Land Values: Where Are We Headed?

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2016 Pro-Ag Meetings, November and December, 2016

Waterloo, Fort Dodge, Mason City, Carroll, Decorah, Iowa City, Cedar Rapids, Mt. Pleasant, Clarinda, Iowa

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The new Mike Duffy

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A Quick Introduction: Dr. Wendong Zhang

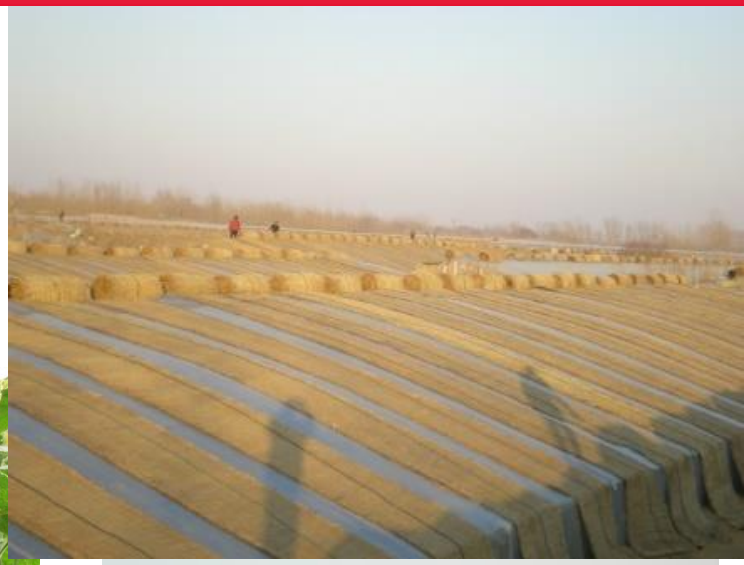
- Grown up in a rural county in NE China
- Attended college in Shanghai and Hong Kong
- Ph.D. in Ag Econ in 2015 from Ohio State
- 2012 summer intern at USDA-ERS on farm economy and farmland values
- Research and extension interests: land value, land ownership, agriculture and the environment, China Ag

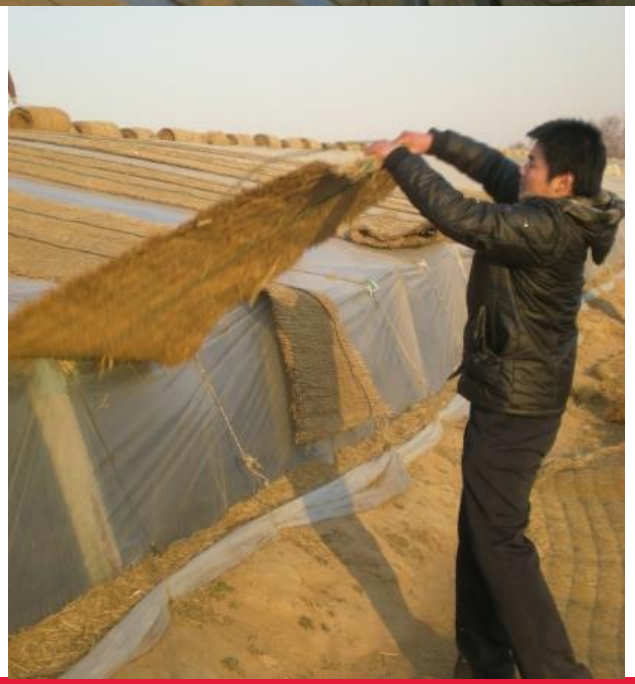
China's Provinces

My Hometown: Shenxian, Shandong Province

Intensification of Land-Use in China

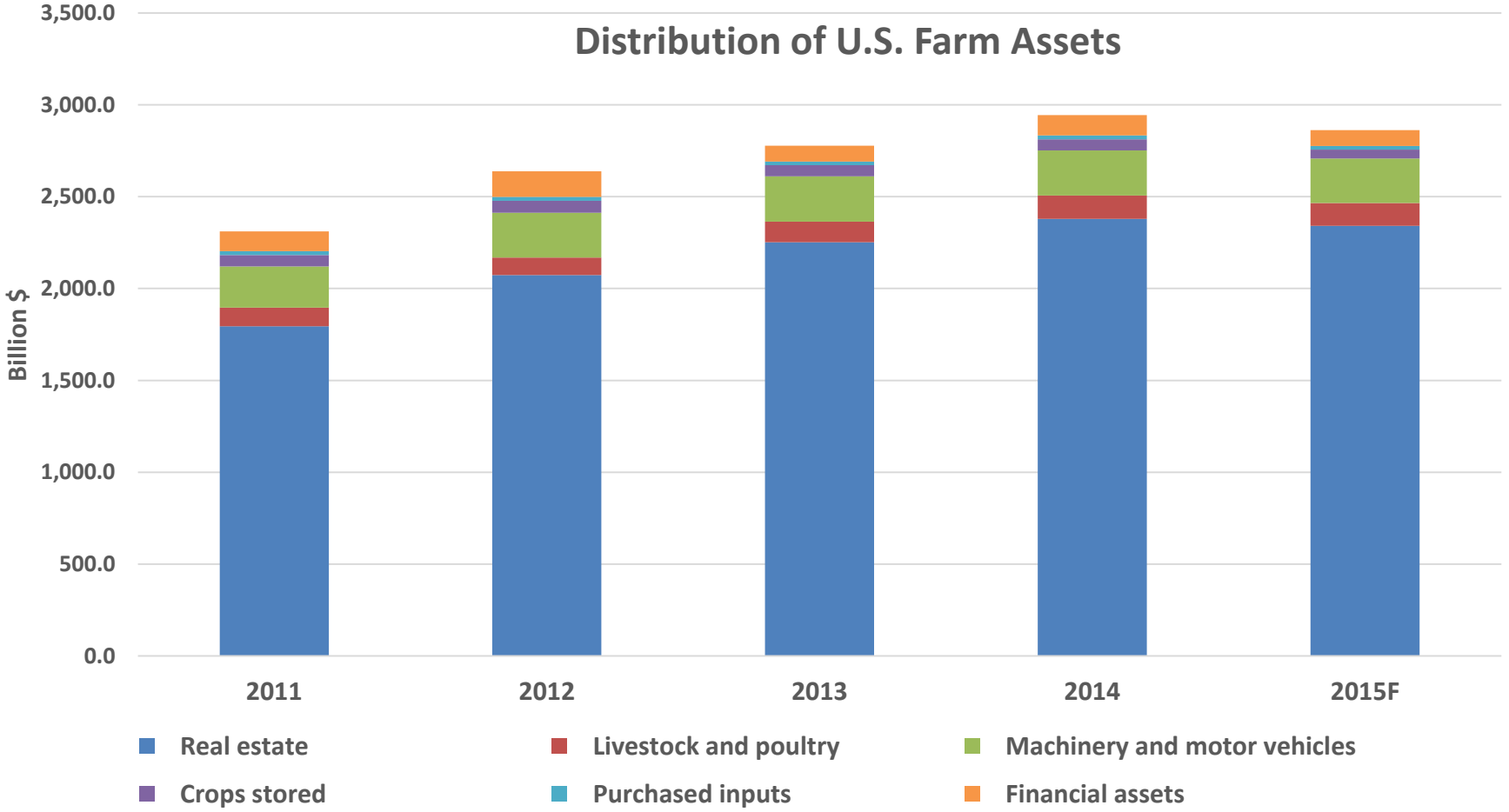
Greenhouse – plastic film - Shandong Province





Pudong, Shanghai in 30 years

Why Care About Farmland Market?



Please Participate the 2016 ISU Land Value Survey by Dec 2nd

When: Now – Dec 2nd, 2016

How: http://bit.ly/landvalue16/

Who: Ag Professionals (farm managers, appraisers, ag lenders, broker/realtor, sales etc.)

Contact: Dr. Wendong Zhang

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515-294-2536

(Paper copies are also part of the handouts)

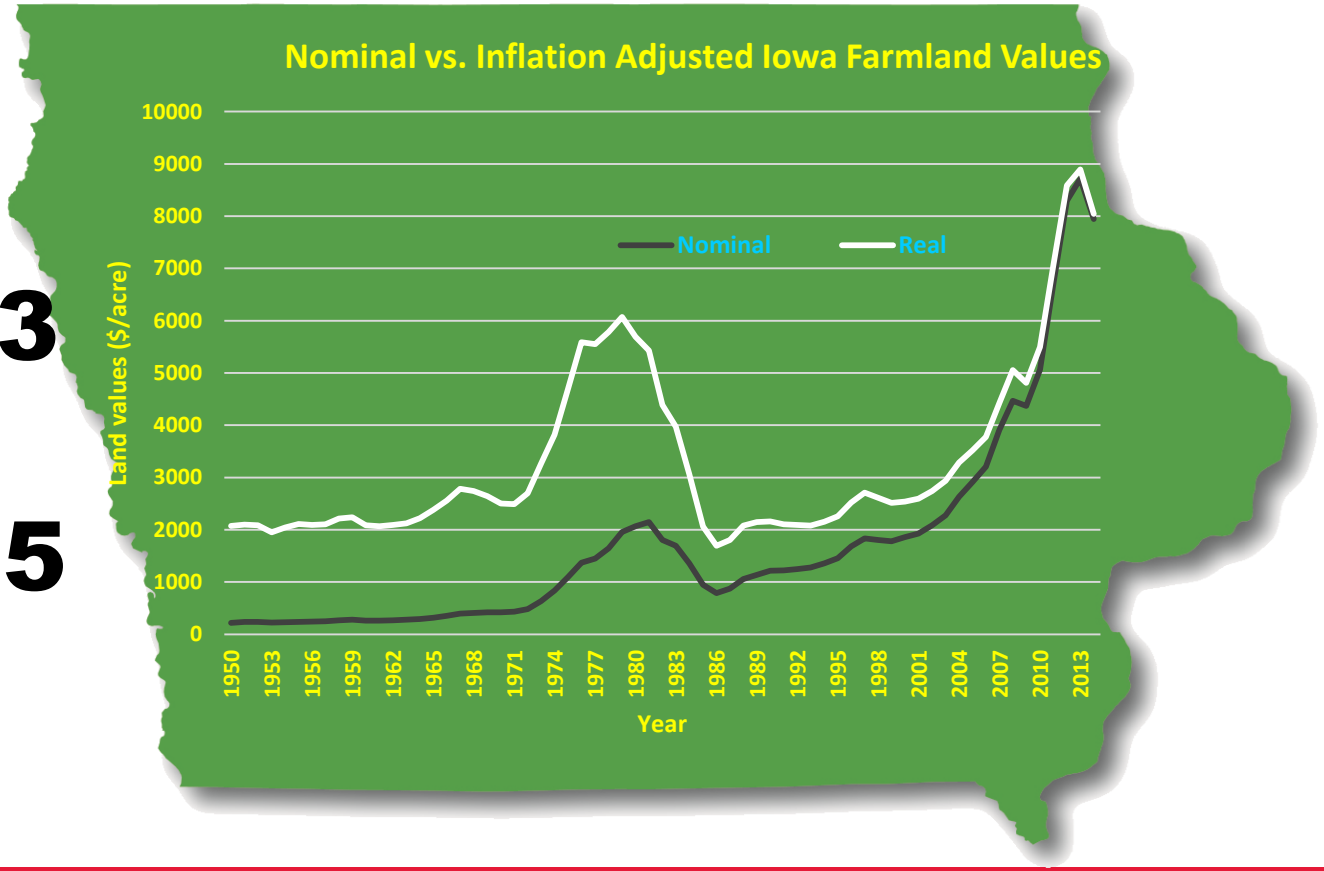
Current Situation of Iowa Farmland Market and Beyond

