2012-13 Corn, Wheat and Feed Grains Situation and Outlook

Todd Davis
Senior Economist

AMERICAN FARM BUREAU FEDERATION®

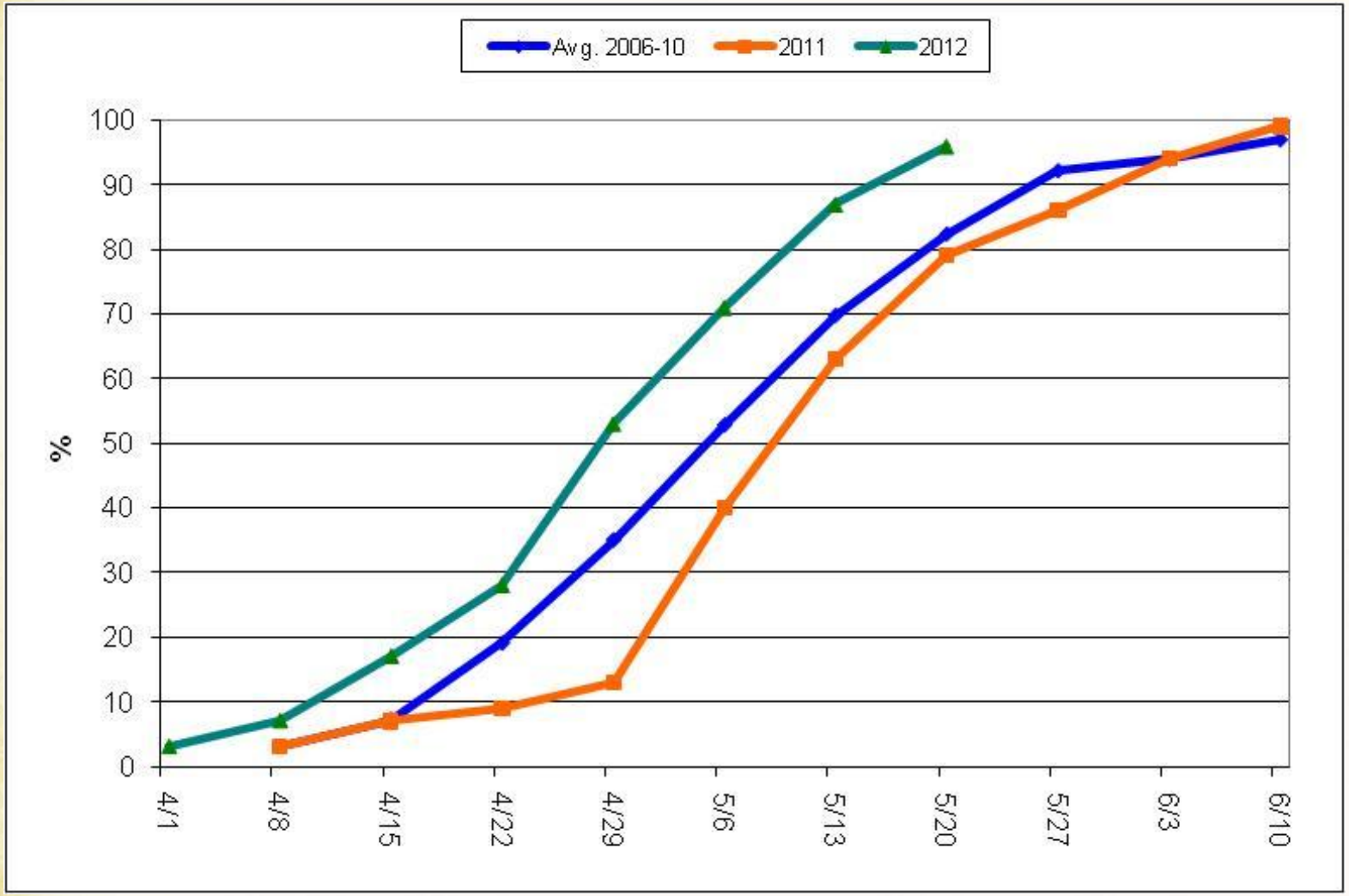
Outline

- Situation and outlook for corn, wheat and sorghum
  - Soil moisture and crop progress
  - Supply and demand balance sheets
  - Impacts of changes in production on stocks-use for corn
- RFS2 Waiver – Background and Potential Impact
- Fear mongering and things that keep me awake at night
- Projected Illinois 2013 Corn and Soybean Profitability
- Acreage in 2013 and Supply-Use examples

