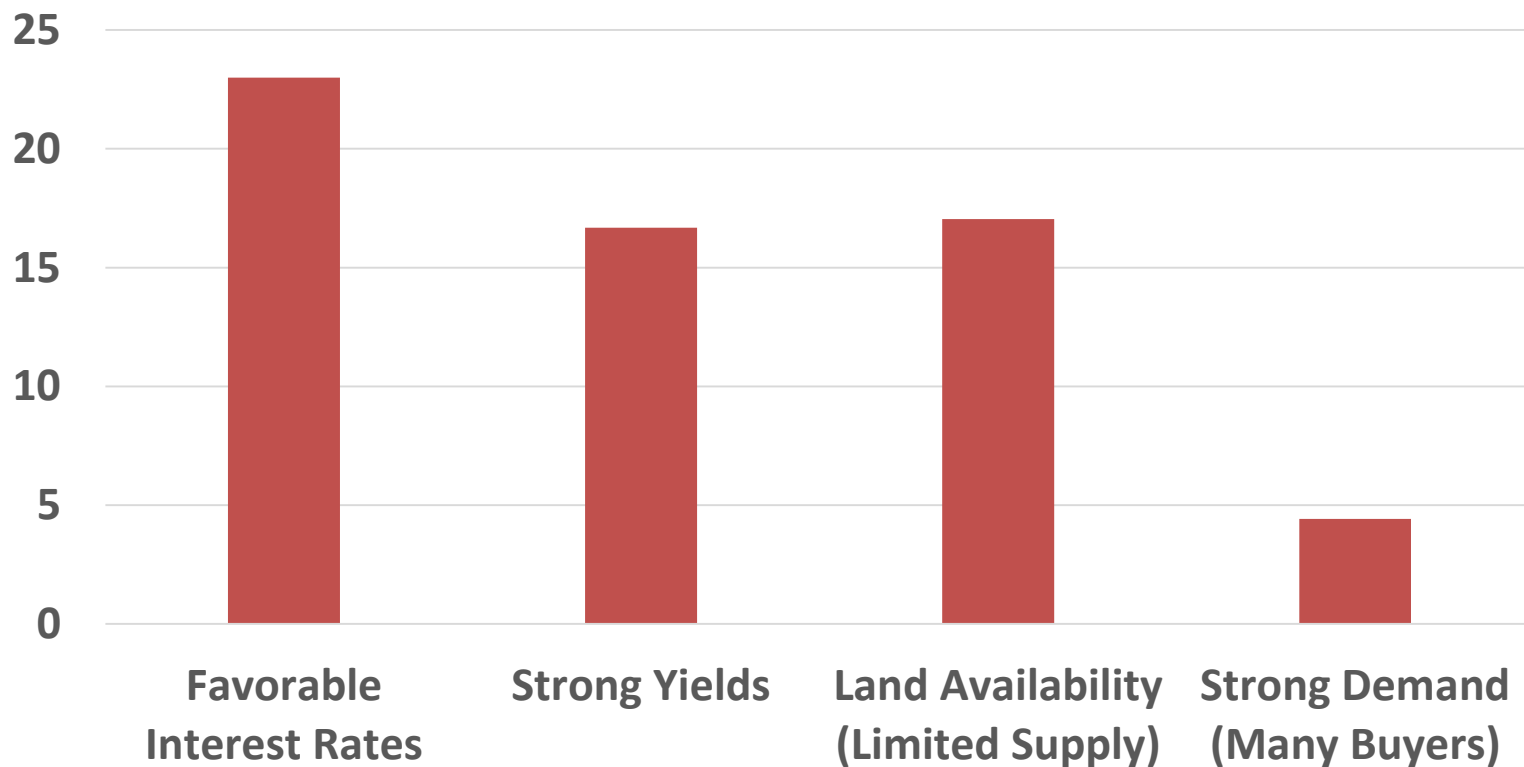


<u>Land Category</u>	<u>Mid Range 2016 Change</u>	<u>Comments</u>
Excellent	-5%	Values pulled back, but remained relatively strong in areas. Pockets of strength still exist. Buyers still willing to pay for high quality soil.
Good	-6%	Farmers were primary buyers. Buyers were cautious - - looking for deals in this land class. Longer marketing periods noticed on listings.
Average	-12%	These farms require higher maintenance and management. Buyers were selective. More noticeable price declines. More Auction “No Sales” in this land class than others. Investment Funds focused here in 2016 recognizing the steeper declines.
Recreational	<i>Steady</i>	Volume of sales increased slightly. More support around metropolitan areas. Very rural areas seeing longer marketing periods. Prices tied more to the general economy.
Transitional	<i>Lower on Limited Information</i>	Activity very limited in our metropolitan areas. Market comeback slowly underway in the Chicago area. There is a little 1031 money.

# Factors Driving Past (and Future!) Land Value Changes

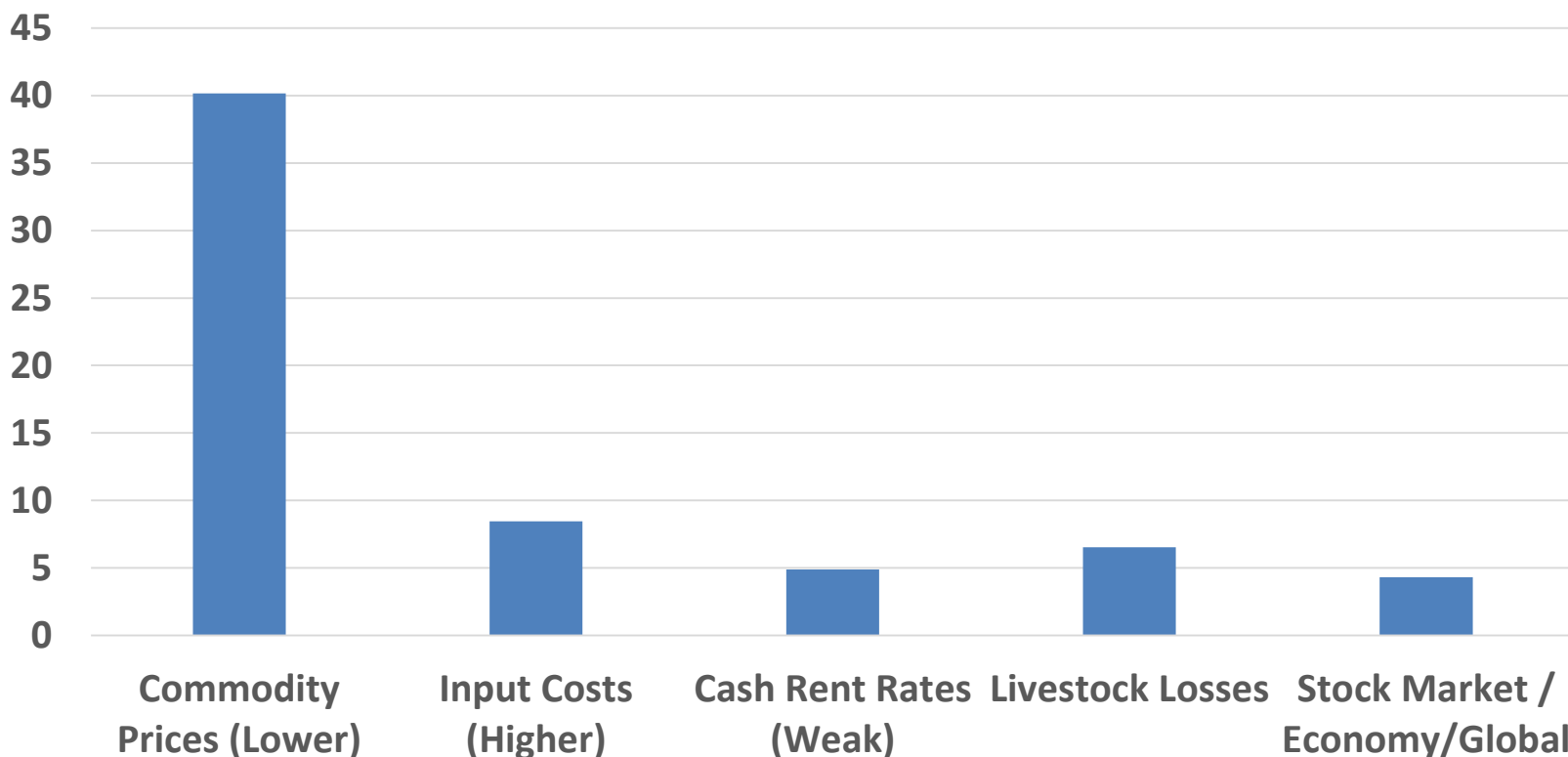
# Major Positive Factors Affecting Iowa Farmland Market, 2016