Iowa Farmland Values

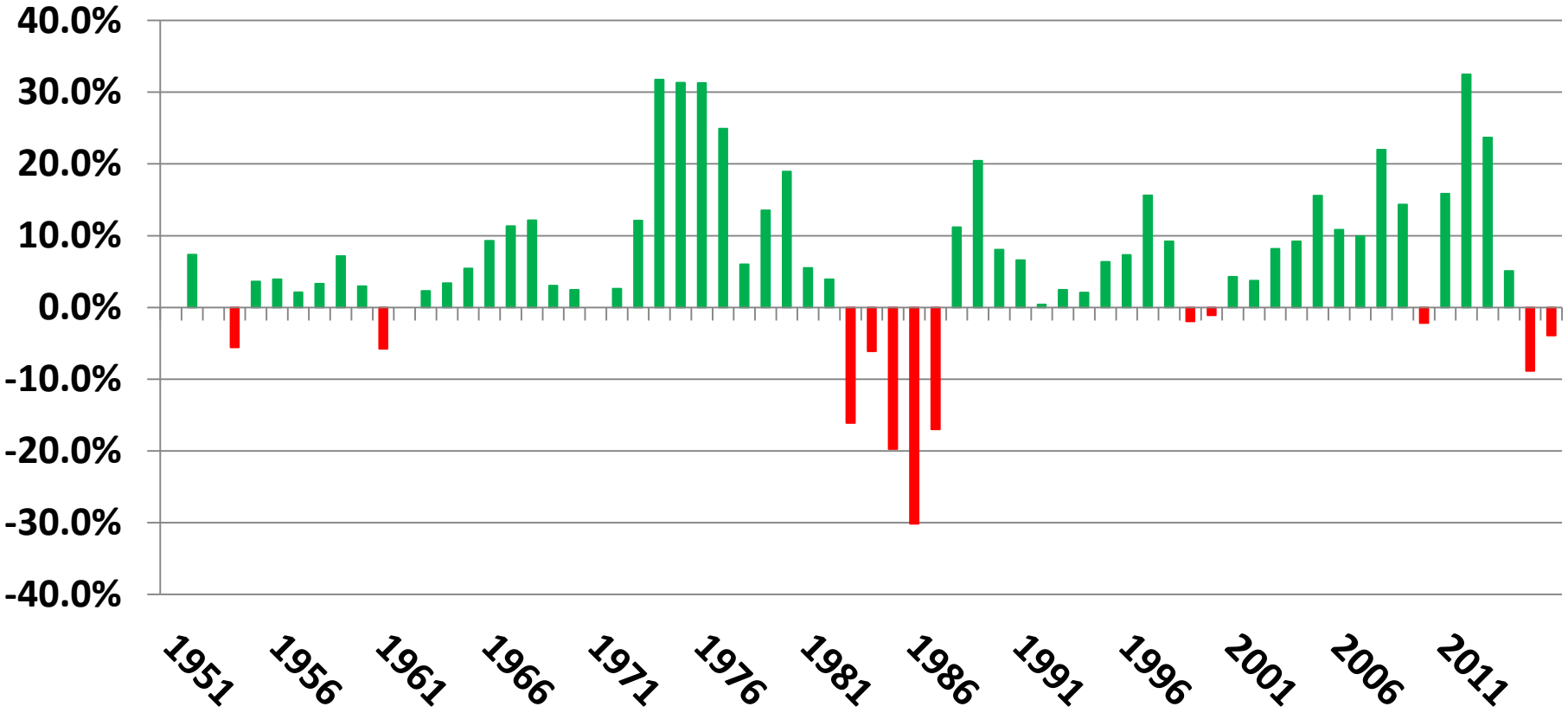
all farmland 1950–2015

$7,633
As of
Nov 15

-3.9%



% Change in Iowa Farmland Values 1951-2015



Not Every Iowa District Are Created Equal

2015 Iowa Land Values by Crop Reporting District

Land Values by District and Land Quality, 2015

District	Average Value	% Change	High Quality	% Change	Medium Quality	% Change	Low Quality	% Change
Northwest	$9,685	**0.7%**	$11,229	**0.3%**	$8,834	**1.6%**	$6,252	**2.6%**
North Central	$7,962	**-6.7%**	$8,976	-6.8%	$7,352	-6.6%	$5,372	**-1.0%**
Northeast	$7,861	-3.6%	$9,575	-5.0%	$7,460	-1.7%	$5,242	-0.3%
West Central	$8,061	-4.3%	$9,684	-5.8%	$7,581	-3.2%	$5,082	-1.8%
Central	$8,505	**-6.4%**	$10,087	-6.4%	$7,758	-6.8%	$5,292	**-5.2%**
East Central	$8,506	**-5.6%**	$10,289	-6.8%	$7,934	-5.4%	$5,366	-2.1%
Southwest	$6,372	-2.2%	$8,031	-5.3%	$6,038	**-1.2%**	$4,070	**5.4%**
South Central	$4,397	-1.7%	$6,445	-3.3%	$4,282	**-0.8%**	$2,750	-2.1%
Southeast	$6,892	-4.5%	$9,536	-6.0%	$6,525	-2.8%	$3,797	-2.4%
Iowa Avg.	**$7,633**	**-3.9%**	**$9,364**	**-5.0%**	**$7,127**	**-3.2%**	**$4,834**	**-0.9%**

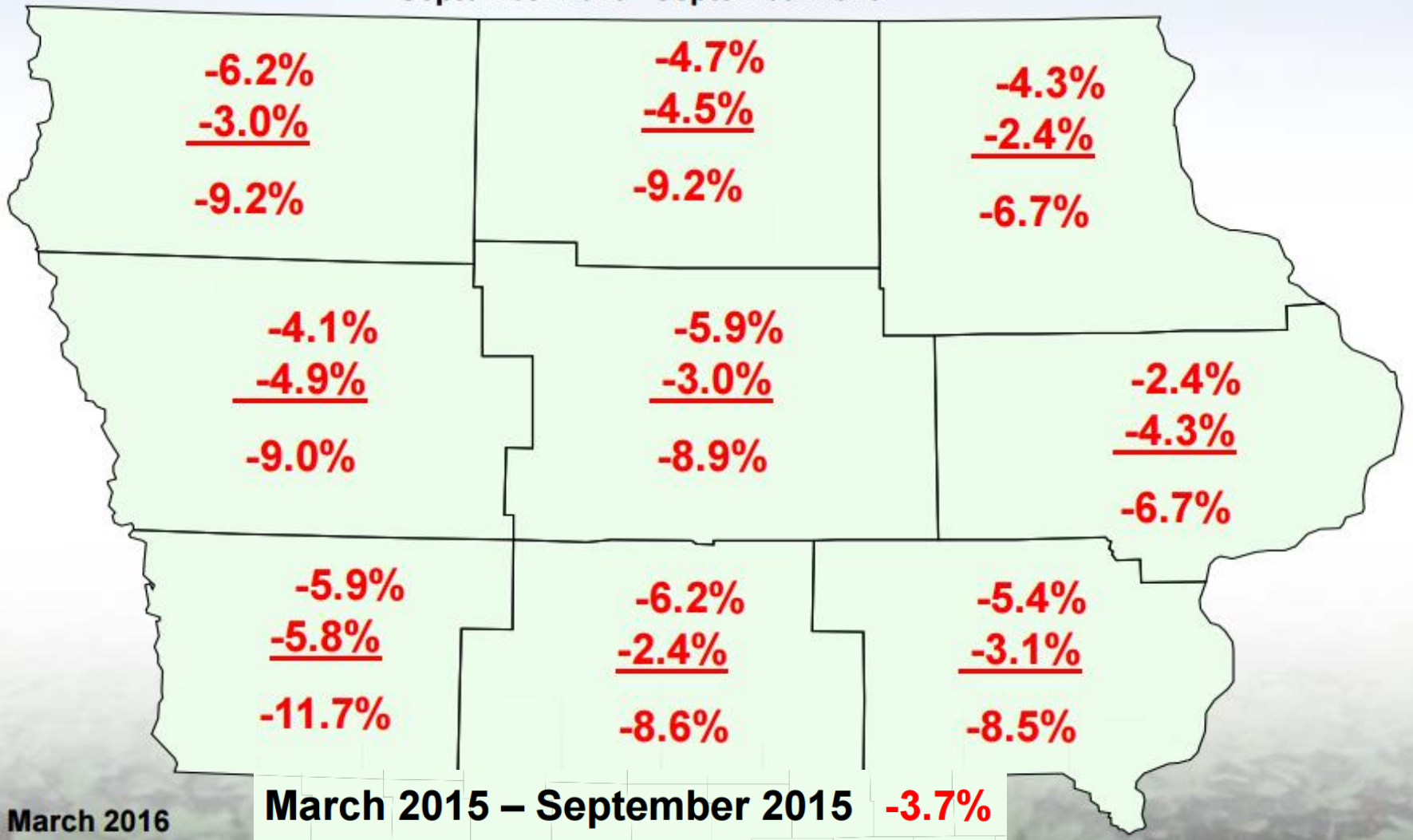
Livestock and Crop Inventory by District