AMERICAN FARM BUREAU FEDERATION®

2012-13 Corn Situation and Outlook

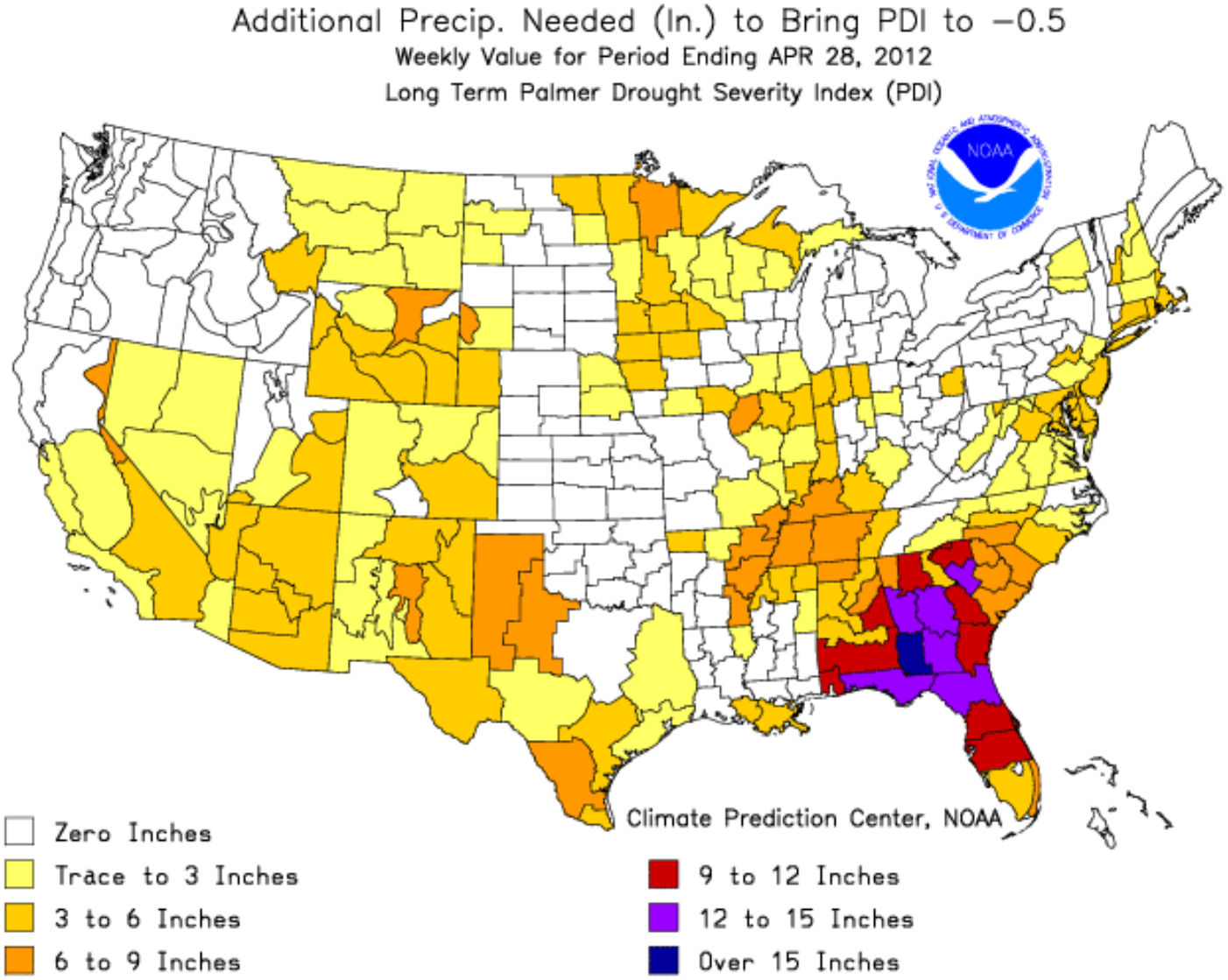
U.S. Corn Planting Progress for 2012 vs. 2011 and 2006-10 Average



50% Completed:
2006-10: May 6
2011: May 13
2012: April 29

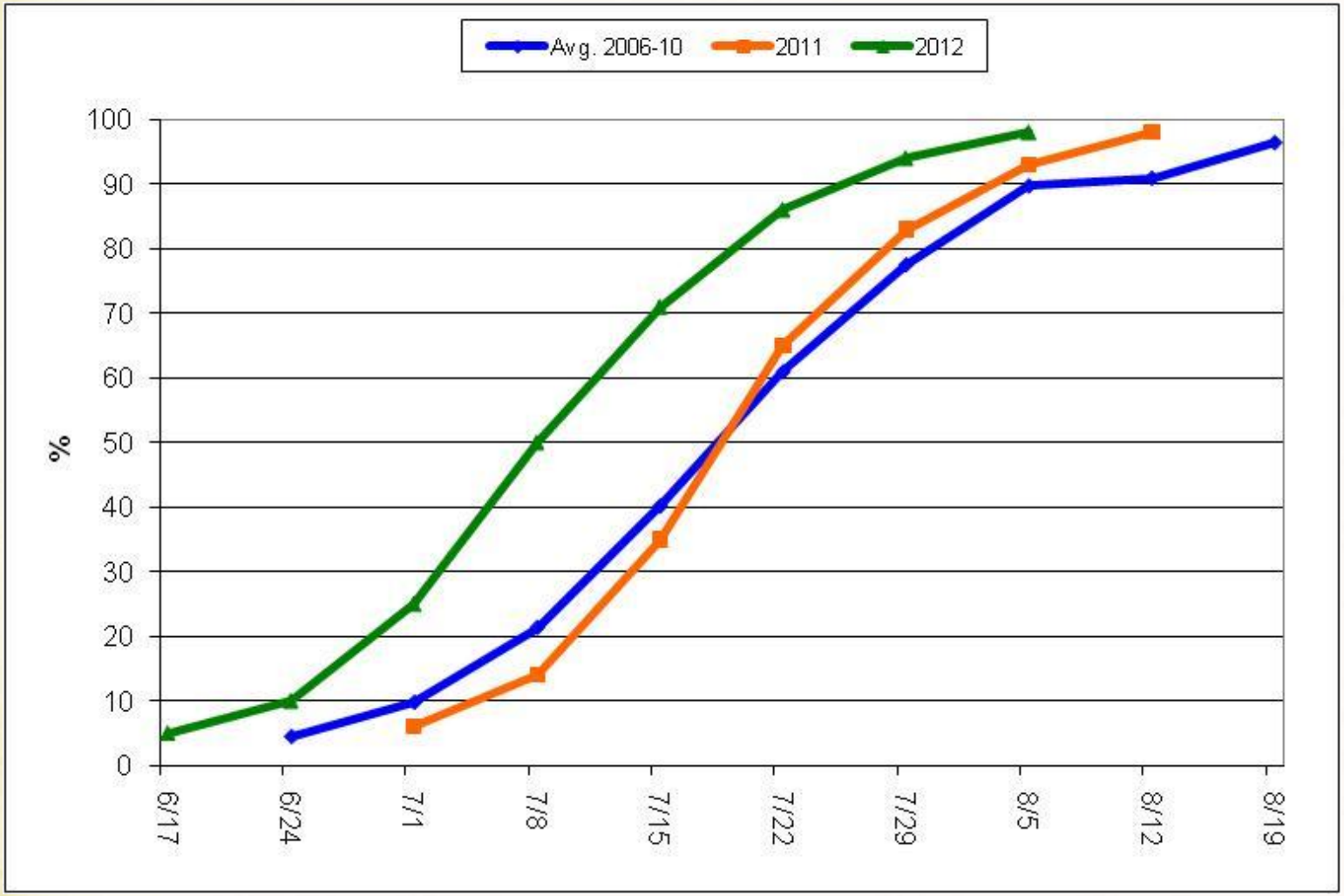
Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®