Positive Factors, 2016 (Percent)



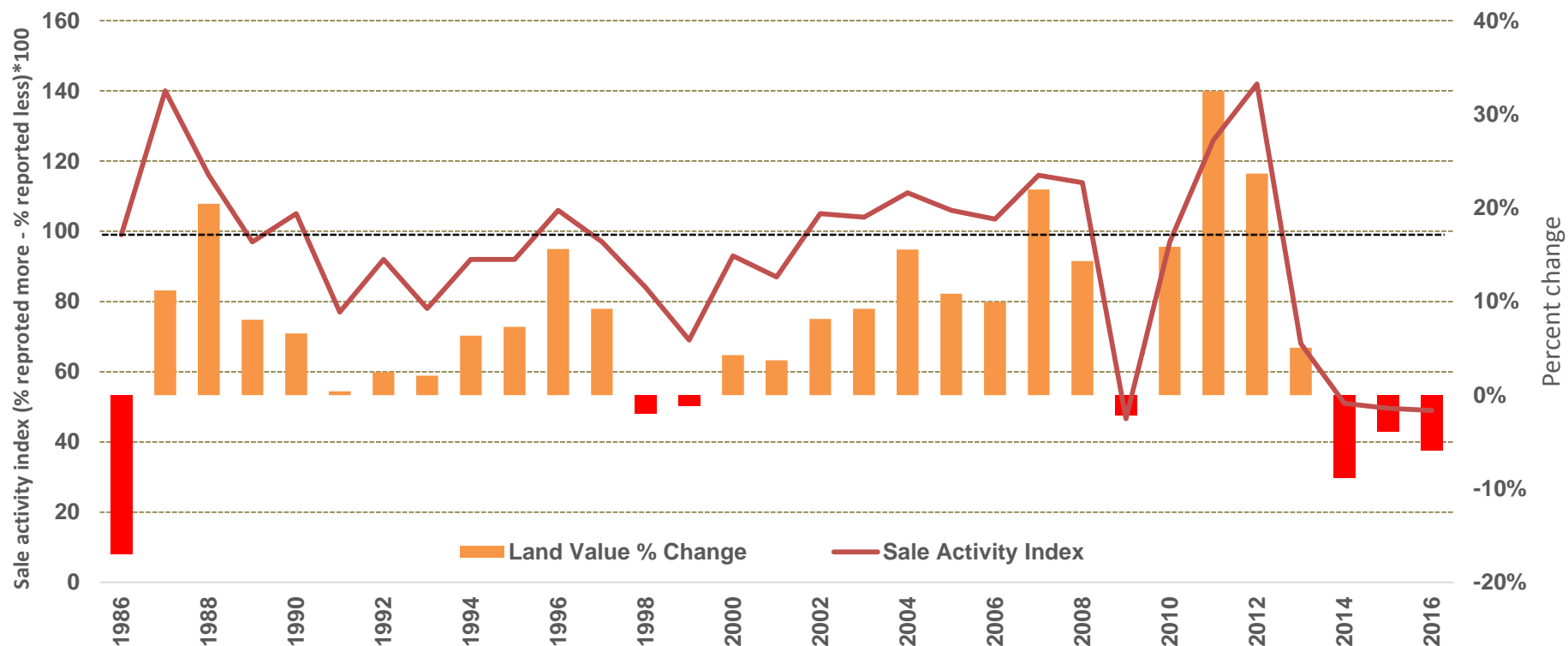
# Major Negative Factors Affecting Iowa Farmland Market, 2016

Negative Factors, 2016 (Percent)



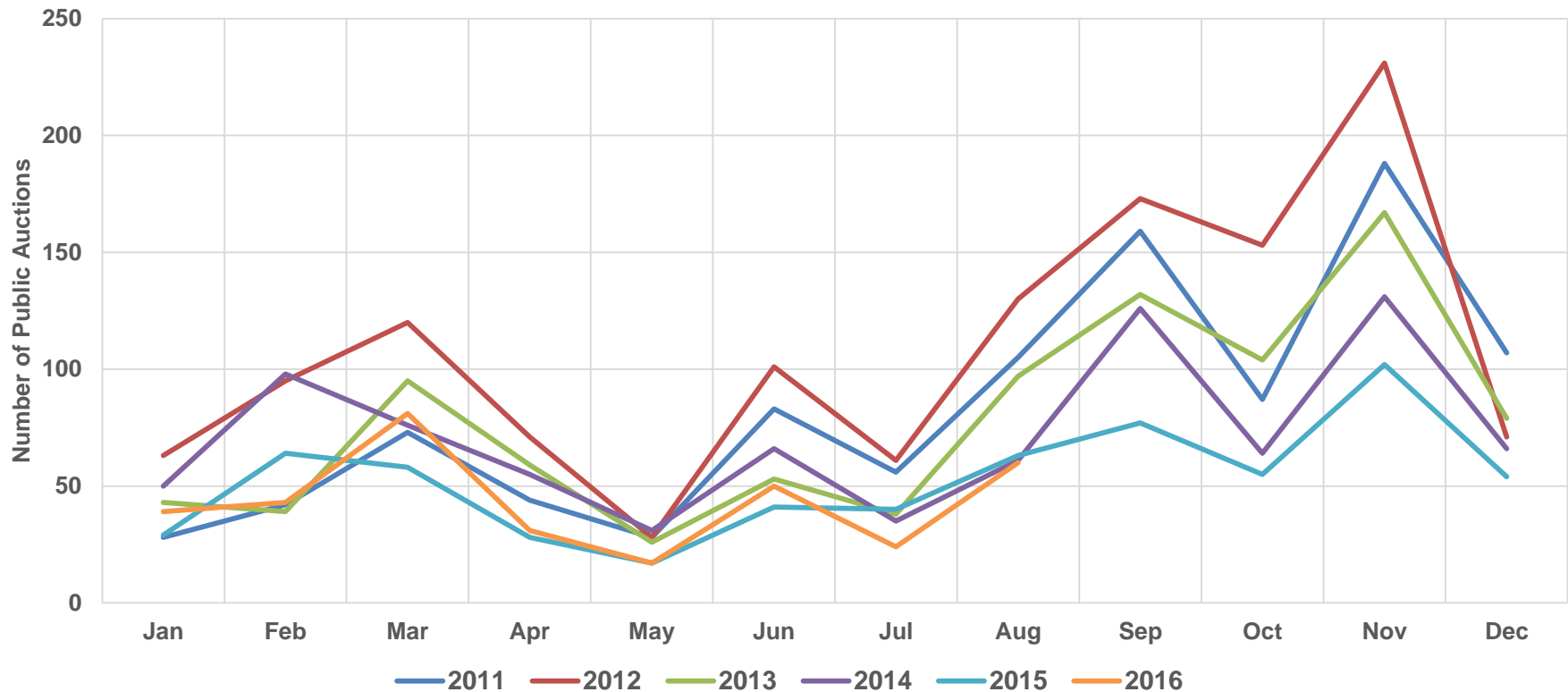
# Farmland supply tends to be tighter in down years

ISU sale activity index and percent change in  
Iowa land value, 1986-2016  
(% reported more sales - % reported less sales) + 100



# Limited farmland supply tends to bolster land values

Number of Public Auctions by Month 2011-2016



# Looking Ahead

# Cash Crop Price Predictions for Nov 2017, 2018, 2020

	Cash Corn Prices			Cash Soybean Prices		
	2017	2018	2020	2017	2018	2020
<b>Northwest</b>	\$ 3.34	<b>\$ 3.65</b>	\$ 3.98	\$ 9.25	\$ 9.61	<b>\$ 10.32</b>
<b>North Central</b>	\$ 3.42	\$ 3.59	\$ 3.93	\$ 9.16	\$ 9.46	\$ 10.01
<b>Northeast</b>	\$ 3.41	\$ 3.59	\$ 3.95	\$ 9.19	\$ 9.28	\$ 9.76
<b>West Central</b>	\$ 3.34	\$ 3.59	\$ 4.02	\$ 9.12	\$ 9.33	\$ 10.06
<b>Central</b>	\$ 3.36	\$ 3.50	\$ 3.77	\$ 9.17	\$ 9.40	\$ 9.86
<b>East Central</b>	\$ 3.42	\$ 3.58	\$ 3.89	\$ 9.26	\$ 9.51	\$ 10.00
<b>Southwest</b>	\$ 3.31	\$ 3.56	\$ 3.94	\$ 9.15	\$ 9.42	\$ 10.09
<b>South Central</b>	\$ 3.36	\$ 3.59	\$ 3.90	\$ 9.51	<b>\$ 9.76</b>	\$ 10.35
<b>Southeast</b>	<b>\$ 3.50</b>	\$ 3.83	\$ 4.17	\$ 9.49	\$ 9.59	\$ 10.08
<b>STATE</b>	<b>\$ 3.38</b>	<b>\$ 3.60</b>	<b>\$ 3.94</b>	<b>\$ 9.24</b>	<b>\$ 9.48</b>	<b>\$ 10.06</b>