	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

REALTORS® Land Institute Land Value Survey

September 1, 2016

September 2015– September 2016

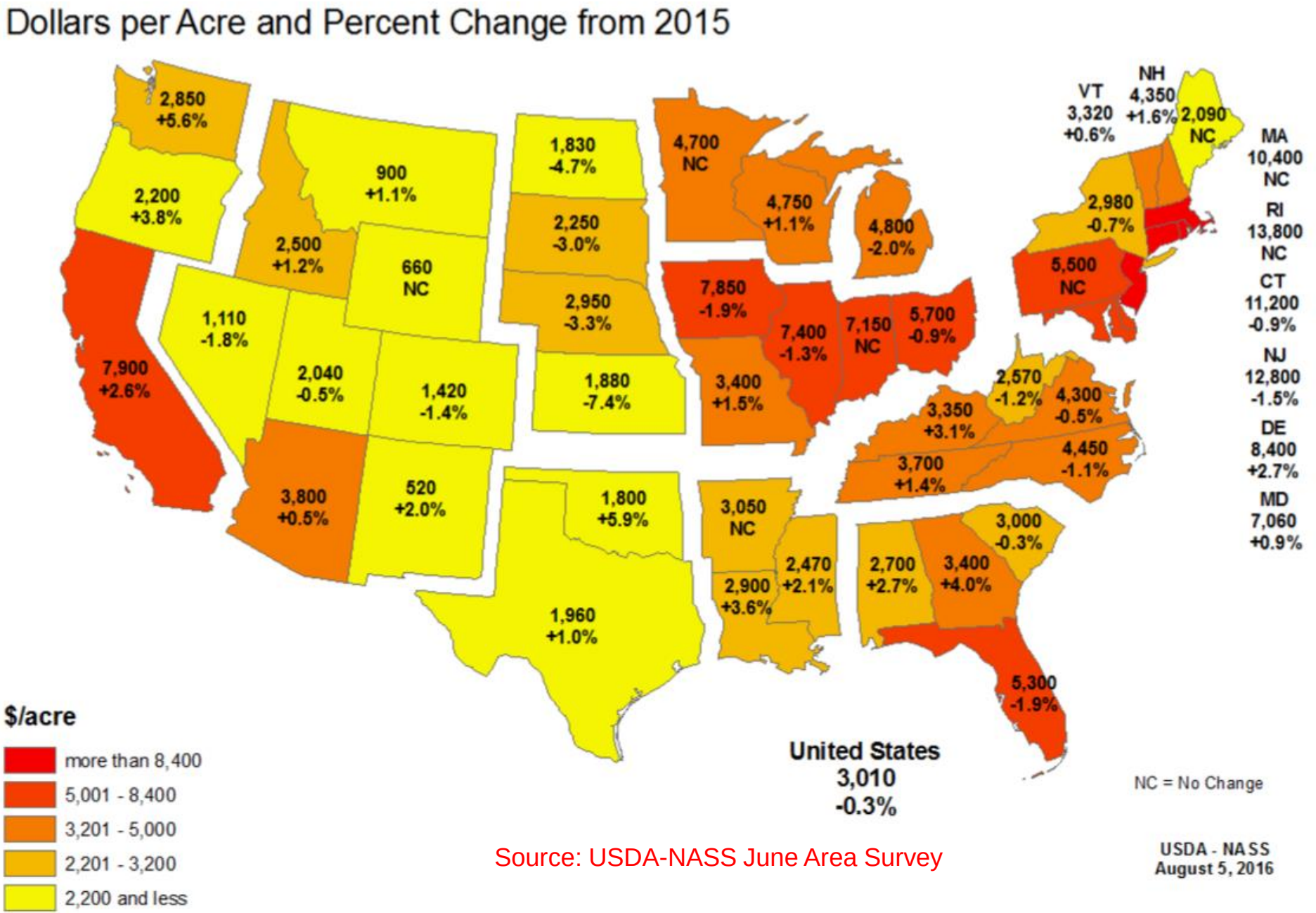


Top – March 2016

Bottom – September 20

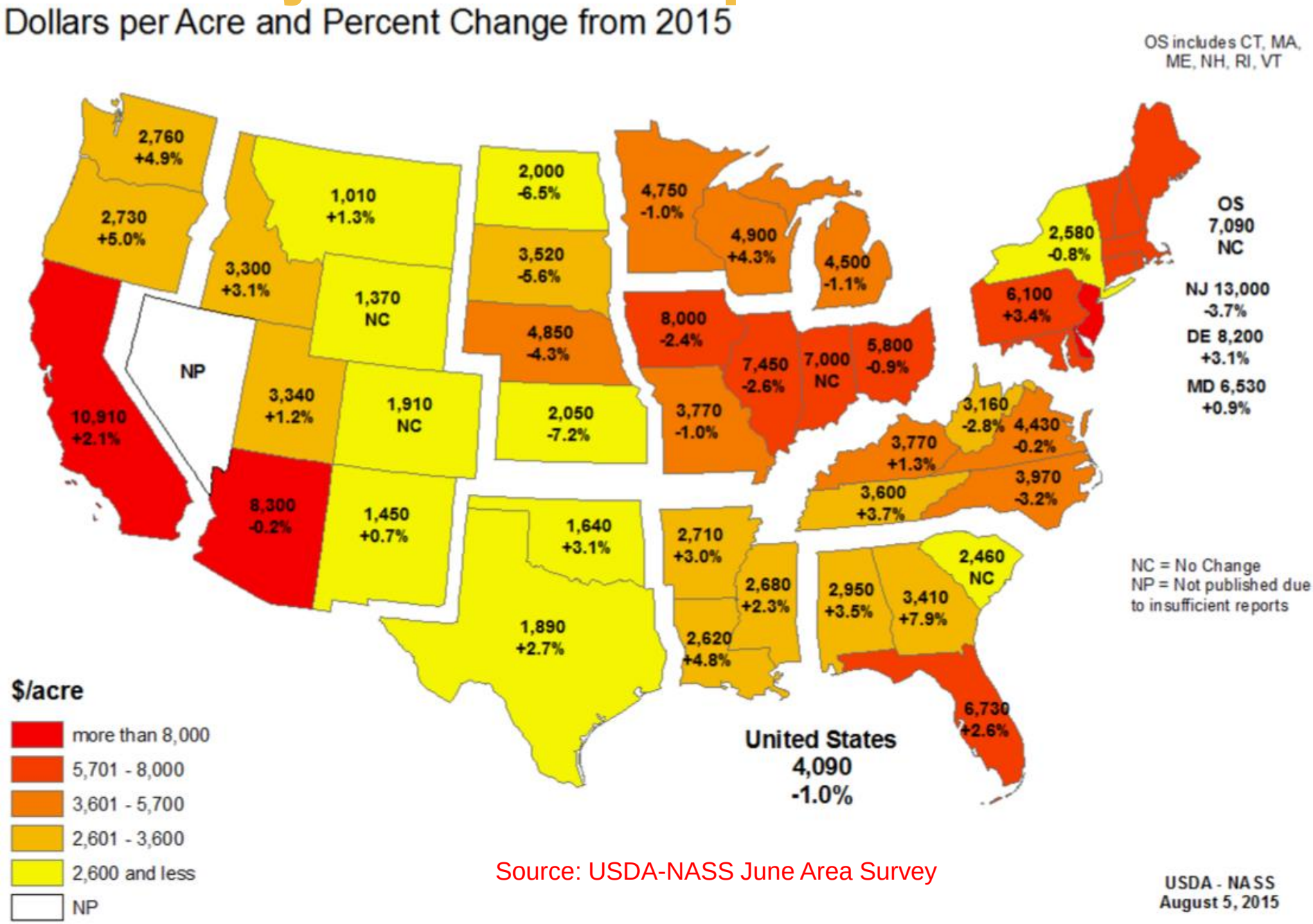
March 2015 – September 2015	-3.7%
September 2015 – March 2016	-5.0%
	- 8.7%

Beyond Iowa – farm real estate values

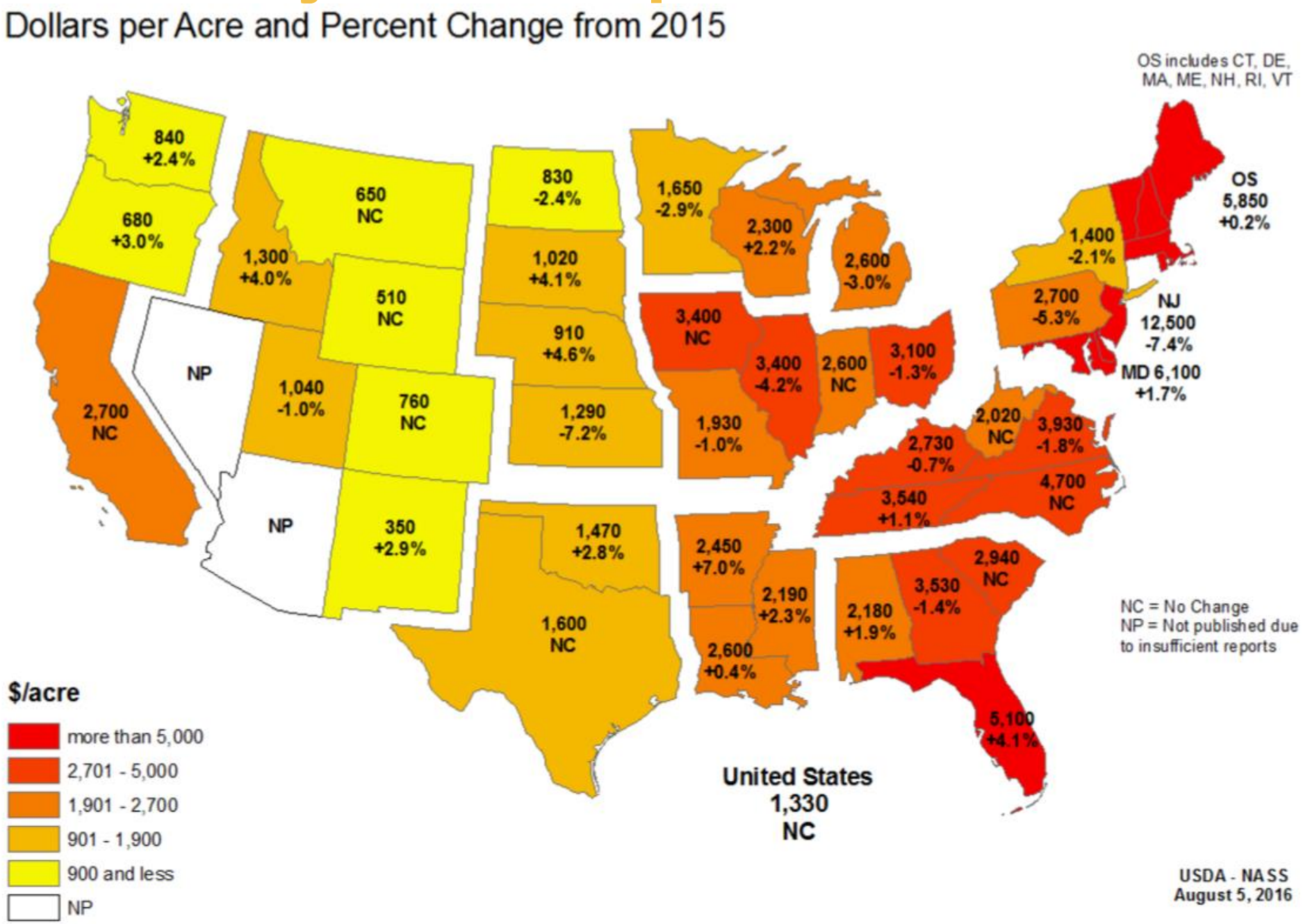


Source: USDA-NASS June Area Survey

Beyond Iowa – cropland values



Beyond Iowa – pasture values



Percent change in dollar value of "good" farmland

Chicago Fed Ag Letter
November 2016

	July 1, 2016 to October 1, 2016	October 1, 2015 to October 1, 2016
Illinois	–1	–4
Indiana	0	+1
Iowa	–1	–5
Michigan	–3	–11
Wisconsin	0	+2
Seventh District	–1	–3

Table: Tenth District Farmland Value by State, Third Quarter 2016

Percent change from previous year *

	Nonirrigated	Irrigated	Ranchland
Kansas	- 14.4	- 16.7	- 8.7
Western Missouri	1.7	n/a **	- 0.4
Mountain States***	- 2.4	3.1	- 0.5
Nebraska	- 5.4	- 5.2	- 9.0
Oklahoma	- 4.6	- 7.6	- 4.4
Tenth District	- 6.1	- 7.0	- 6.5

* Percent changes are calculated using responses only from those banks reporting in both the past and the current quarters.
** Not reported due to small sample size.
*** Mountain States include Colorado, northern New Mexico and Wyoming, which are grouped because of limited survey responses from each state.