Source: NOAA. *Climate Prediction Center.*

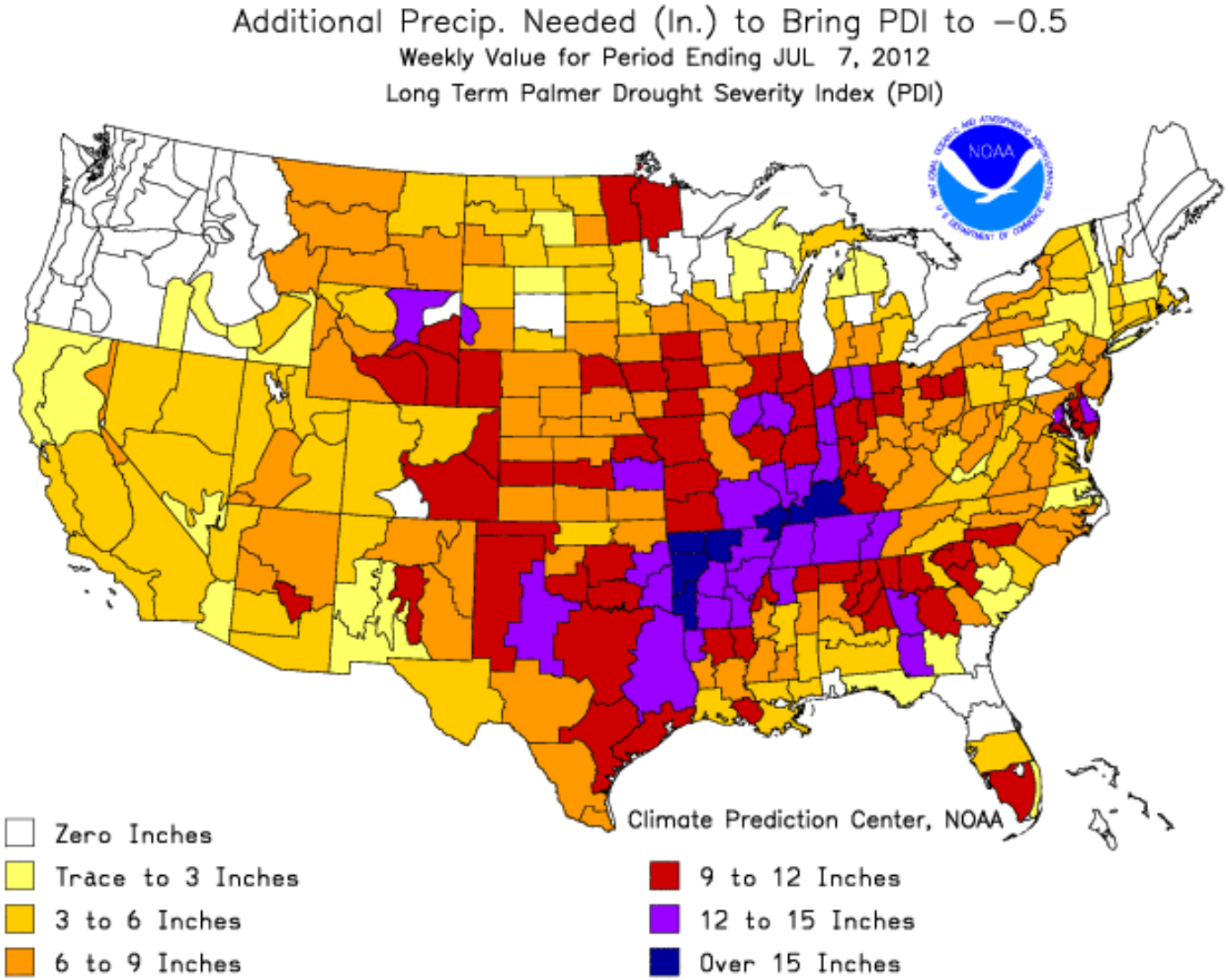
U.S. Corn Silking Progress for 2012 vs. 2011 and 2006-10 Average



50% Completed:
2006-10: July 22
2011: July 22
2012: July 8

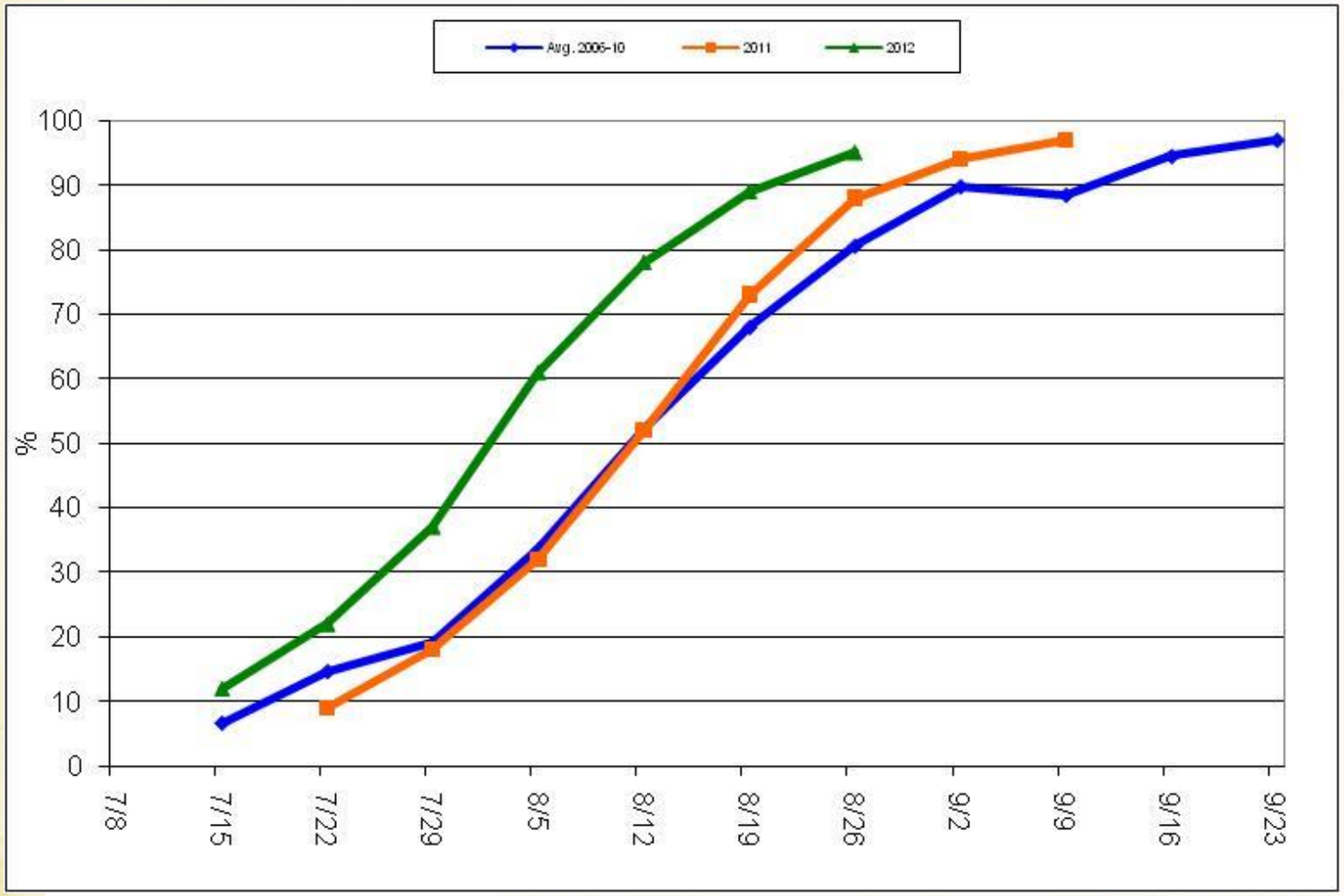
Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®