# Your estimates as of May 2017: Iowa land market stabilizing

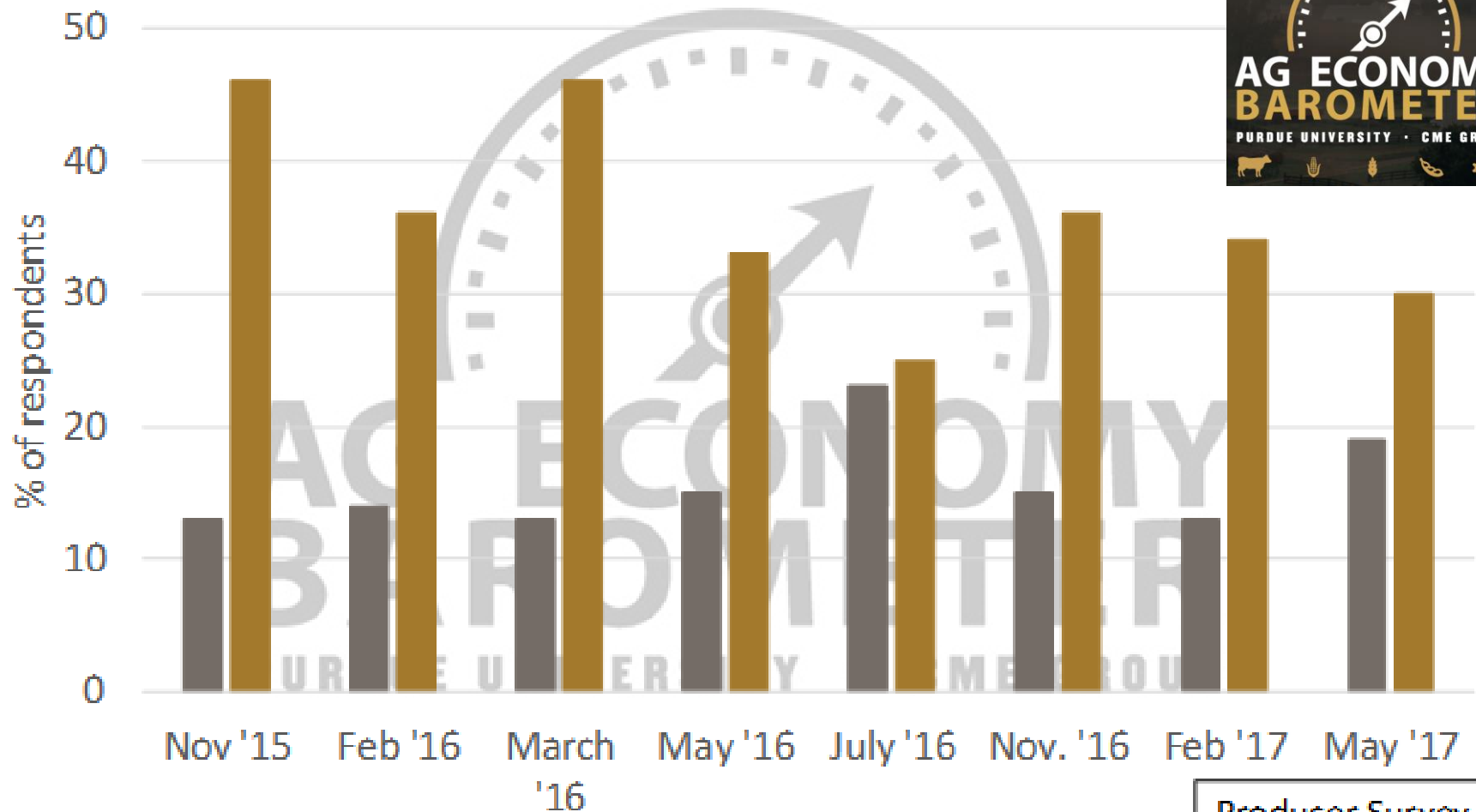
2017 SMLV Estimated Land and Commodity Prices					
	AVG. Estimate				
LAND:					
	NW	NE	SW	SE	STATE
Nov 2017	\$ 8,457	\$ 7,985	\$ 6,674	\$ 7,845	\$ 7,863
Nov 2018	\$ 8,438	\$ 8,006	\$ 6,697	\$ 7,795	\$ 7,849
Nov 2020	\$ 8,844	\$ 8,650	\$ 7,137	\$ 8,150	\$ 8,307
Nov 2025	\$ 10,202	\$ 10,090	\$ 8,239	\$ 9,430	\$ 9,632
Nov 2040	\$ 13,424	\$ 13,911	\$ 10,932	\$ 12,335	\$ 12,841
Commodity Prices					
	CORN		SOYBEAN		
Nov 2017	\$ 3.47		\$ 9.31		
Nov 2018	\$ 3.67		\$ 9.60		
Nov 2020	\$ 3.93		\$ 9.92		

# Compare your estimates last year - Iowa land market stabilizing

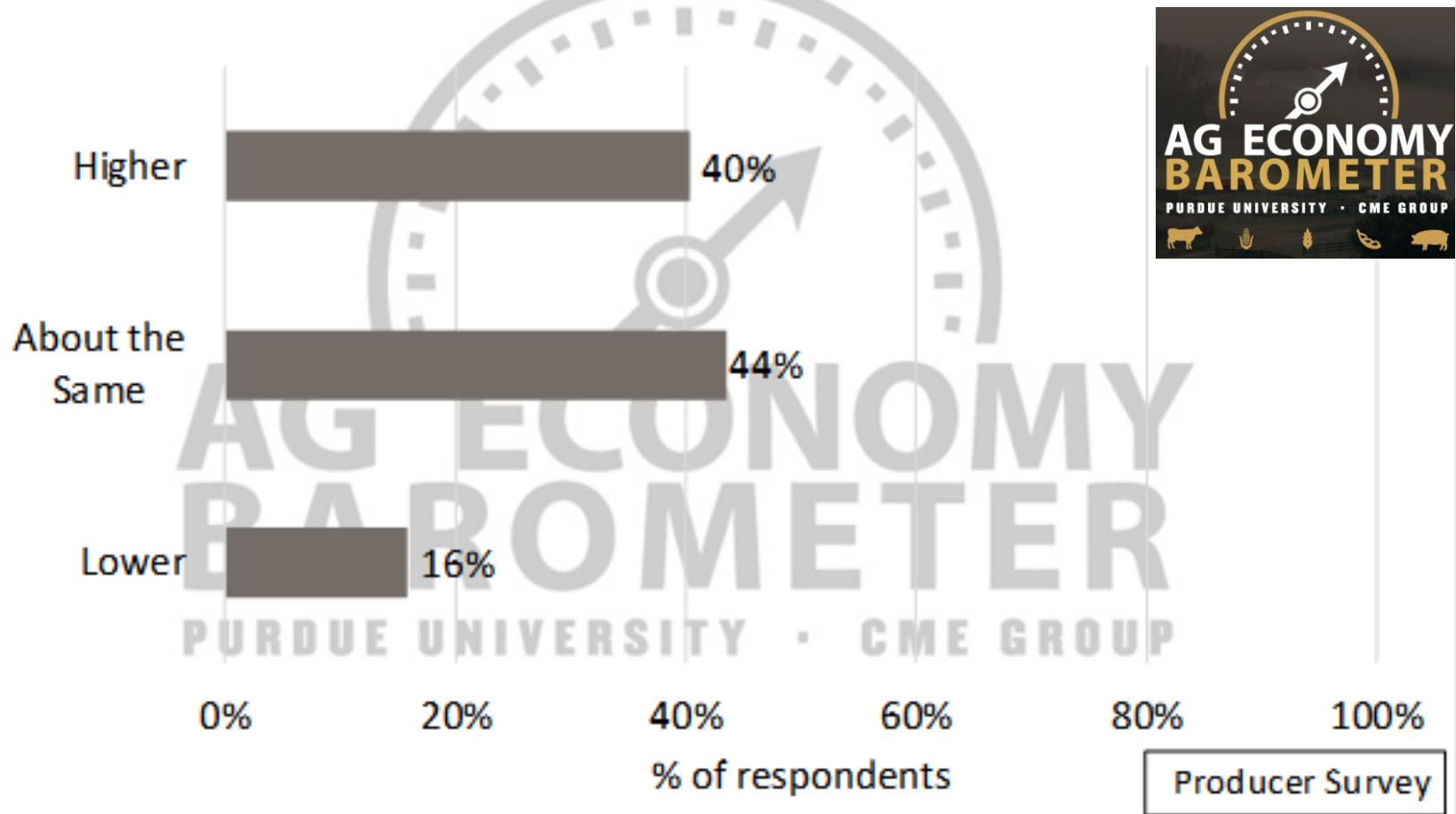
2016 Estimated Land and Commodity Prices					
	AVG. Estimate				
<b>LAND:</b>					
	NW	NE	SW	SE	STATE
<b>Nov 2016</b>	\$ 8,358	\$ 8,191	\$ 6,958	\$ 7,320	\$ 7,776
<b>Nov 2017</b>	\$ 8,137	\$ 7,991	\$ 6,991	\$ 6,869	\$ 7,572
<b>Nov 2020</b>	\$ 8,884	\$ 8,758	\$ 7,698	\$ 7,614	\$ 8,303
<b>Nov 2025</b>	\$ 10,199	\$ 9,756	\$ 8,834	\$ 8,681	\$ 9,446
<b>Nov 2040</b>	\$ 14,487	\$ 12,818	\$ 11,833	\$ 11,988	\$ 12,866
<b>Commodity Prices</b>					
	CORN		SOYBEAN		
<b>Nov 2016</b>	\$	3.75	\$	9.44	
<b>Nov 2017</b>	\$	3.73	\$	10.12	
<b>Nov 2020</b>	\$	4.32	\$	10.78	