Kansas City Fed Ag Credit Survey
October 2016

2015 Q3 to 2016 Q3

CARD
Center for Agricultural and Rural Development

Purdue Land Value Survey 2016

Area	Land Class	Corn bu/A	Land Value Dollars Per Acre June 2015 $/A	Dec 2015 $/A	June 2016 $/A	% Change 6/15-6/16 %	12/15-6/16 %
Indiana	Top	198	9,266	8,977	8,508	-8.2%	-5.2%
	Average	166	7,672	7,381	7,041	-8.2%	-4.6%
	Poor	134	5,863	5,668	5,353	-8.7%	-5.6%
	Transition[2]	XXX	11,829	10,386	10,506	-11.2%	1.2%
	Recreation[3]	XXX	4,523	3,477	3,433	-24.1%	-1.3%

USDA NASS Land Value Survey 1950-2016

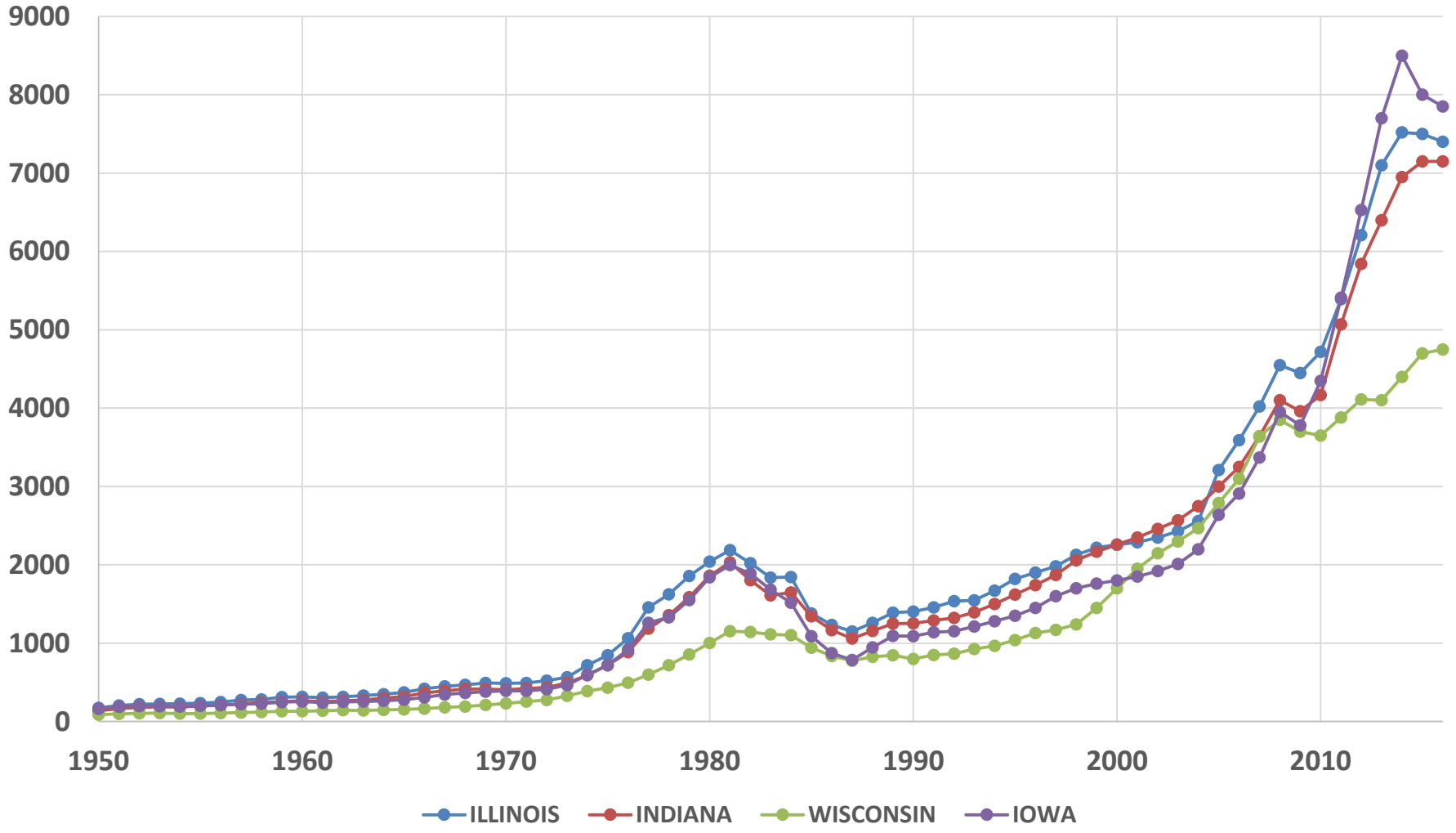


Table 1. Peak Years and Percentage Declines for Cash Rent and Land Values in Iowa, Illinois, and Indiana.

State		Peak Cash Rent (CR)	% CR Decline from Peak to 2015	Peak Farmland Price (P)	% P Decline from Peak to 2015
Iowa					
	USDA-NASS	2014	-3.8%	2014	-6.3%
	Iowa State	2013	-8.9%	2013	-12.4%
Illinois					
	USDA-NASS	2014	-2.6%	2014	-0.1%
	Illinois Society of Profession Farm Managers and Rural Appraisers	2013	-12.3%	2013	-17.1%
Indiana					
	USDA-NASS	2015	0.0%	2014	-0.1%
	Purdue	2014	-1.3%	2014	-3.8%

Farmland Market Outlook

Consensus: Going down
Divergence: Magnitude & Speed of the Decline

Looking Ahead

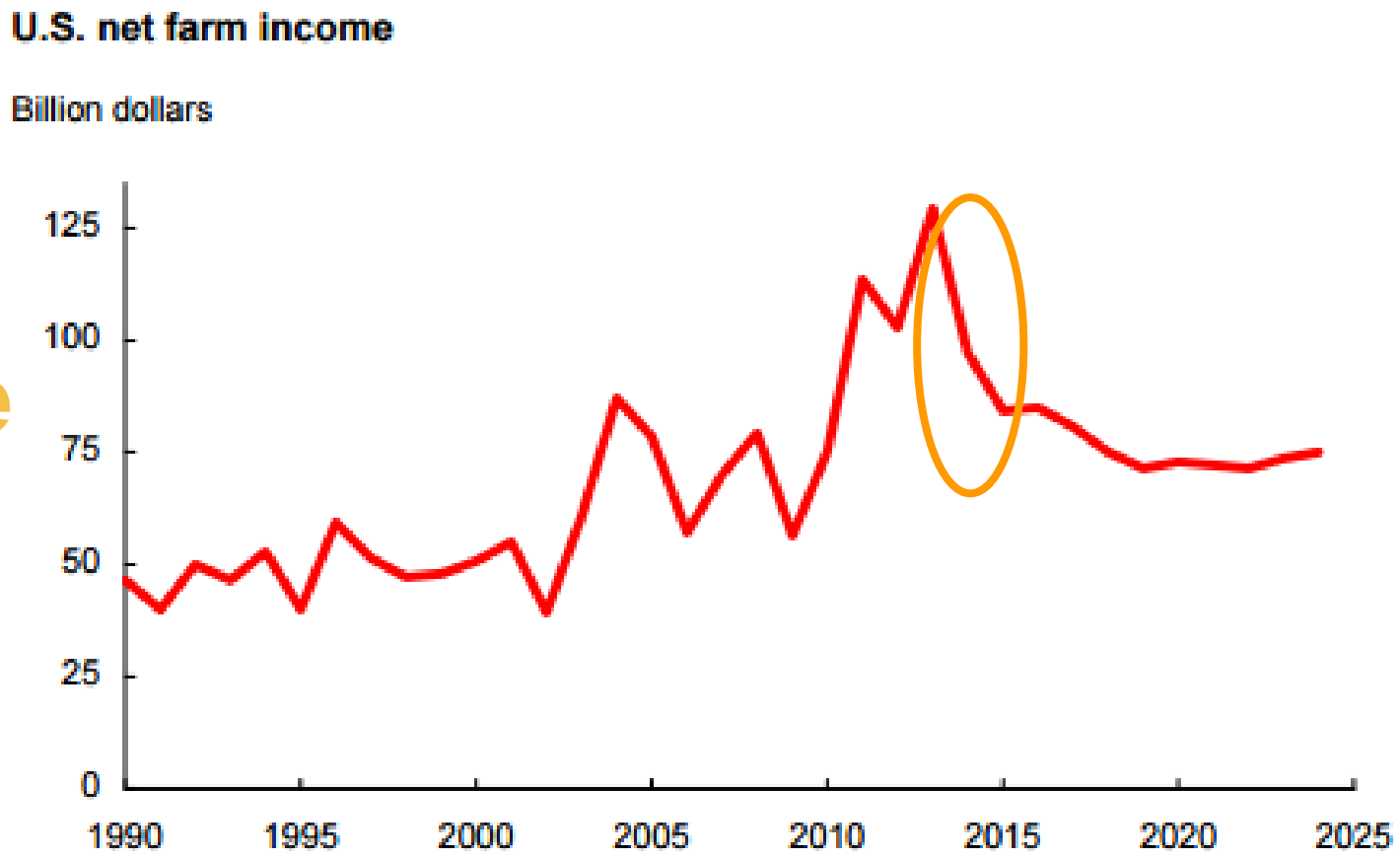
Farmland Values Predictions in the Next Year

District	Increase 5% or more	Increase 0-5%	Stay the same	Decrease 0-5%	Decrease 5-10%	Decrease 10% or more
			PERCENT			
Northwest	**3**	**9**	**28**	36	19	6
North Central	0	2	16	**38**	**44**	2
Northeast	0	2	20	38	36	5
West Central	2	2	22	44	26	4
Central	0	0	13	**48**	33	6
East Central	2	2	18	30	**40**	9
Southwest	2	2	21	**40**	24	**10**
South Central	0	3	10	**33**	**41**	**13**
Southeast	0	0	17	47	33	3
STATE	**1**	**3**	**19**	**39**	**32**	**6**

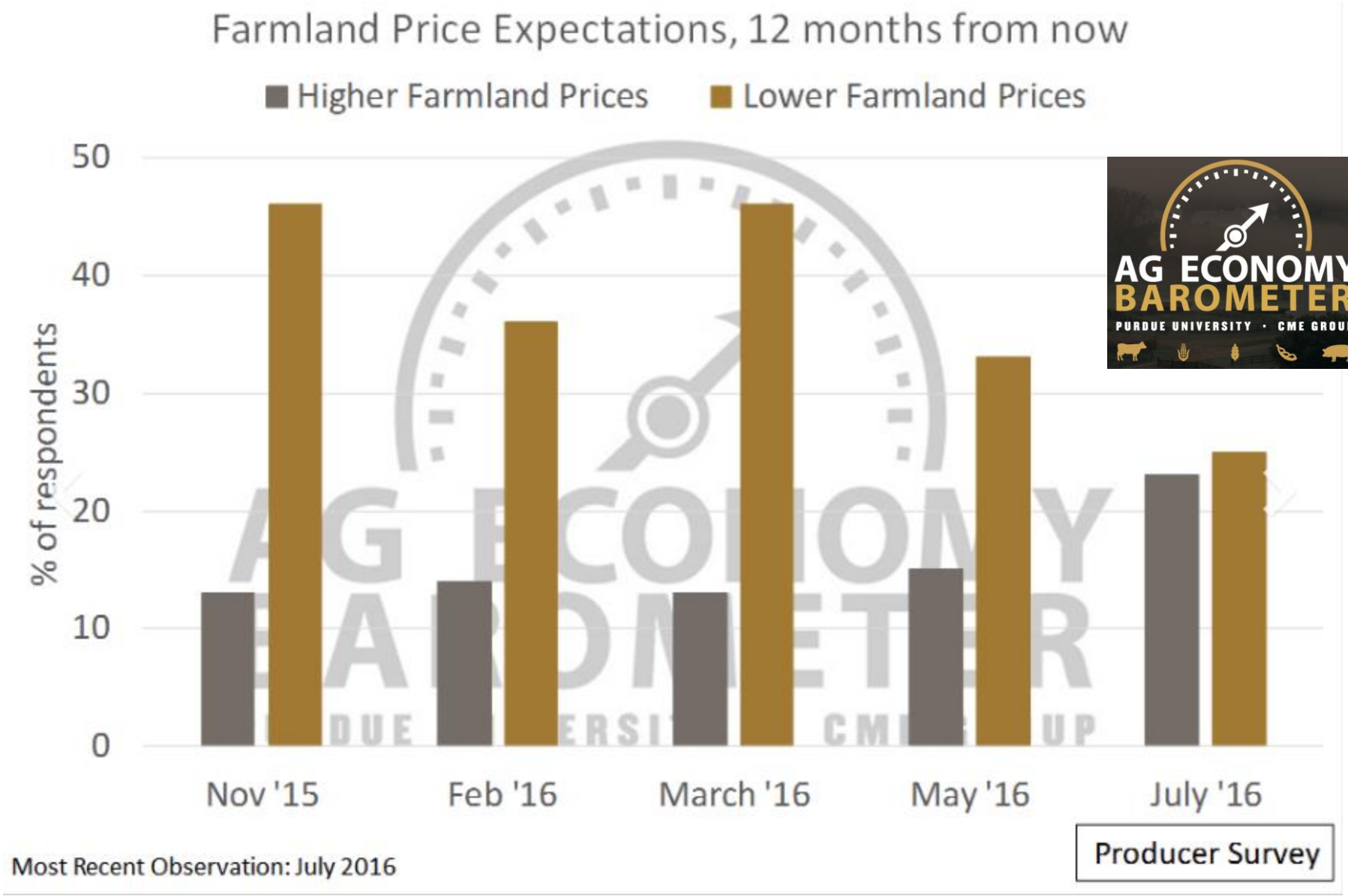
Farmland Values Predictions in Five Years