Source: NOAA. *Climate Prediction Center.*

U.S. Corn Dough Progress for 2012 vs. 2011 and 2006-10 Average

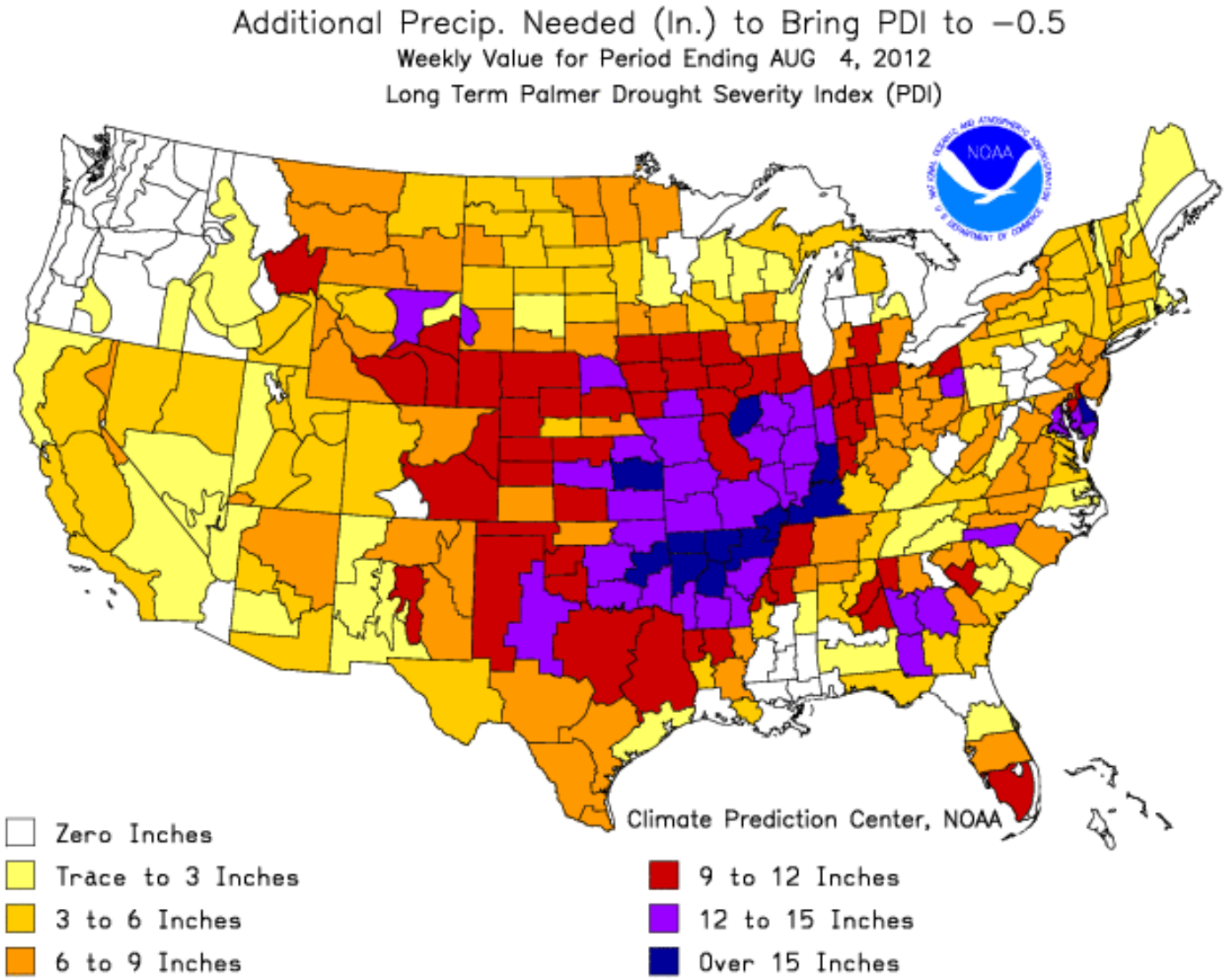


50% Completed:
2006-10: Aug 12
2011: Aug 12
2012: Aug 5

Update For 9/23

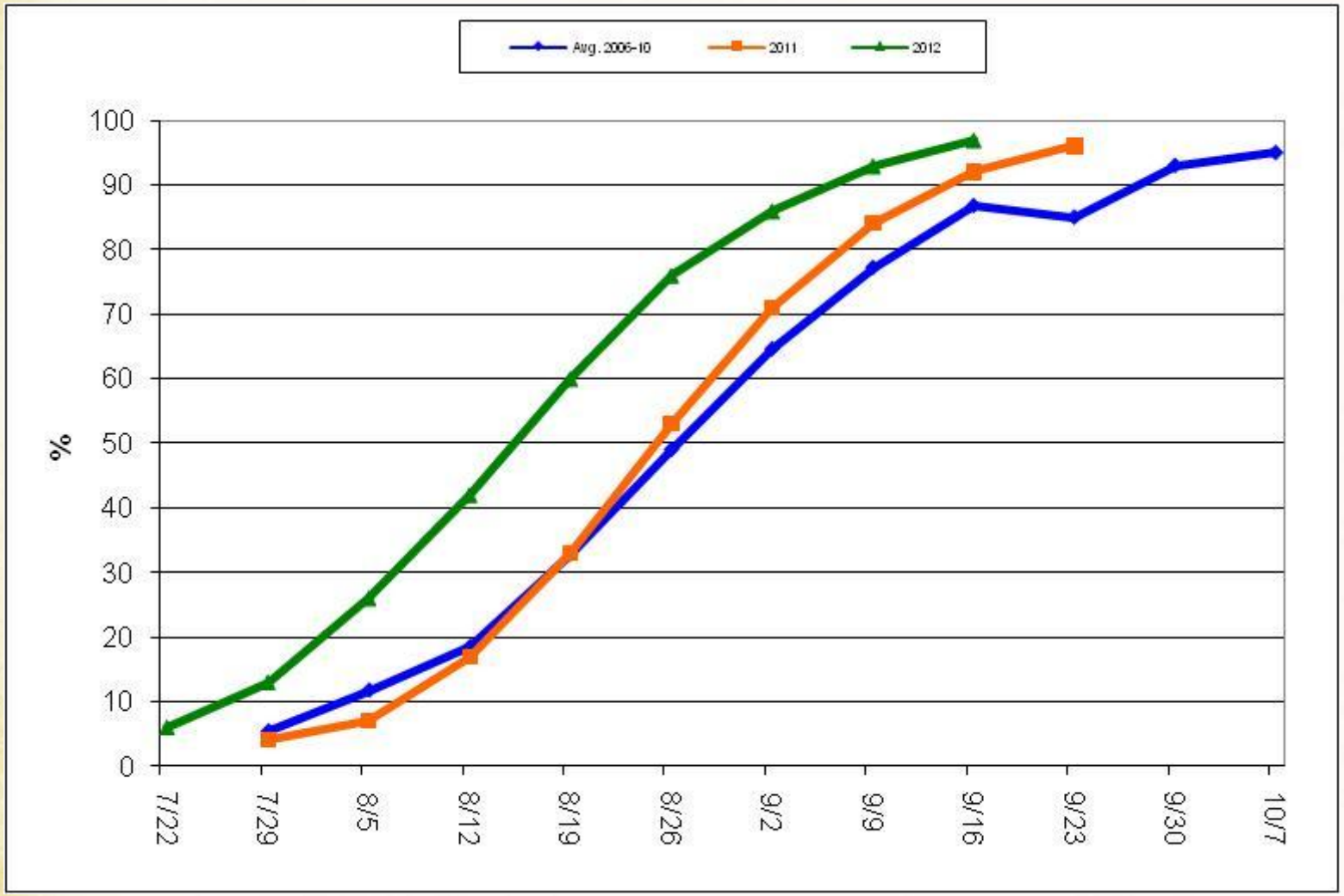
Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®