## Farmland Price Expectations, 12 months from now

■ Higher Farmland Prices ■ Lower Farmland Prices



Thinking long-term, what are your expectation for farmland prices in your area 5 years from now? Higher, Lower, or About the Same?

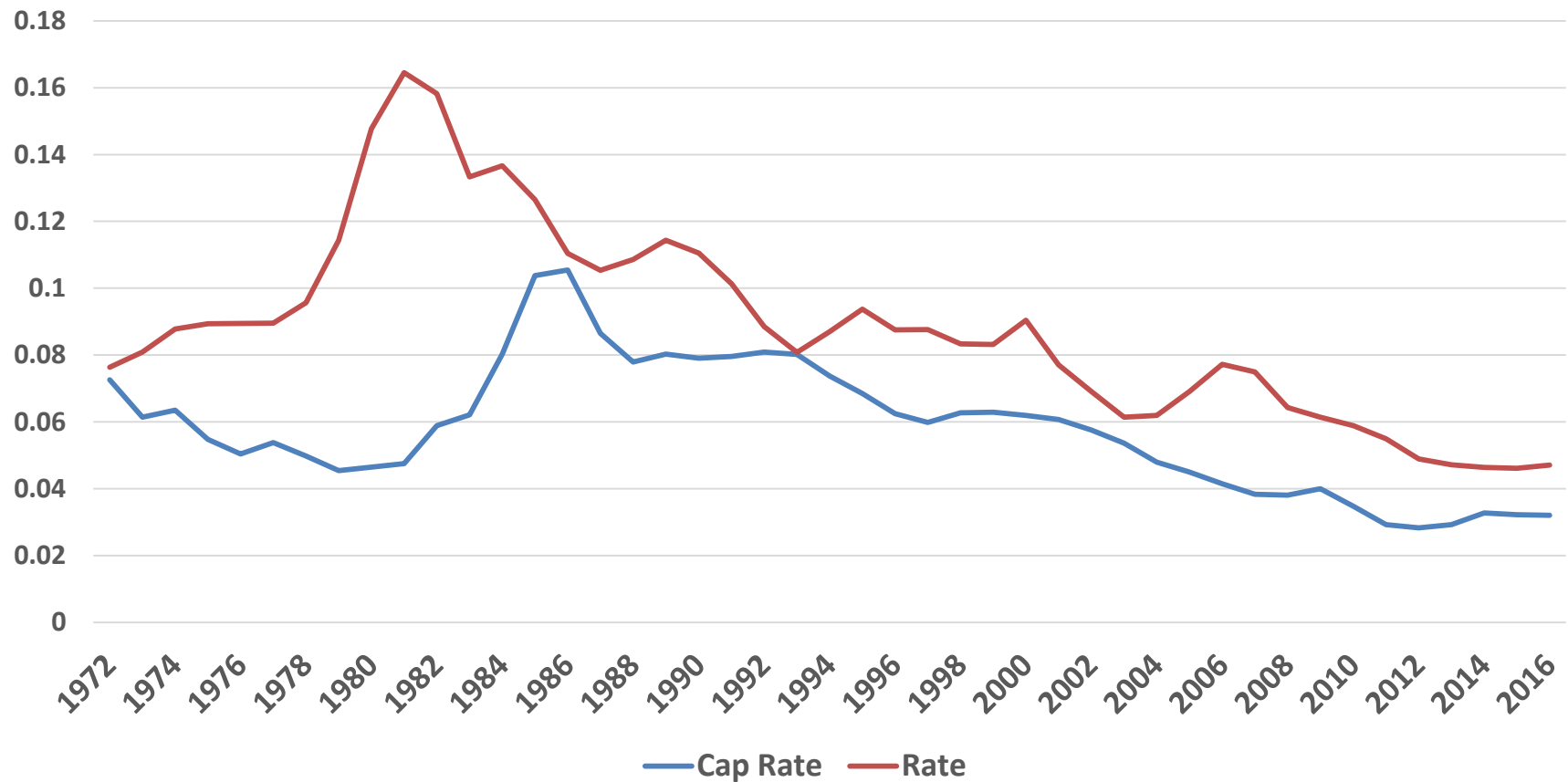


# **Key Indicators to Watch**

## **Land Value = net income / interest rate**

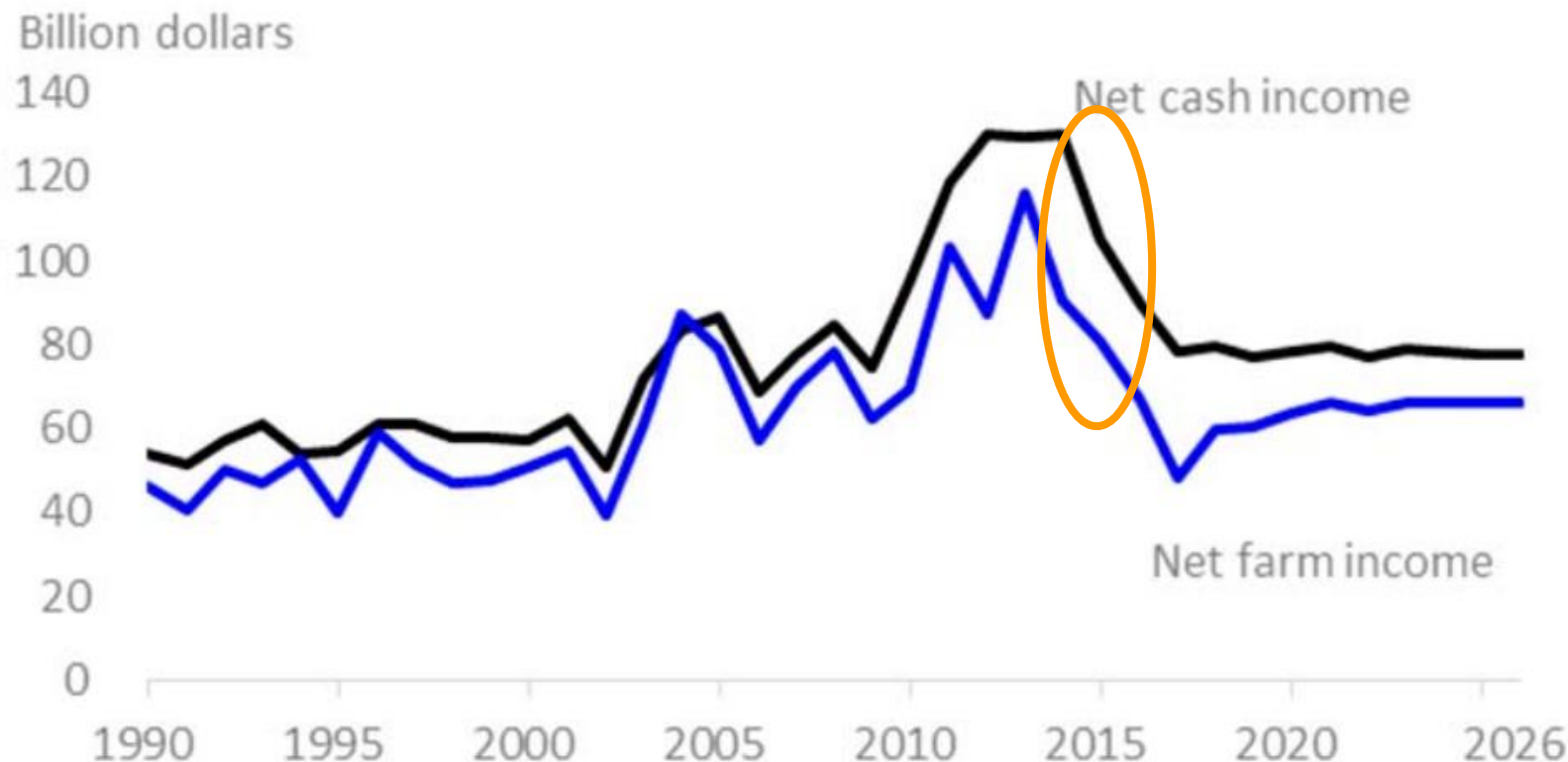
- USDA Farm Income Forecast
  - Price Outlook
  - Ag Exports / Exchange Rate
  - China
  - Ethanol, E-85, RFS
- Fed's move on Interest Rate
- Ag Loan Delinquency; Vendor Credit