District	Increase 5% or more	Increase 0-5%	Stay the same	Decrease 0-5%	Decrease 5-10%	Decrease 10% or more
			PERCENT			
Northwest	16	**18**	**20**	16	16	14
North Central	16	12	10	17	**22**	**22**
Northeast	7	**22**	15	10	**22**	**24**
West Central	**20**	20	16	14	16	12
Central	**22**	**21**	19	8	19	11
East Central	9	19	17	19	19	19
Southwest	**18**	15	21	10	13	**23**
South Central	12	12	15	12	**32**	18
Southeast	6	14	26	14	17	**23**
STATE	**14**	**17**	**17**	**14**	**19**	**18**

US Farm Income 1990-2025



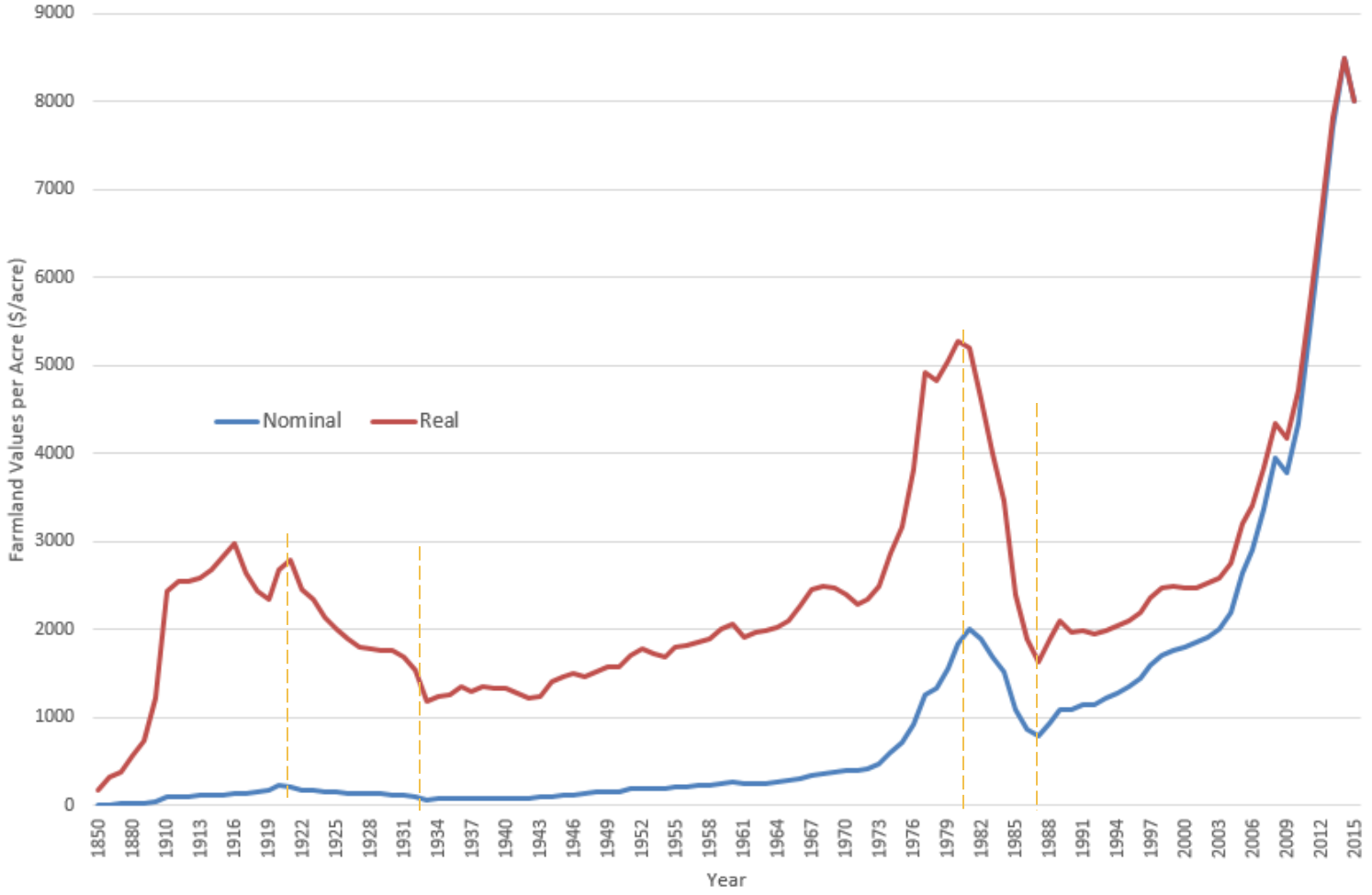
2016 Estimated Land and Commodity Prices					
	AVG. Estimate				
LAND:					
	NW	**NE**	**SW**	**SE**	**STATE**
Nov 2016	$ 8,358	$ 8,191	$ 6,958	$ 7,320	**$ 7,776**
Nov 2017	$ 8,137	$ 7,991	$ 6,991	$ 6,869	**$ 7,572**
Nov 2020	$ 8,884	$ 8,758	$ 7,698	$ 7,614	**$ 8,303**
Nov 2025	$ 10,199	$ 9,756	$ 8,834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


Farmland Price Expectations, 12 months from now
Higher Farmland Prices
Lower Farmland Prices
% of respondents
50
40
30
20
10
0
Nov '15
Feb '16
March '16
May '16
July '16
AG ECONOMY BAROMETER
PURDUE UNIVERSITY · CME GROUP
Most Recent Observation: July 2016
Producer Survey

A Bust of Farmland Market Bubble?

A Replay of 1980s Farm Crisis?

Iowa Ag Real Estate Values 1850-2015



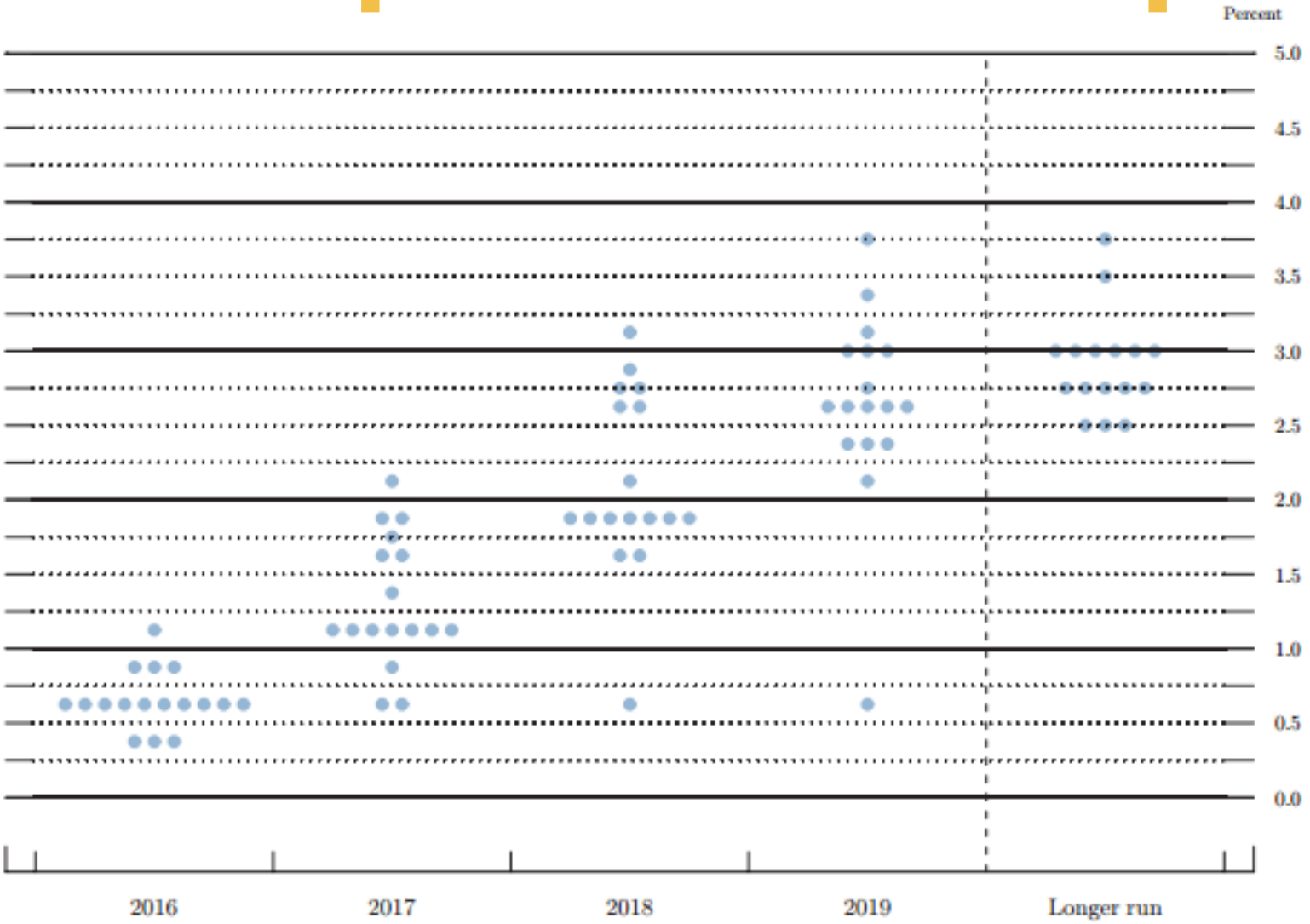
A replay of 1920s or 1980s farm crisis?