Source: NOAA. *Climate Prediction Center.*

U.S. Corn Dent Progress for 2012 vs. 2011 and 2006-10 Average

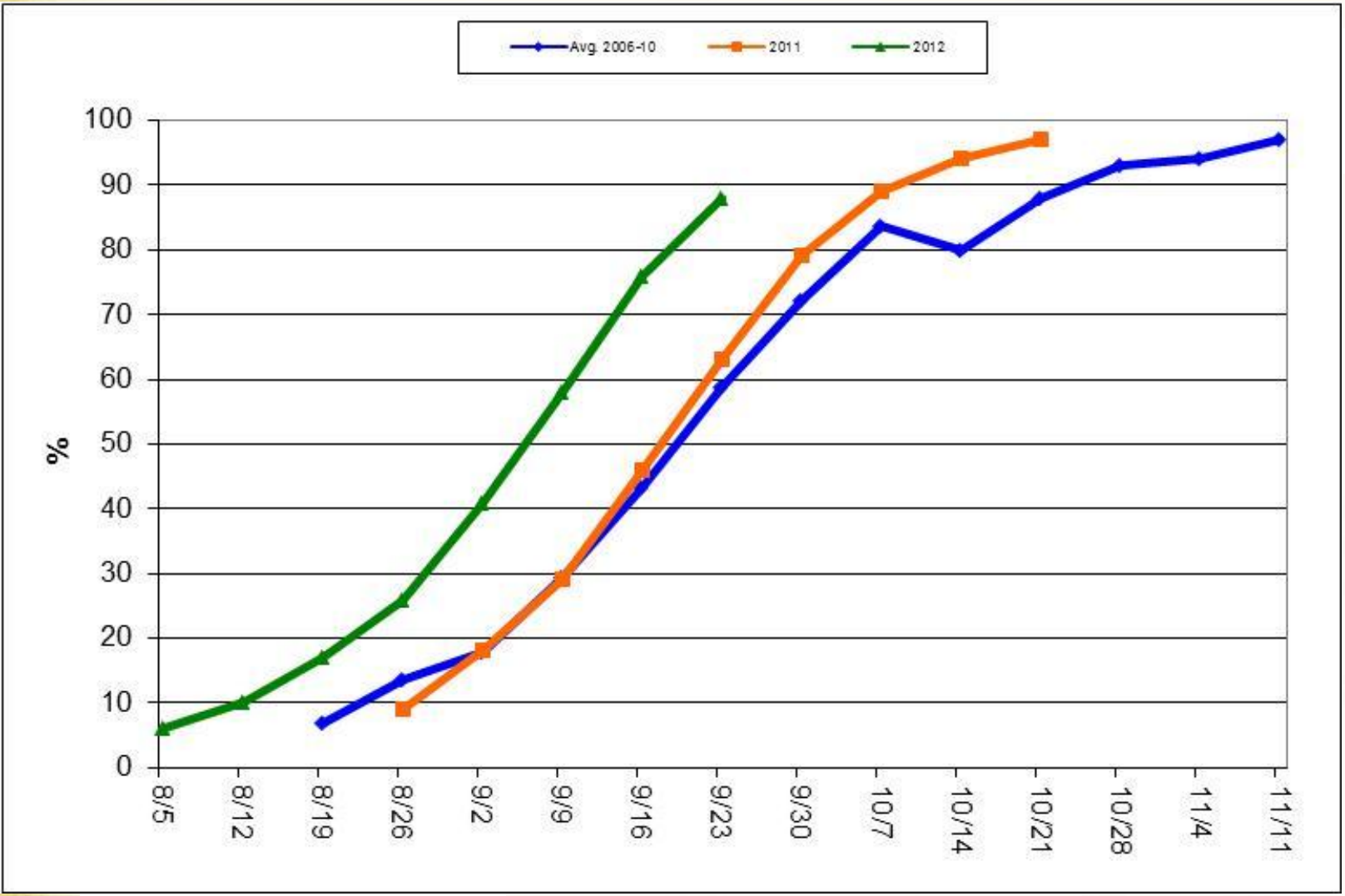


50% Completed:
2006-10: Aug 26
2011: Aug 26
2012: Aug 15

Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®

U.S. Corn Maturity Progress for 2012 vs. 2011 and 2006-10 Average

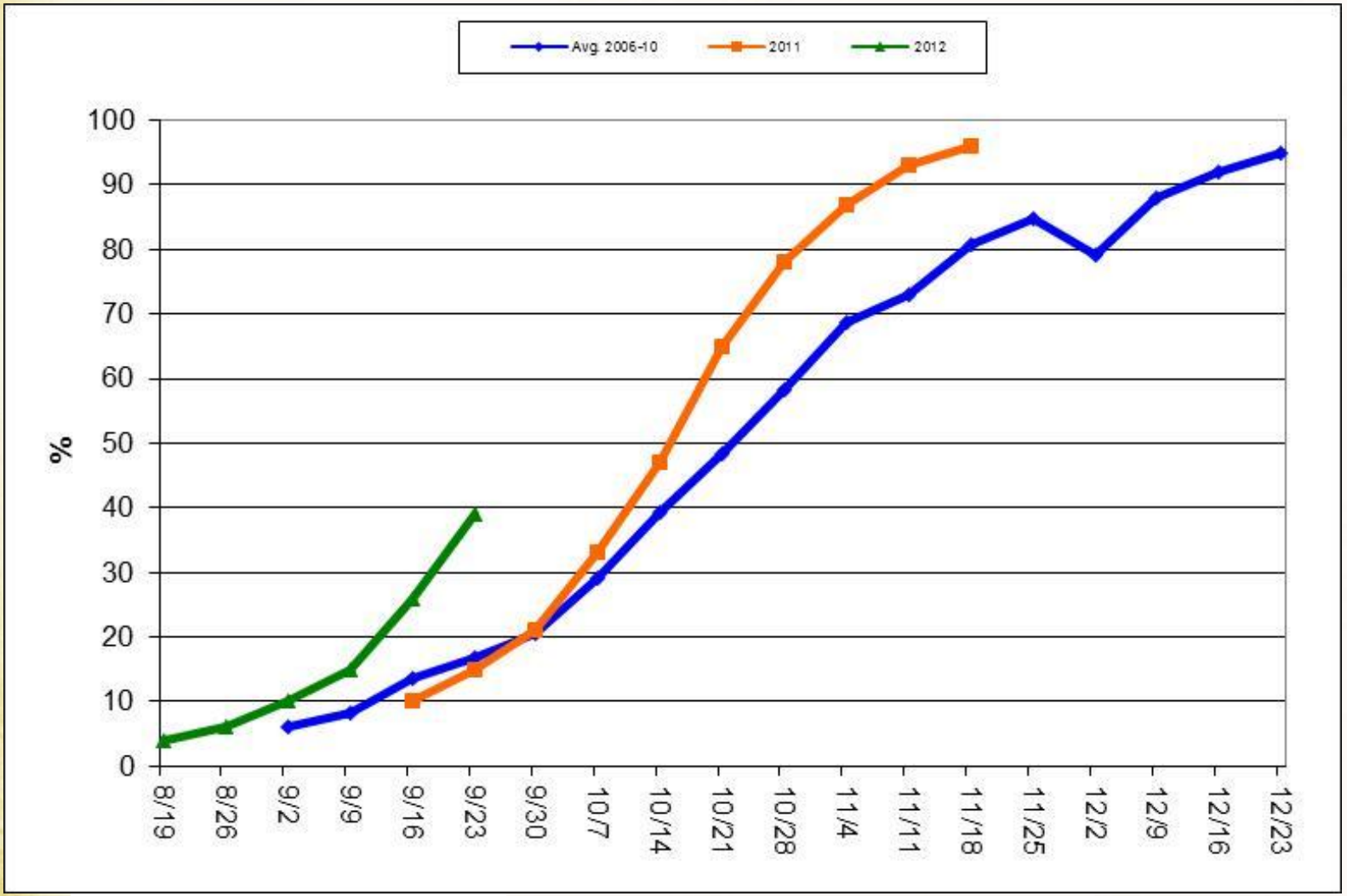


50% Completed:
2006-10: Sep 23
2011: Sep 20
2012: Sep 9

Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®

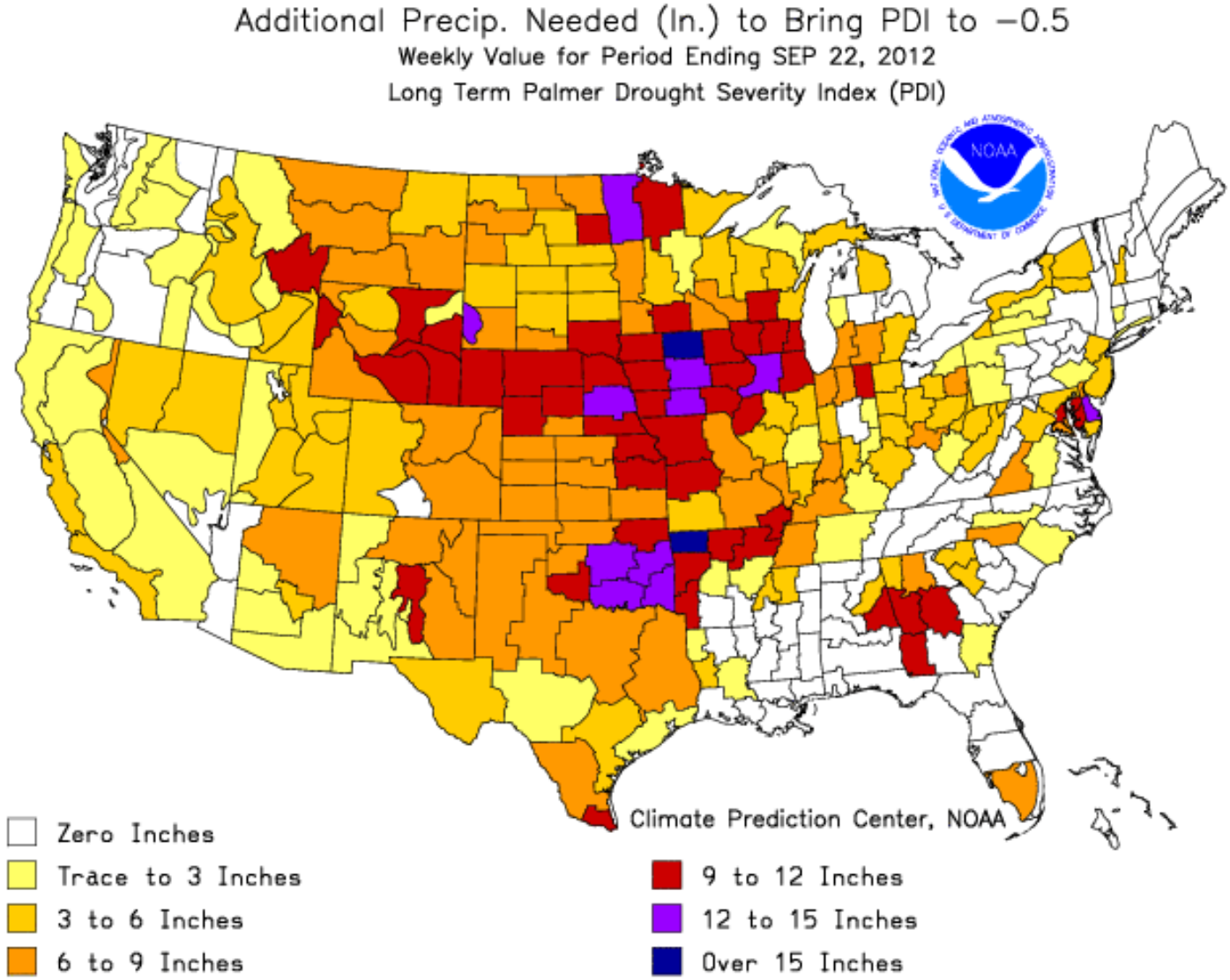
U.S. Corn Harvest Progress for 2012 vs. 2011 and 2006-10 Average



50% Completed:
2006-10: Oct 28
2011: Oct 14
2012:

Source: USDA-NASS. *Crop Progress.*

AMERICAN FARM BUREAU FEDERATION®



Source: NOAA. *Climate Prediction Center.*

U.S. Corn Supply and Use

	2009-10 Actual	2010-11 Actual	2011-12 Estimated	2012-13 Sep. Forecast	Change from 2011-12