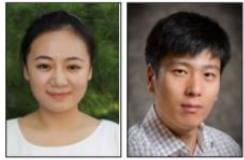
# Cap Rate (Rent-to-Value) vs. Farmland Loan Interest Rate



# US Farm Income 1990-2026

## U.S. farm income indicators





## Of maize and markets: China's new corn policy

By Qianrong Wu, economics graduate student, [qianrong@iastate.edu](mailto:qianrong@iastate.edu); Wendong Zhang, extension economist, [wdzhang@iastate.edu](mailto:wdzhang@iastate.edu)

2017

美国农业大州爱荷华州的农畜产品在世界市场上长期占据重要地位，现任州长特里·布兰斯塔德已被特朗普政府提名为下一届驻华大使。爱荷华州立大学中国留学生对中国玉米产业政策的一份研究报告获得州农业部长Bill Northey 的推荐转发，芝华特对此深度报告进行了翻译整理。

玉米与市场：谈中国的新玉米政策

作者：Qianrong Wu Wendong Zhang

翻译：芝华数据 李佳璇



# Federal Reserve raises interest rates for second time in a decade, expects 3 hikes in 2017

The Washington Post

By Jim Tankersley December 14 at 3:30 PM



# Key things to watch

Interest rate hikes: SPEED & MAGNITUDE MATTERS

Possible trade tensions and negotiations (China, Mexico)

2018 Farm Bill Discussions

Possible Changes in tax policies

- Estate tax reforms; step-up basis
- Income tax: section 179, bonus depreciations
- State ownership law

# Ag Policy News

-21% budget cuts for USDA

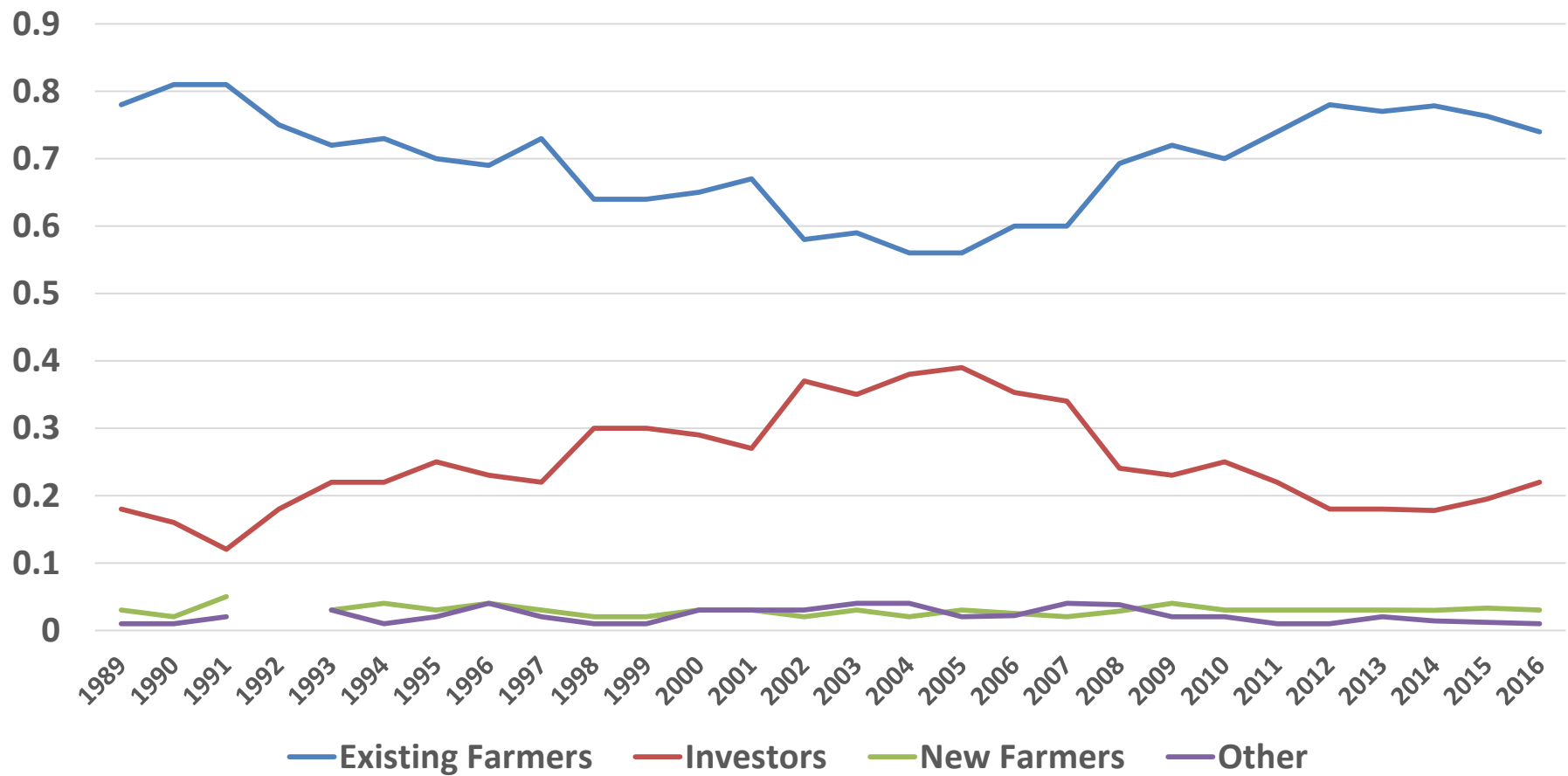
USDA Secretary Perdue just confirmed this Monday

The House and Senate Ag Committees have begun their exploratory hearings for the 2018 Farm Bill, but no firm policy declarations have been made.

What little we have on ag policy comes from the President's Executive Orders and the Budget: withdraw TPP, review "WOTUS" rule, omnibus report on significant trade deficit