Average % change in inflation-adjusted values per year			
Golden Eras			
	Land	***Gross Income***	***Net Income***
1910-1920	1.2%	0.8%	0.2%
1973-1981	9.7%	0.9%	-3.2%
2003-2013	11.1%	4.5%	8.1%
Crises and Declines			
	Land	***Gross Income***	***Net Income***
1921-1933	-5.8%	-1.9%	-1.0%
1981-1987	-15.0%	-2.5%	2.6%
2013-2016	-6.0%*	-2.7%	-9.5%

Key Indicators to Watch
V = I/D

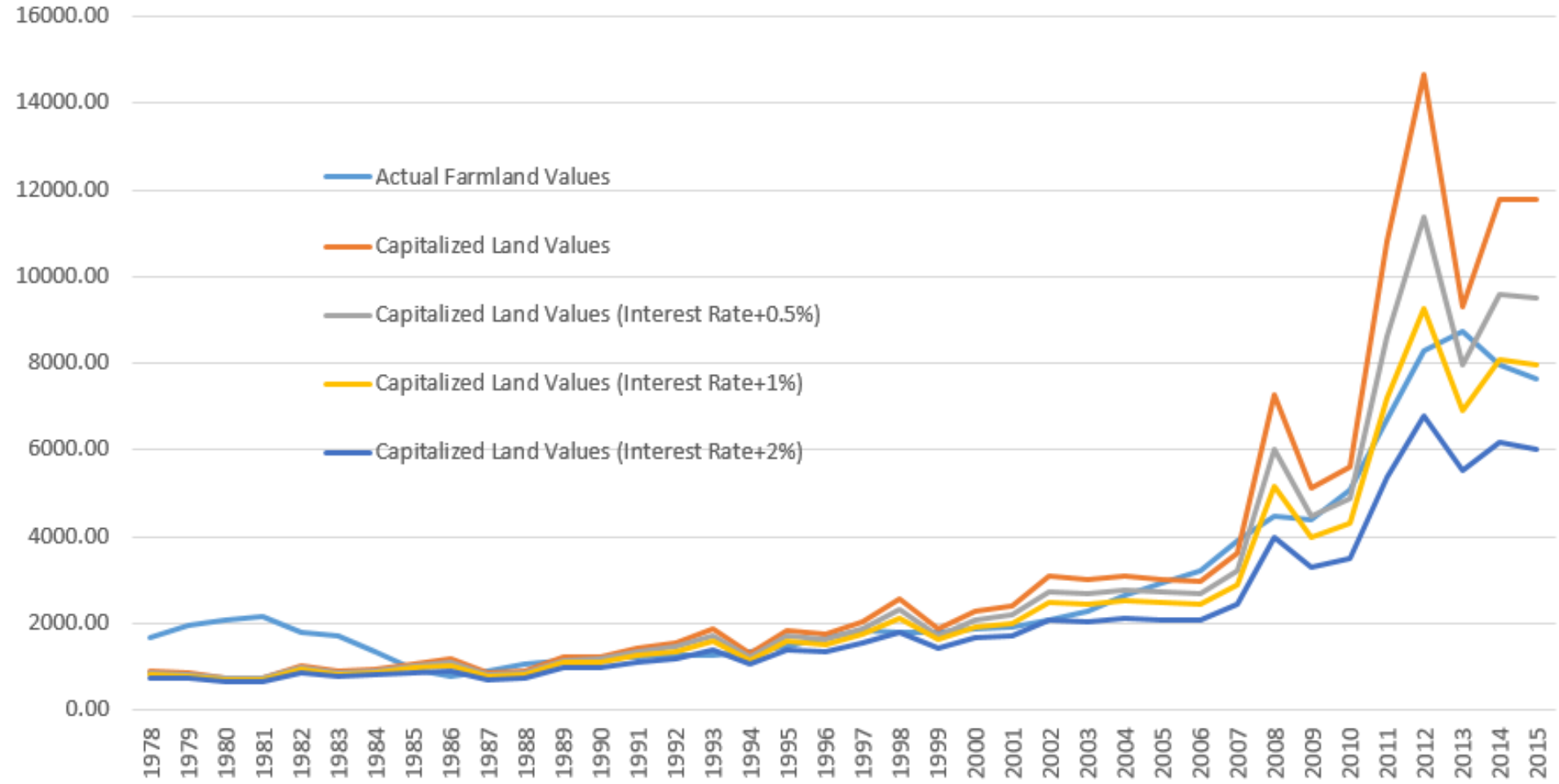
- USDA Farm Income Forecast
  - Price Outlook
  - Ag Exports / Exchange Rate
  - China
  - Ethanol, E-85, RFS
- Fed's move on Interest Rate
- Ag Loan Delinquency; Vendor Credit

Fed's September 16 dot plot



Source: Bloomberg

Farmland Values vs. Capitalized Land Values



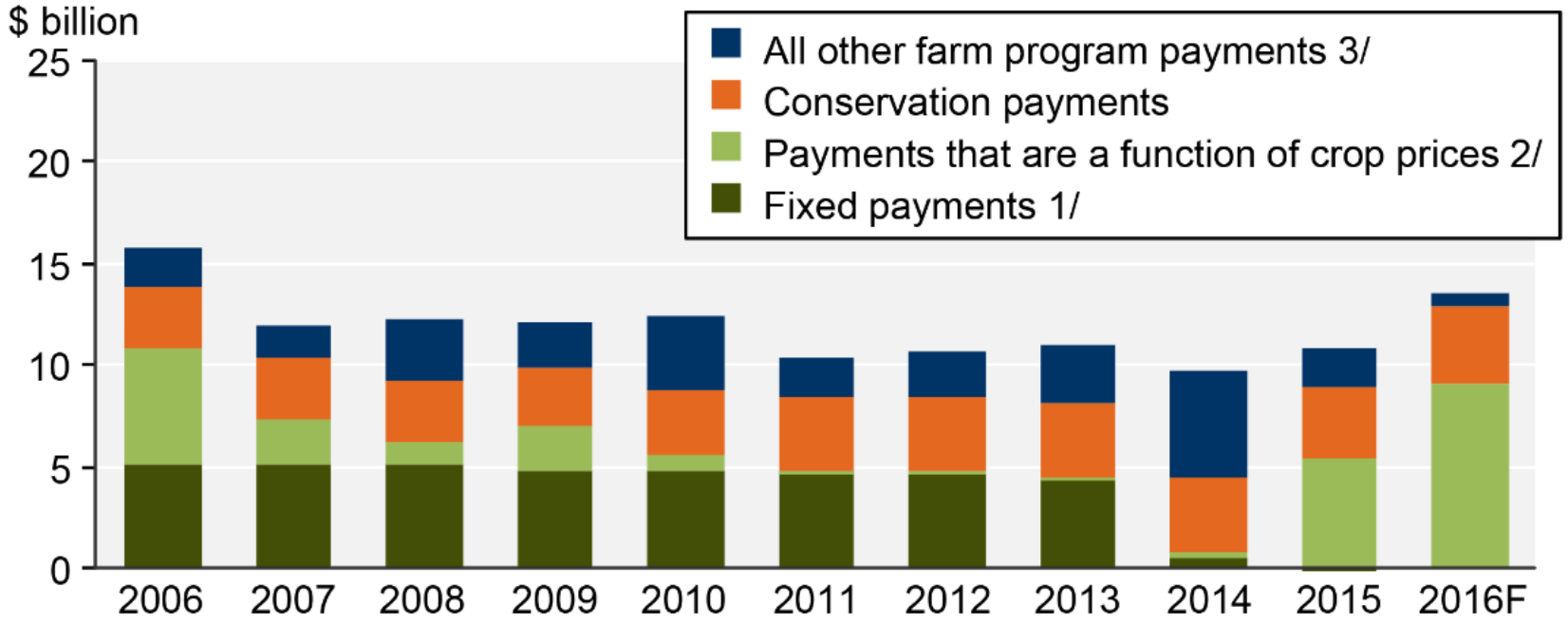
2016 Farm Income Forecast

12% decline from Aug 2015

Net farm income and net cash farm income, 2000-2016F

Note: F = forecast
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of August 30, 2016.

Government farm program payments to farm producers, 2006-2016F



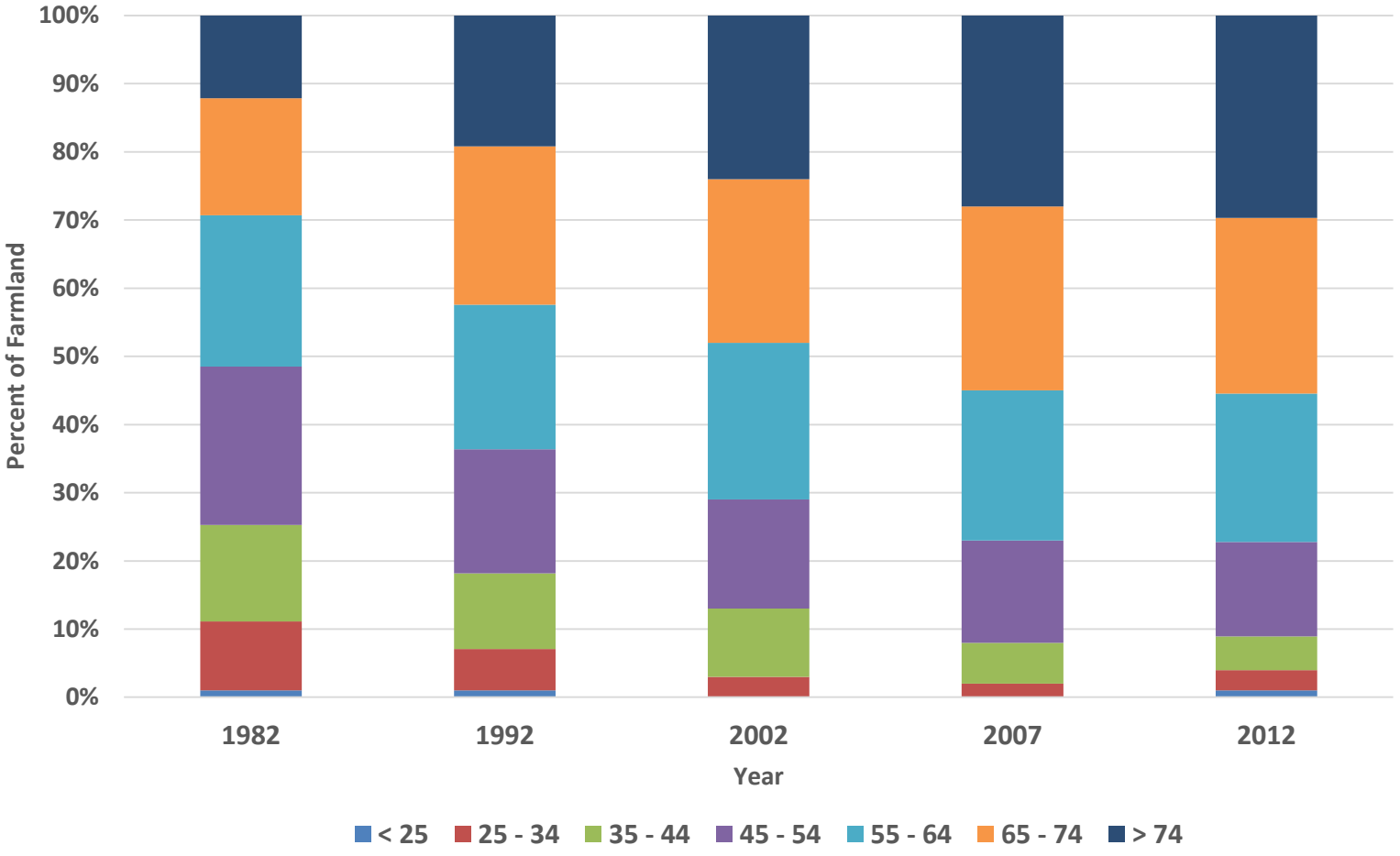
Note: F = forecast.

1/ Includes direct fixed payments portion of Direct and Counter-Cyclical Program (DCP) and Cotton Transition Assistance Program (CTAP) payments. CTAP was designed to make payments only in 2014 and 2015.

2/ Includes counter-cyclical payments (CCP), average crop revenue election (ACRE) payments, loan deficiency payments, marketing loan gains, and certificate exchange gains. The certificate exchange program (CEG) ended after making payments for the 2009 crop year but was restored beginning with the 2015 crop year. CCP and ACRE were not continued in the 2014 Farm Bill. Price loss coverage (PLC) and agricultural risk coverage (ARC) payments began in 2015.