			Million Acres		
Planted Acres	86.4	88.2	91.9	96.4	+4.5
Harvested Acres	79.5	81.4	84.0	87.4	+3.4
% Abandoned	-8.0%	-7.7%	-8.6%	-9.3%	-0.7%
			Bushels per Acre		
Yield	164.7	152.8	147.2	122.8	-24.4
			Million Bushels		
Beginning Stocks	1,673	1,708	1,128	1,181	+53.0
Production	13,092	12,447	12,358	10,727	-1,631.0
Imports	8	28	25	75	+50.0
Total Supply	14,774	14,182	13,511	11,983	-1,528.0
Feed & Residual	5,140	4,792	4,400	4,150	-250.0
Food, Seed & Industrial	5,939	6,428	6,390	5,850	-540.0
Ethanol for Fuel	4,568	5,021	5,000	4,500	-500.0
Exports	1,987	1,835	1,540	1,250	-290.0
Total Use	13,066	13,054	12,330	11,250	-1,080.0
Ending Stocks	1,708	1,128	1,181	733	-448.0
Avg. Farm Price	$3.55	$5.18	$6.25	$7.90	+$1.65
Stocks-Use	13.1%	8.6%	9.6%	6.5%	-3.1%
Days of Ending Stocks	48	32	35	24	-11.2

Largest since 1944 (Yield = 33 bpa in '44)