# Facts and “Alternative Facts” about the Farmland Market

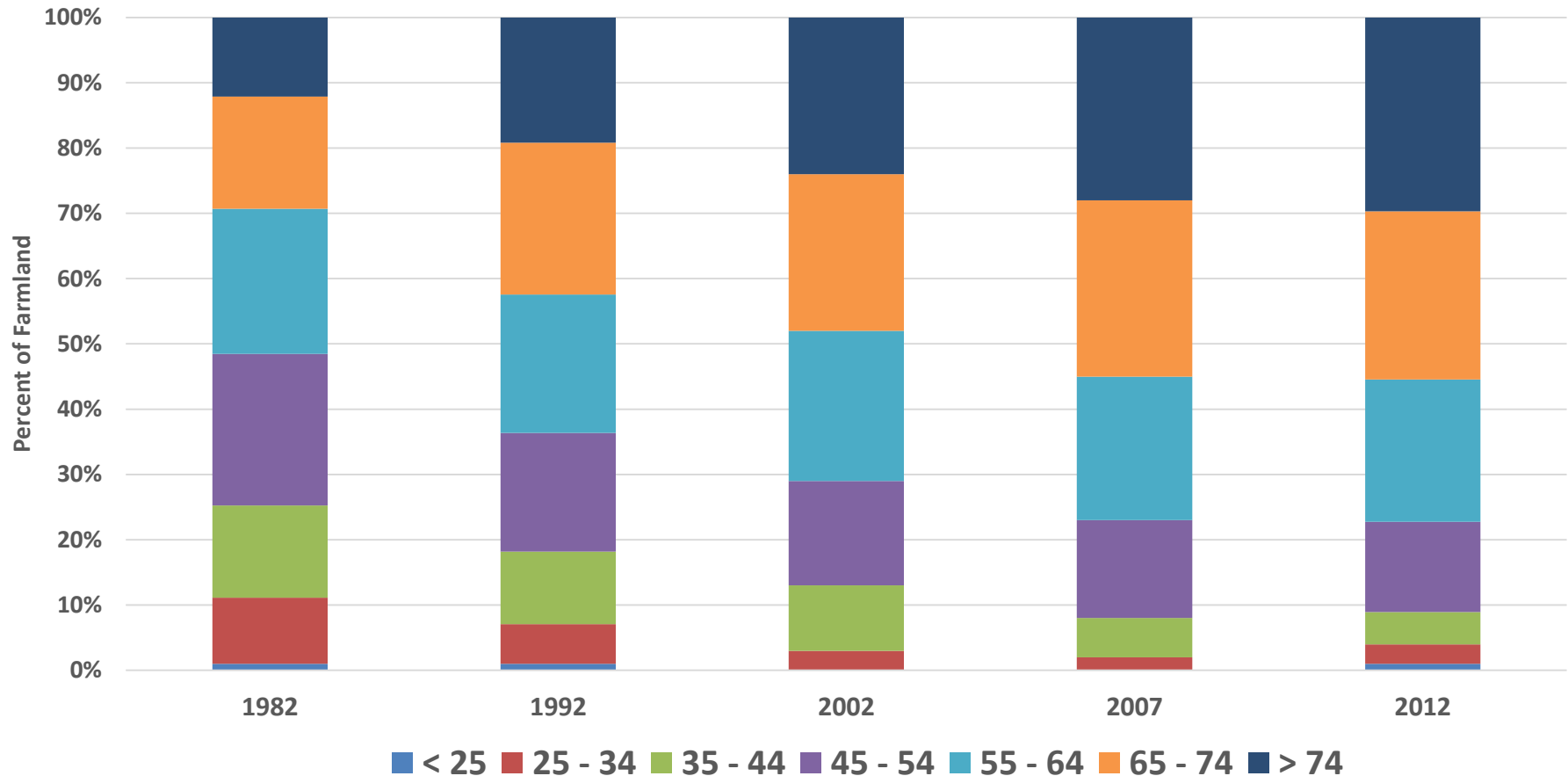
# Iowa Farmland Purchases by Buyer Types 1989-2016



# Iowa Landowners tend to hold the farmland

Years of ownership	% of Iowa Farmland
Less than 10 years	24%
10-20 Years	21%
20-30 Years	19%
30-40 Years	15%
> 40 Years	20%

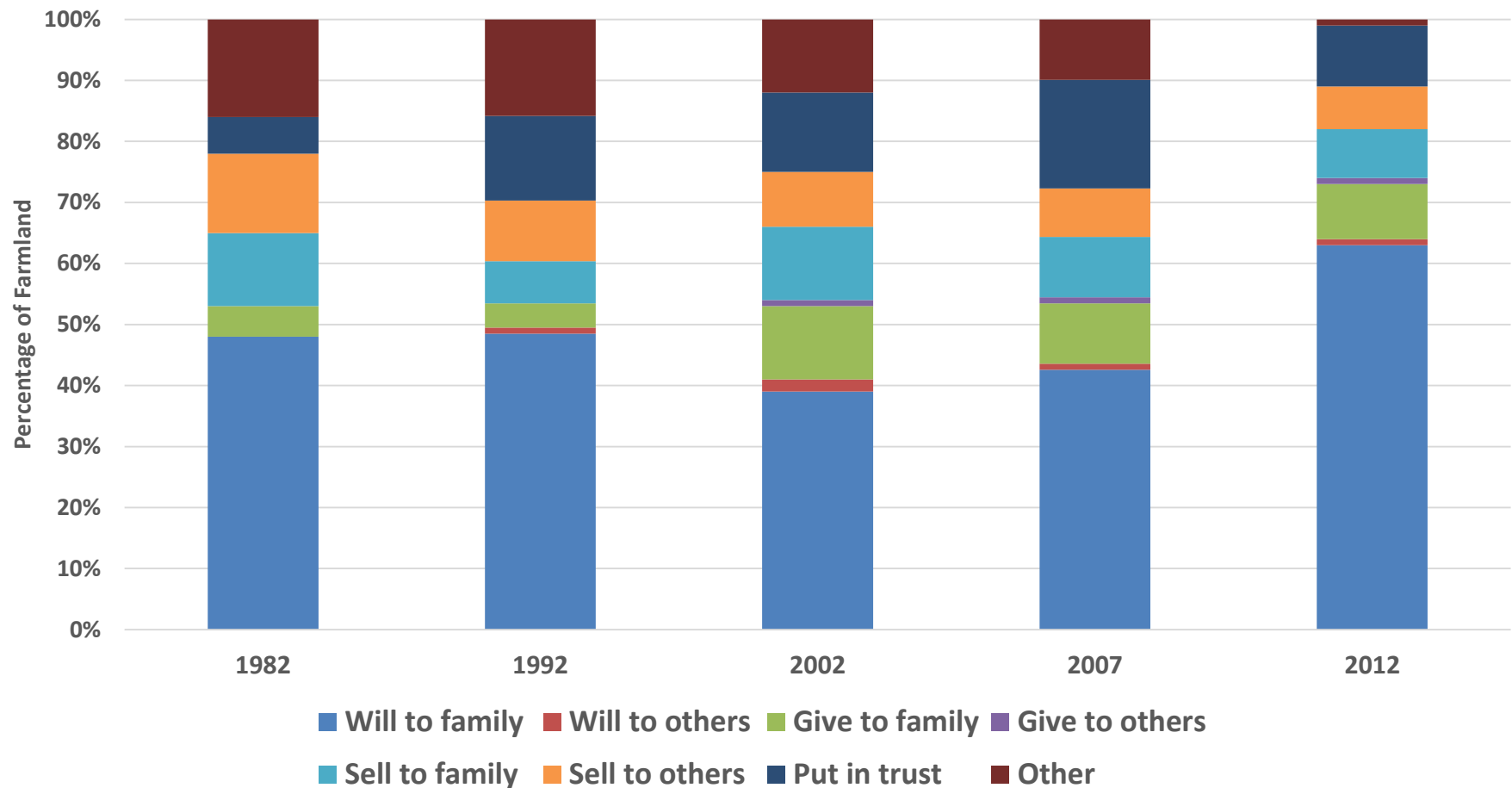
# % of Iowa Farmland by Age and Life Stage of Owners



# Iowa Farmland Purchases by Seller Types, 2016

	Active Farmers	Retired Farmers	Estate Sales	Investors	Other
	PERCENT				
Northwest	12	17	64	5	3
North Central	8	17	61	10	4
Northeast	14	34	43	6	5
West Central	12	25	57	5	2
Central	13	22	53	8	4
East Central	11	24	53	9	2
Southwest	15	24	47	13	1
South Central	17	24	37	19	3
Southeast	11	24	57	10	2
STATE	12	23	53	9	3