3/ All other payments include supplemental and ad hoc disaster assistance, tobacco transition, and dairy programs.

% of Farmland by Age and Life Stage of Owners



Iowa Farmland Purchases by Buyer Types 1986-2015

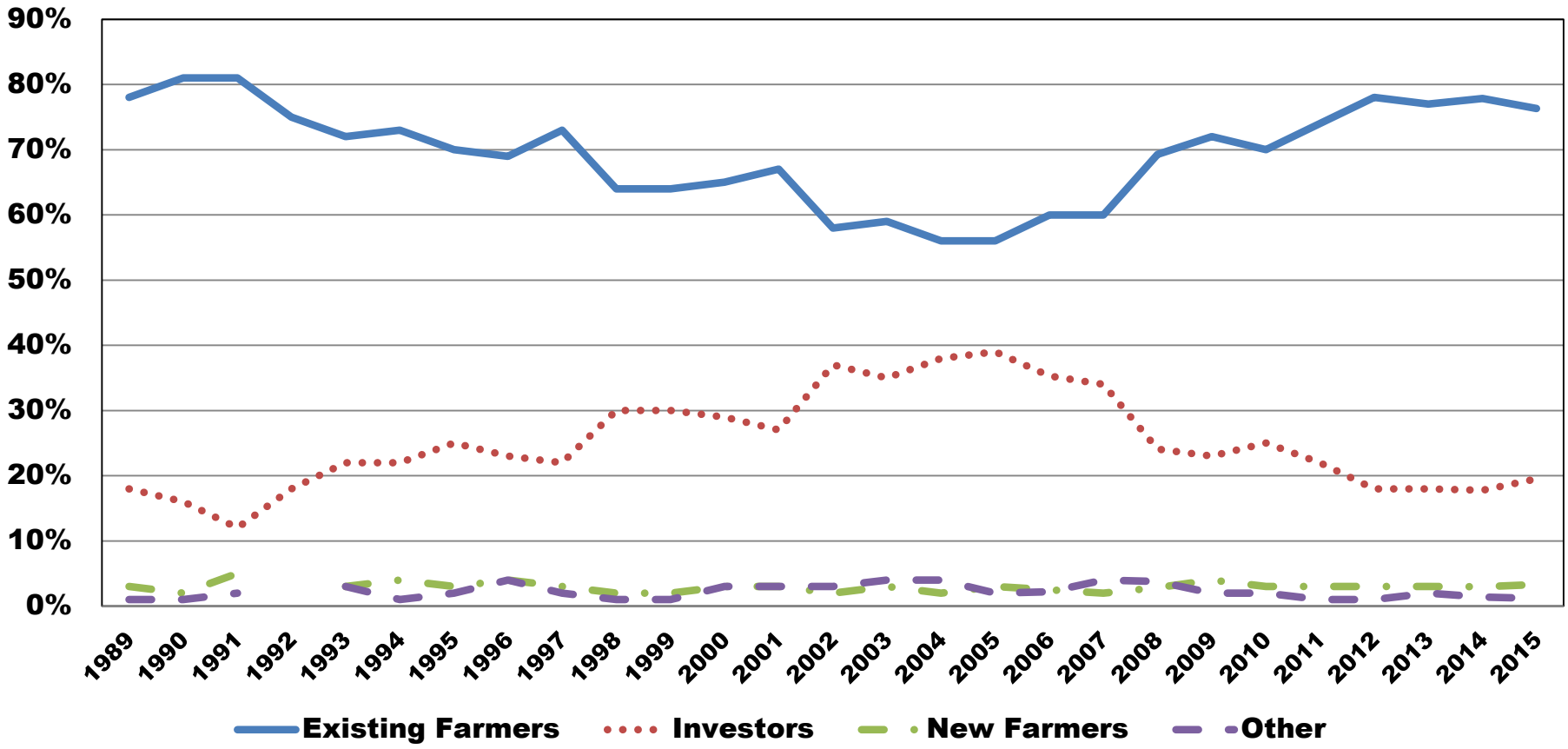
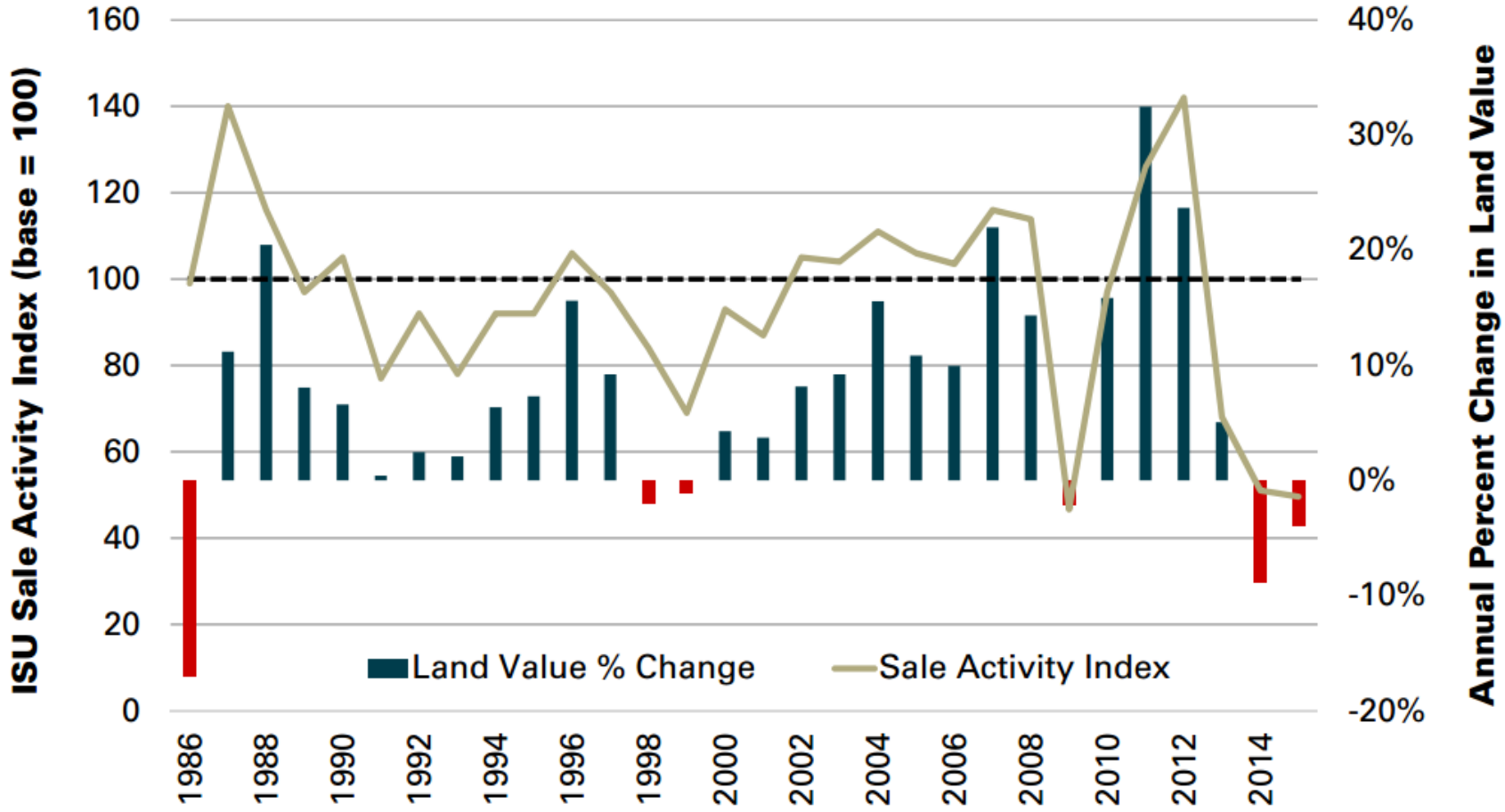
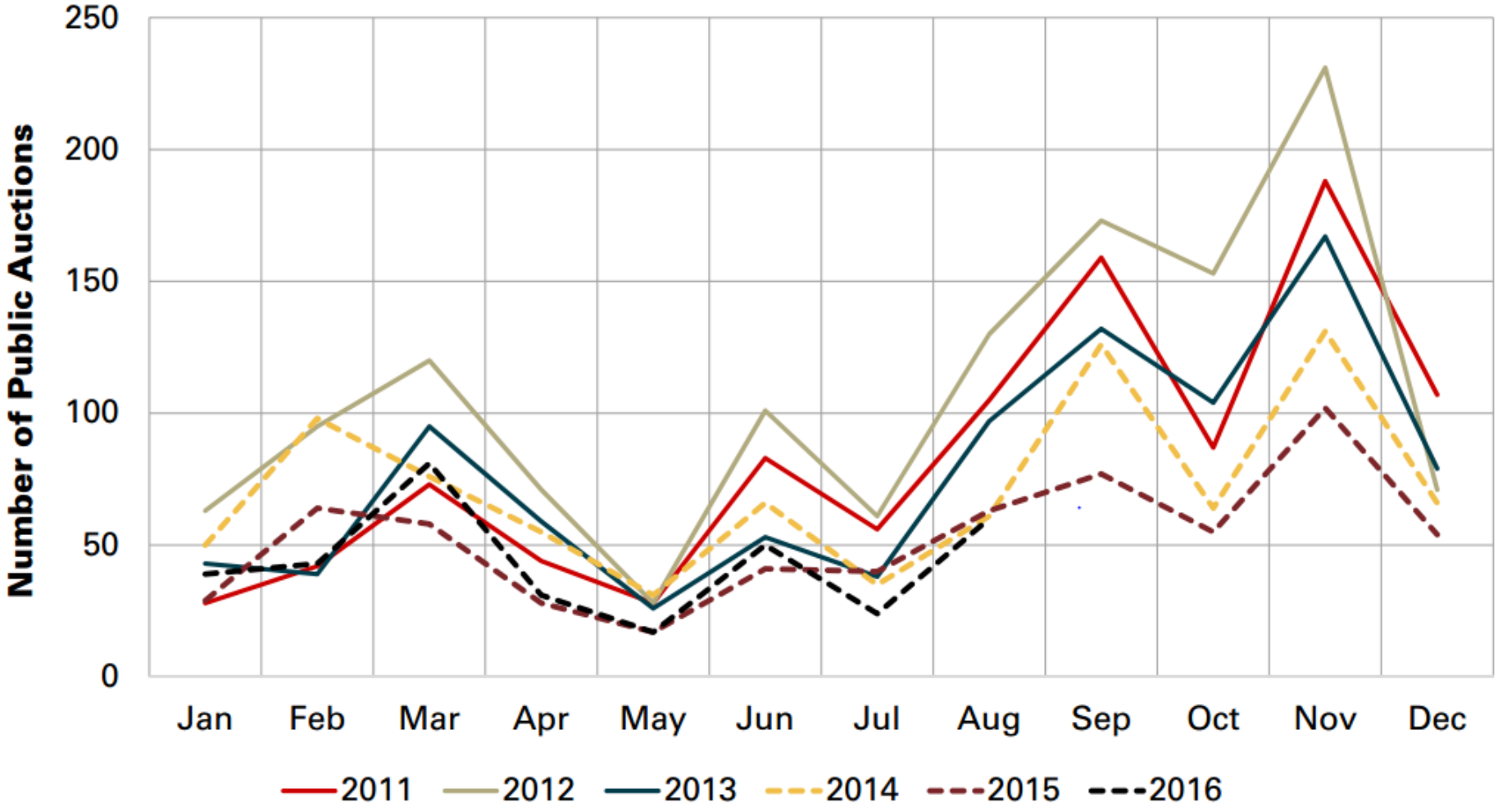