Largest since 2007

Lowest since 2004-05

Smallest crop since 2006

Smallest supply since 2003-04

Lowest since 1988-89

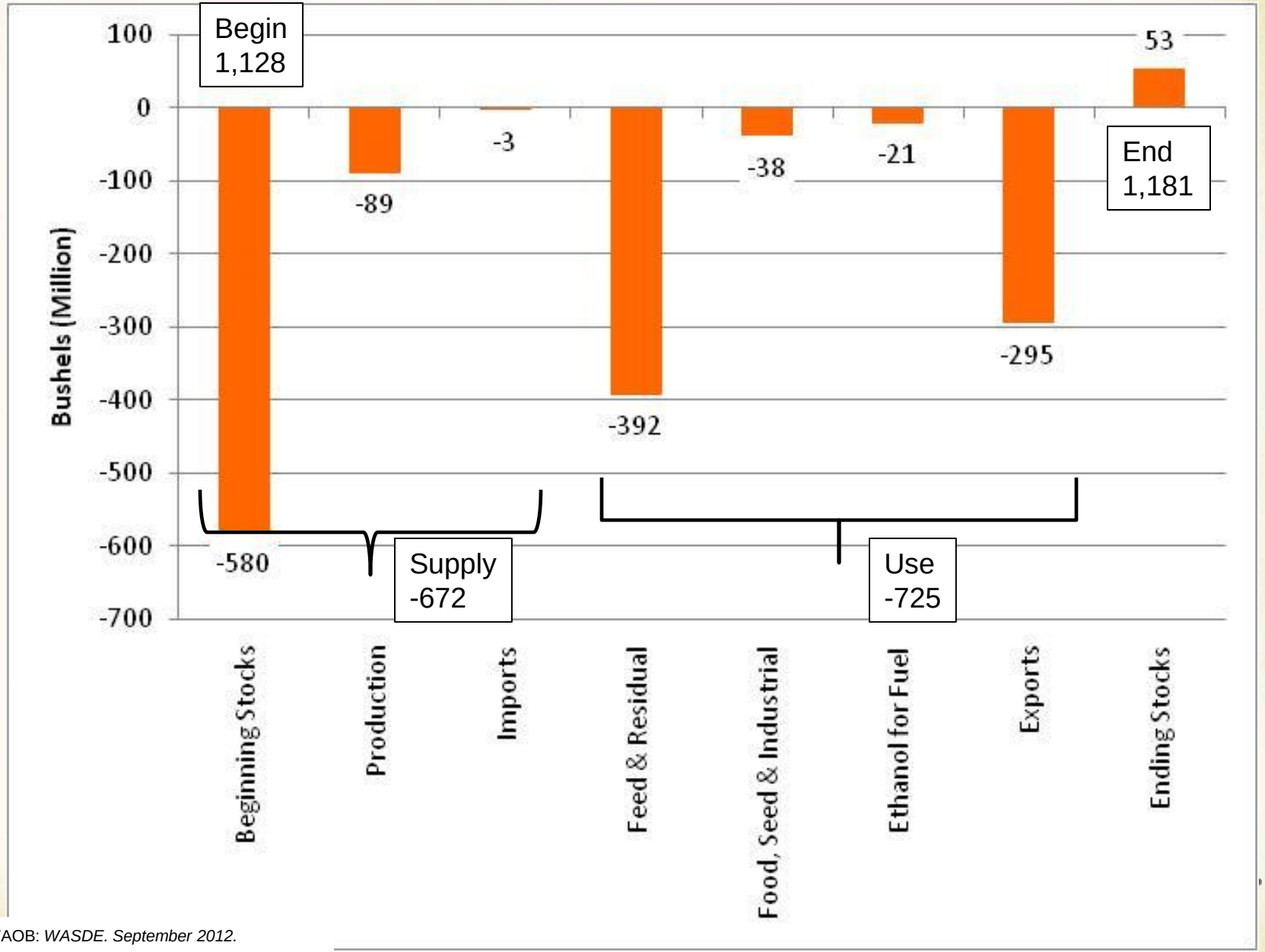
Lowest since 1985-86