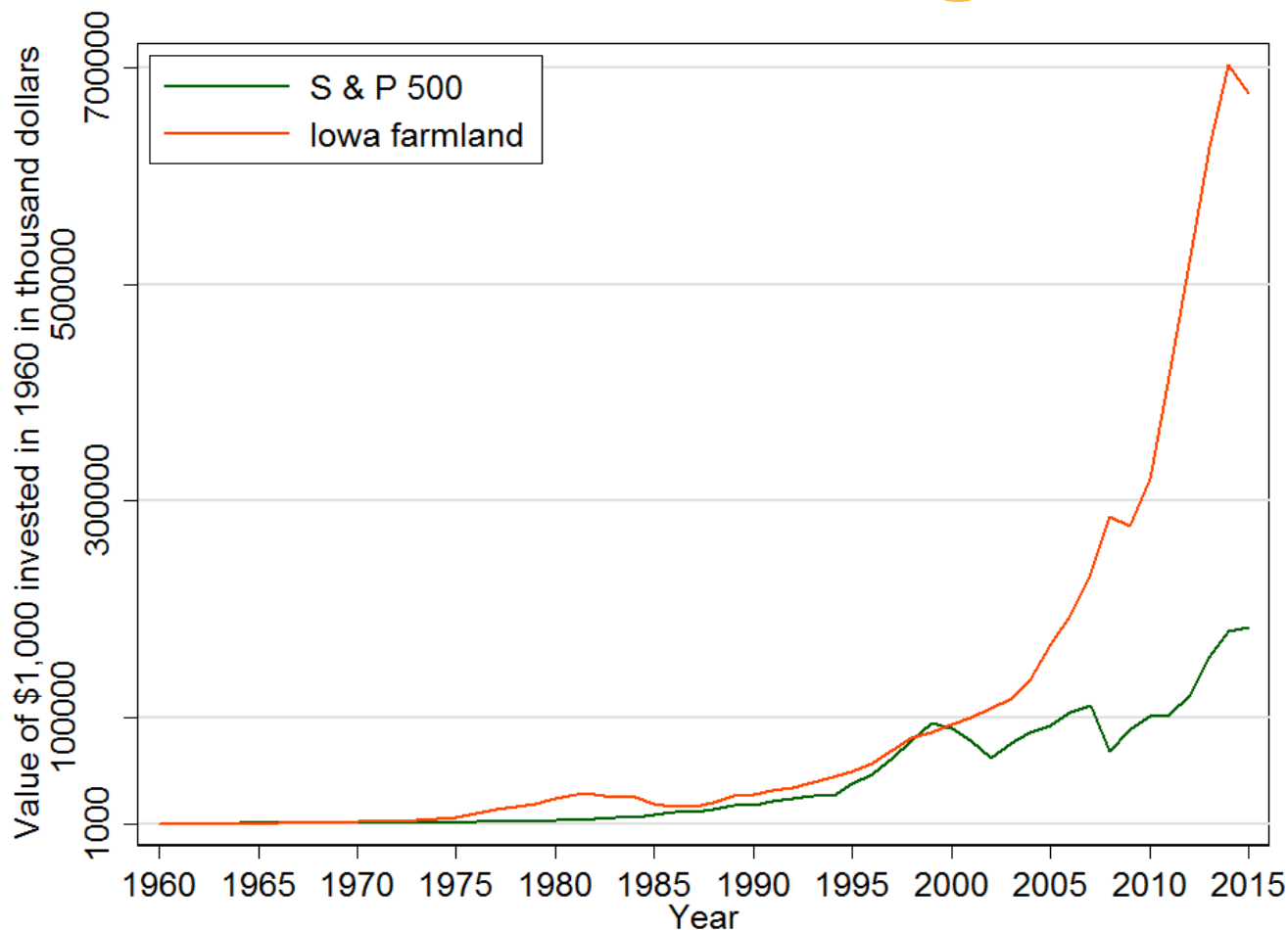
# Method of Anticipated Transfer 1982-2012