Figure 1. ISU sale activity index and percentage change in Iowa land value, 1986 – 2015



Sale activity index = (% Reported More - % Reported Less) * 100 + 100

Figure 2. Number of public auctions by month, 2011 – 2016



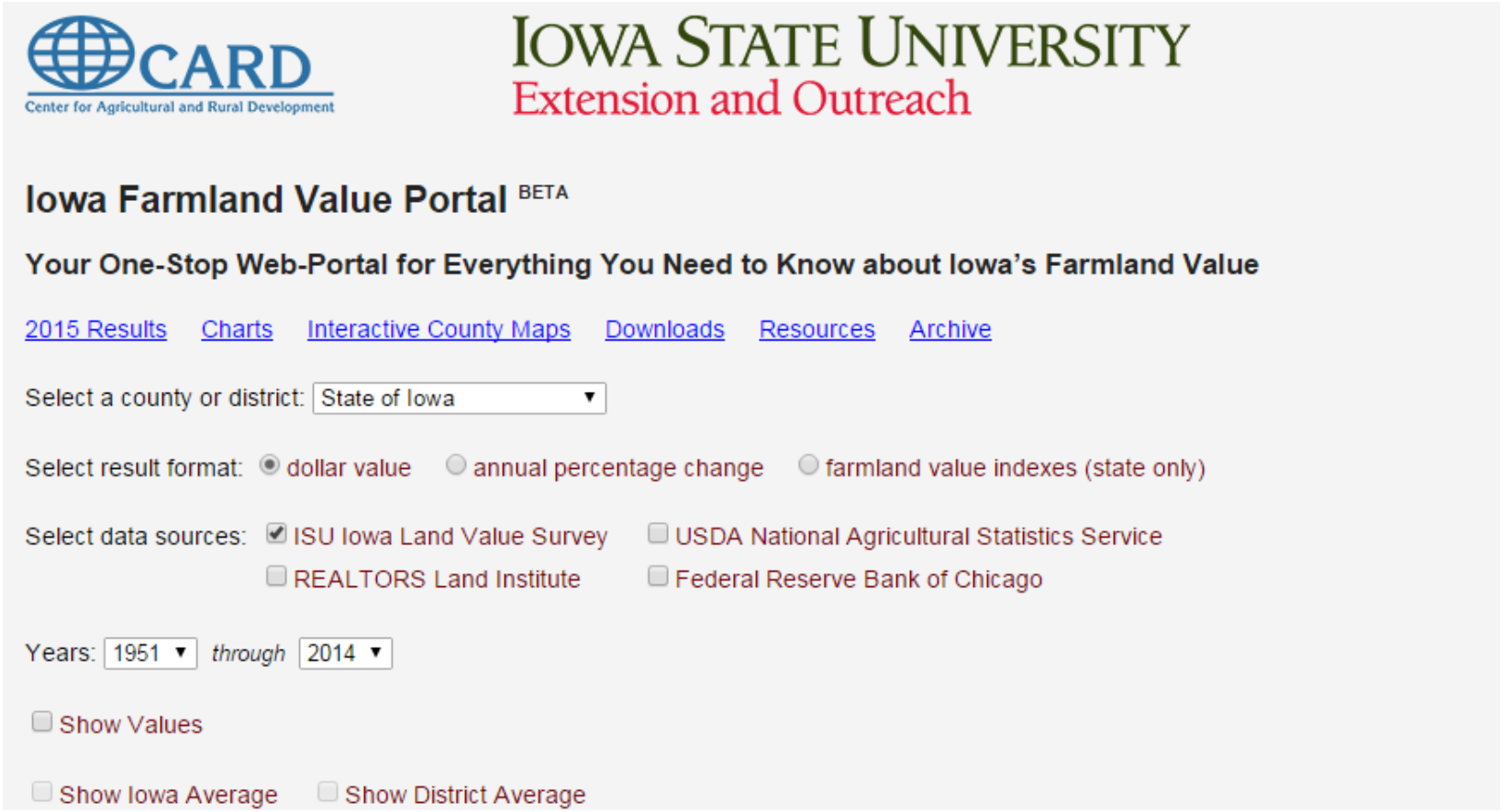
Data Source: Jim Knuth, Farm Credit Services of America

A New, Interactive Iowa Farmland Value Portal

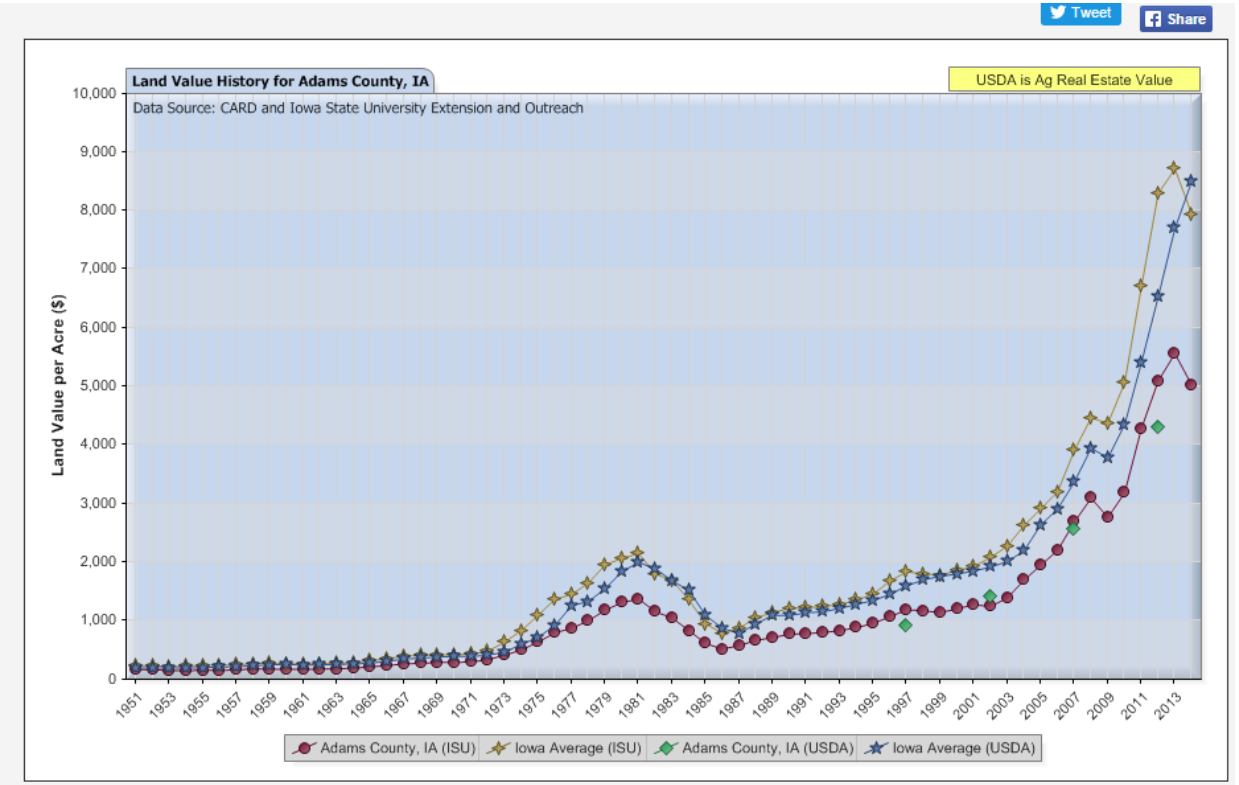
http://card.iastate.edu/farmland/

Iowa Farmland Value Portal

http://card.iastate.edu/farmland



Iowa Farmland Value Portal



http://card.iastate.edu/farmland

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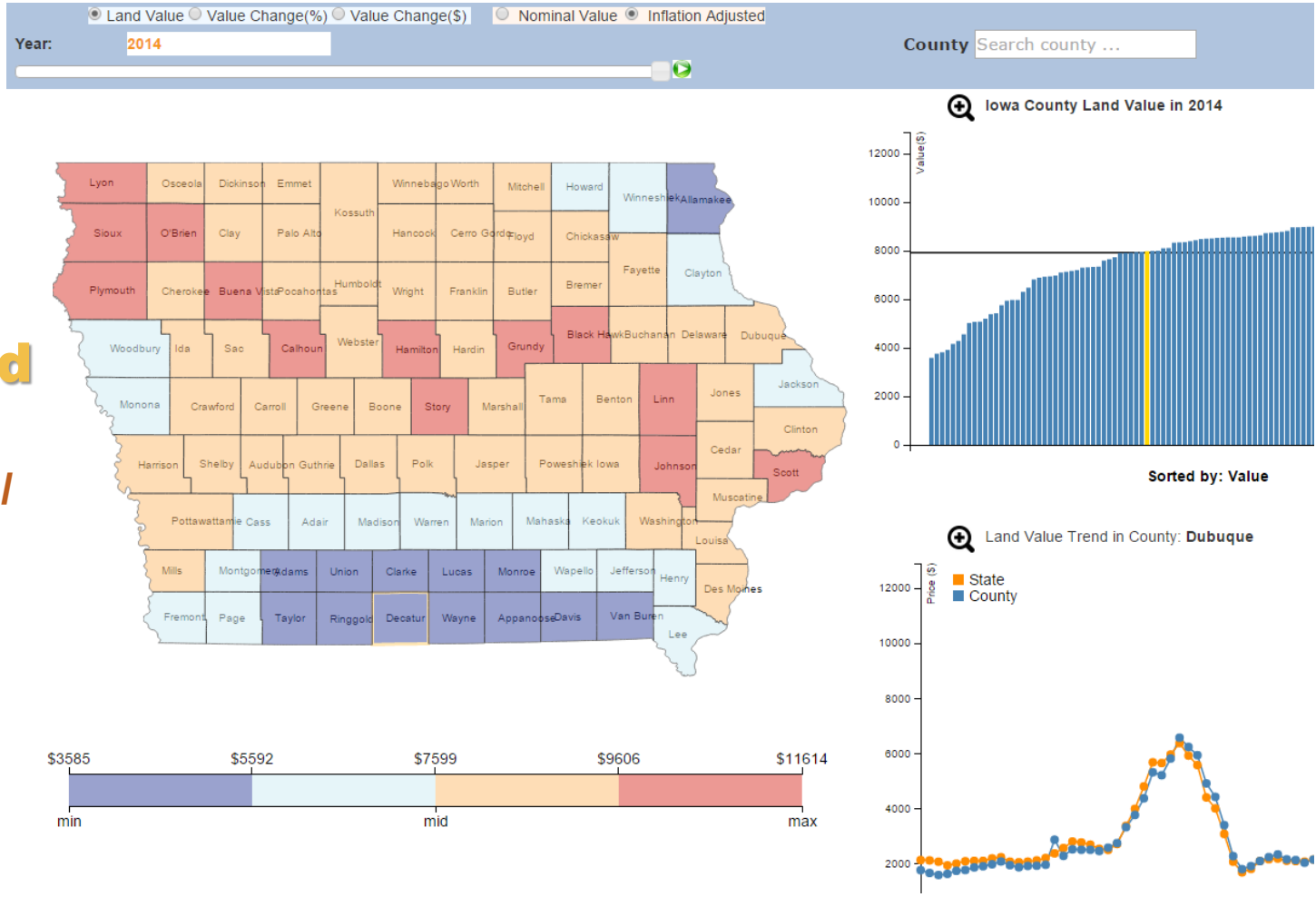

FARMLND
CROPMKT

Thank You!

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