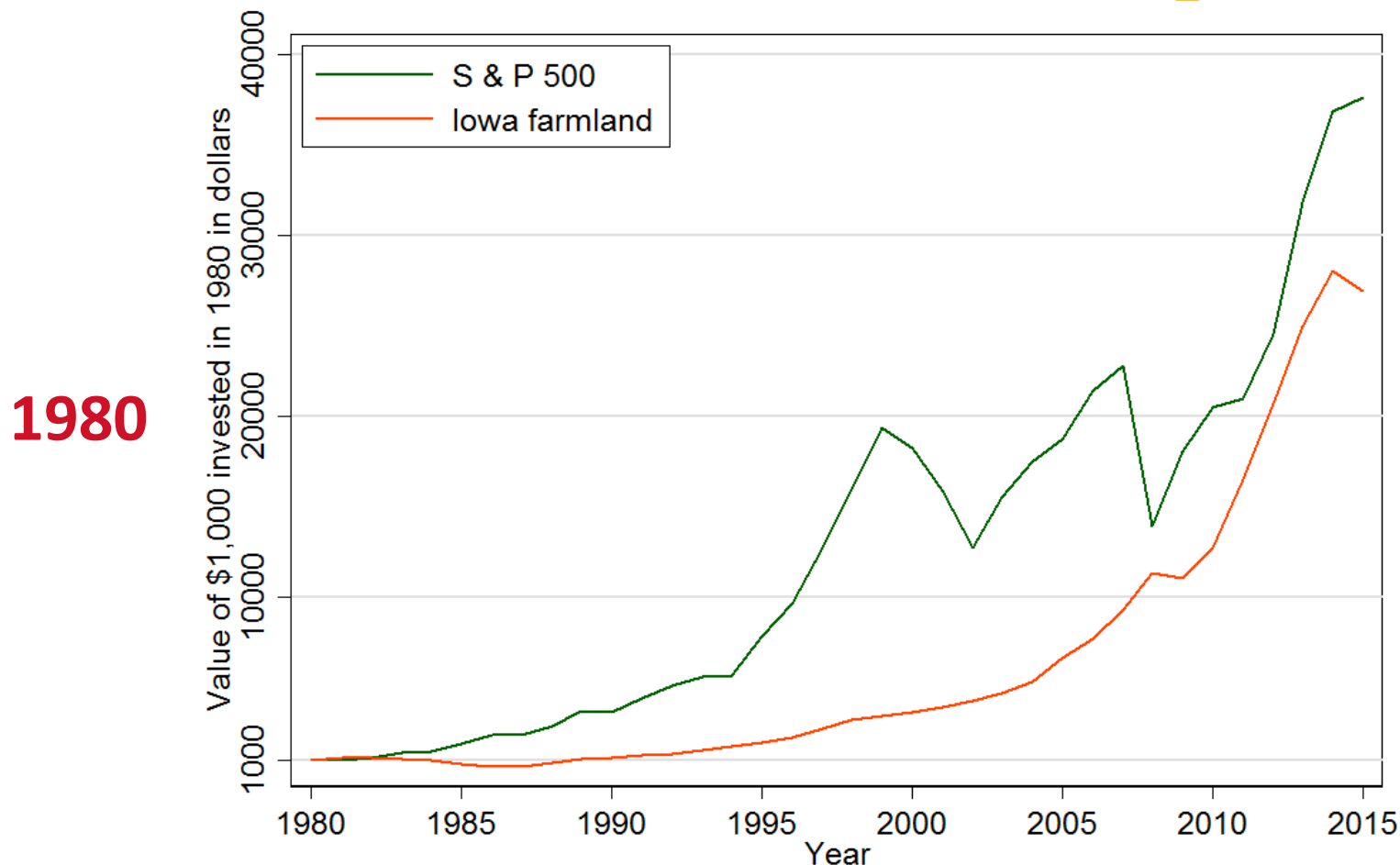


# S&P 500 vs. Farmland Values: A Question of Timing

1960

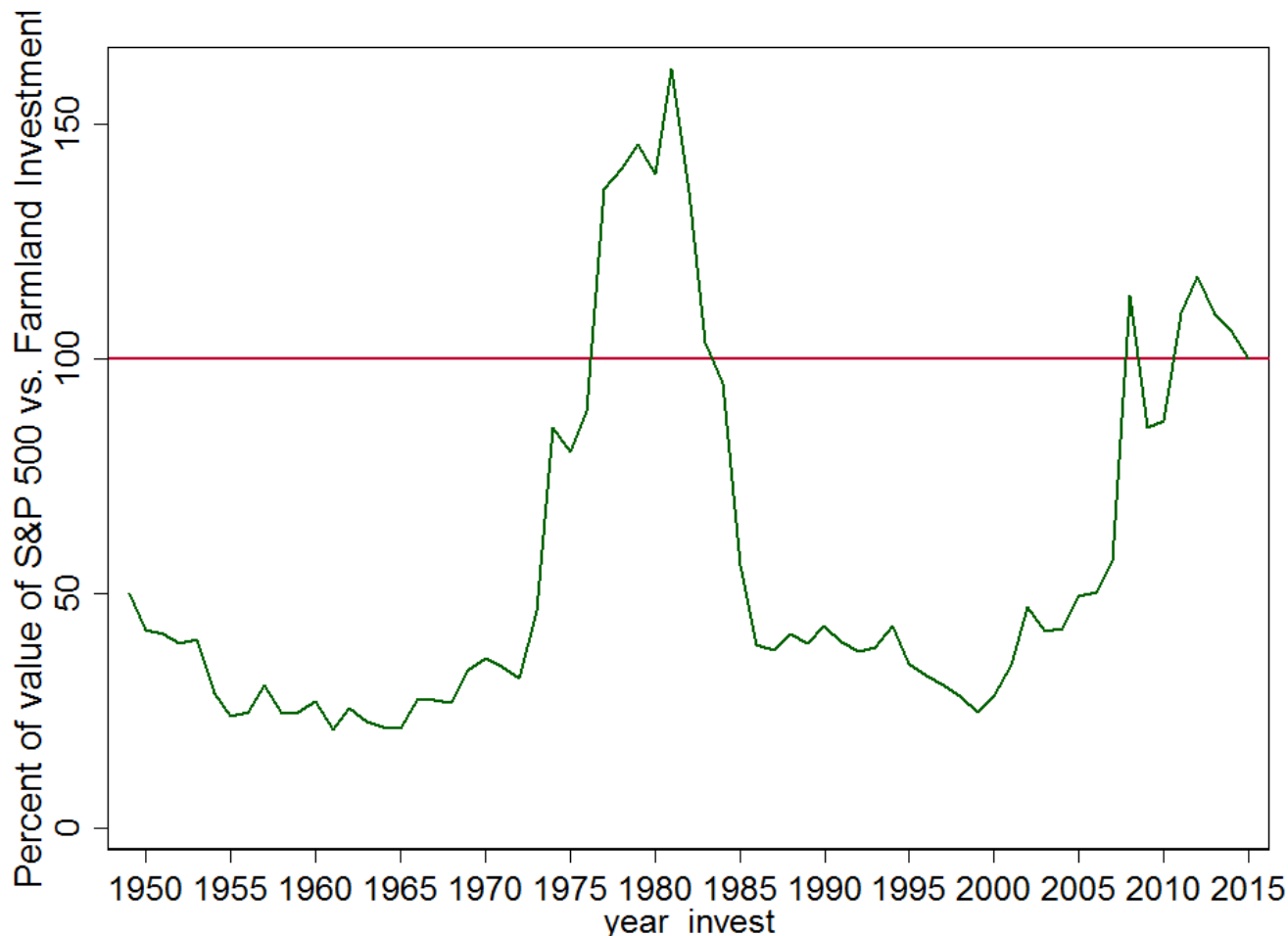


# S&P 500 vs. Farmland Values: A Question of Timing



# S&P 500 vs. Farmland Values: A Question of Timing 1950-2015

**Return to S & P  
Investment Relative  
to Iowa Farmland  
Investment**



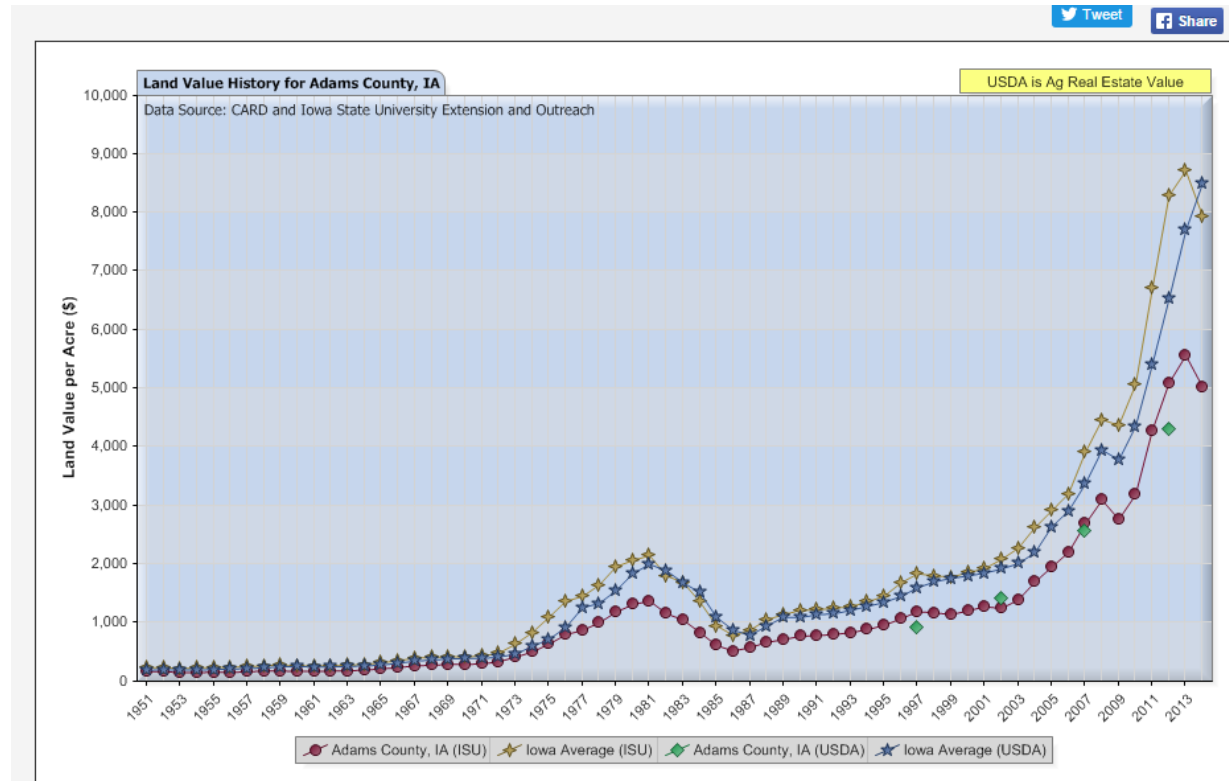
# **A New, Interactive Iowa Farmland Value Portal**

**<http://card.iastate.edu/farmland/>**

# Iowa Farmland Value Portal

**twitter**  
**#ISUland**  
**value**

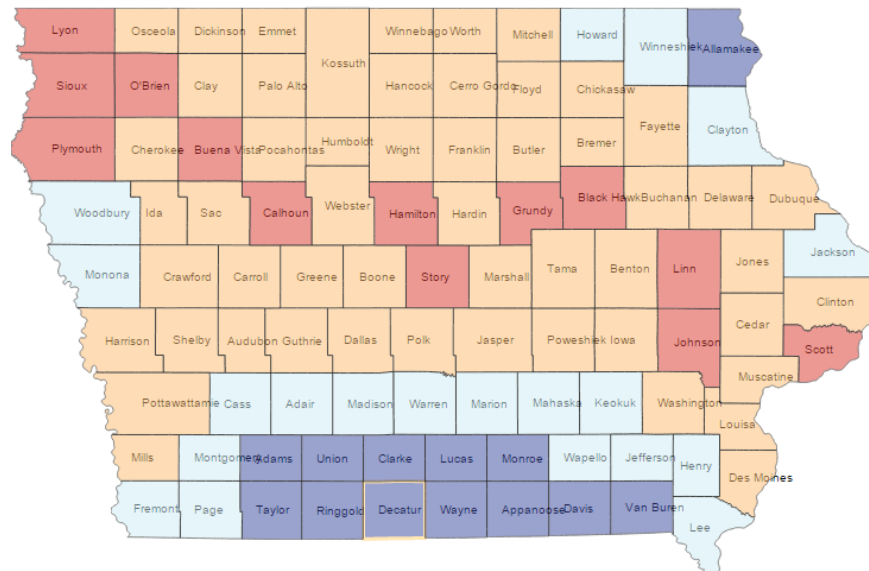
<http://card.iastate.edu/farmland>



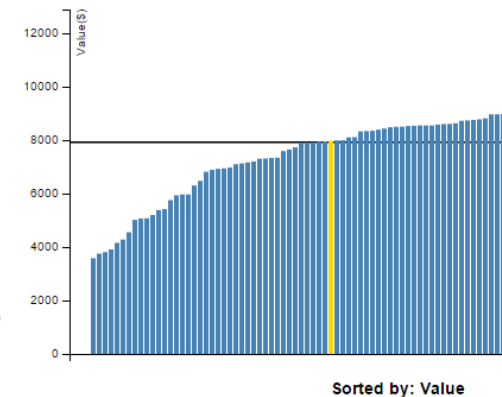
☒ Land Value
 ☐ Value Change(%)
 ☐ Value Change(\$)  
☐ Nominal Value
 ☒ Inflation Adjusted

Year:

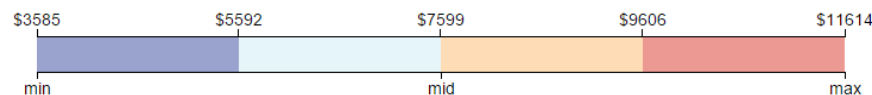
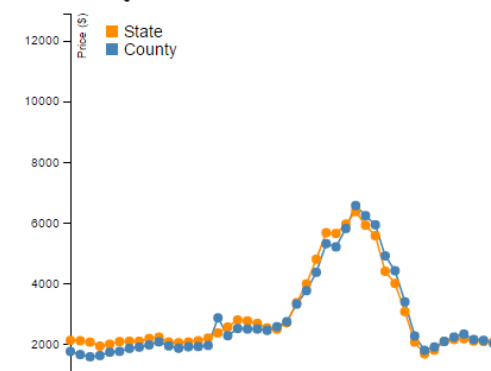
County:



Iowa County Land Value in 2014



Land Value Trend in County: Dubuque





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# Thank You!

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