Lowest use since 2006-07

AMERICAN FARM BUREAU FEDERATION®

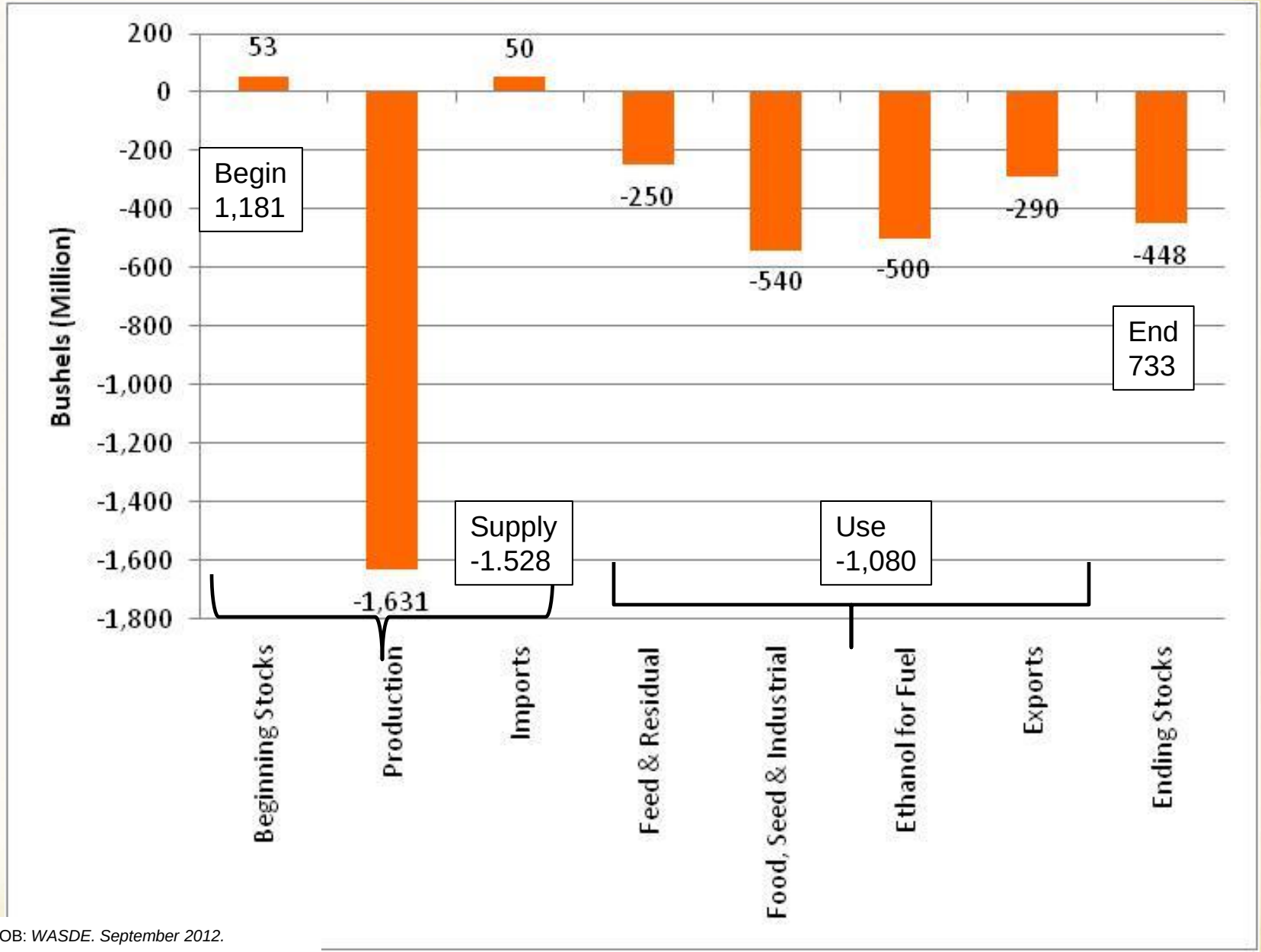
Source: USDA-WAOB: *WASDE. September 2012.*

Corn Balance Sheet Changes from 2010-11 to 2011-12



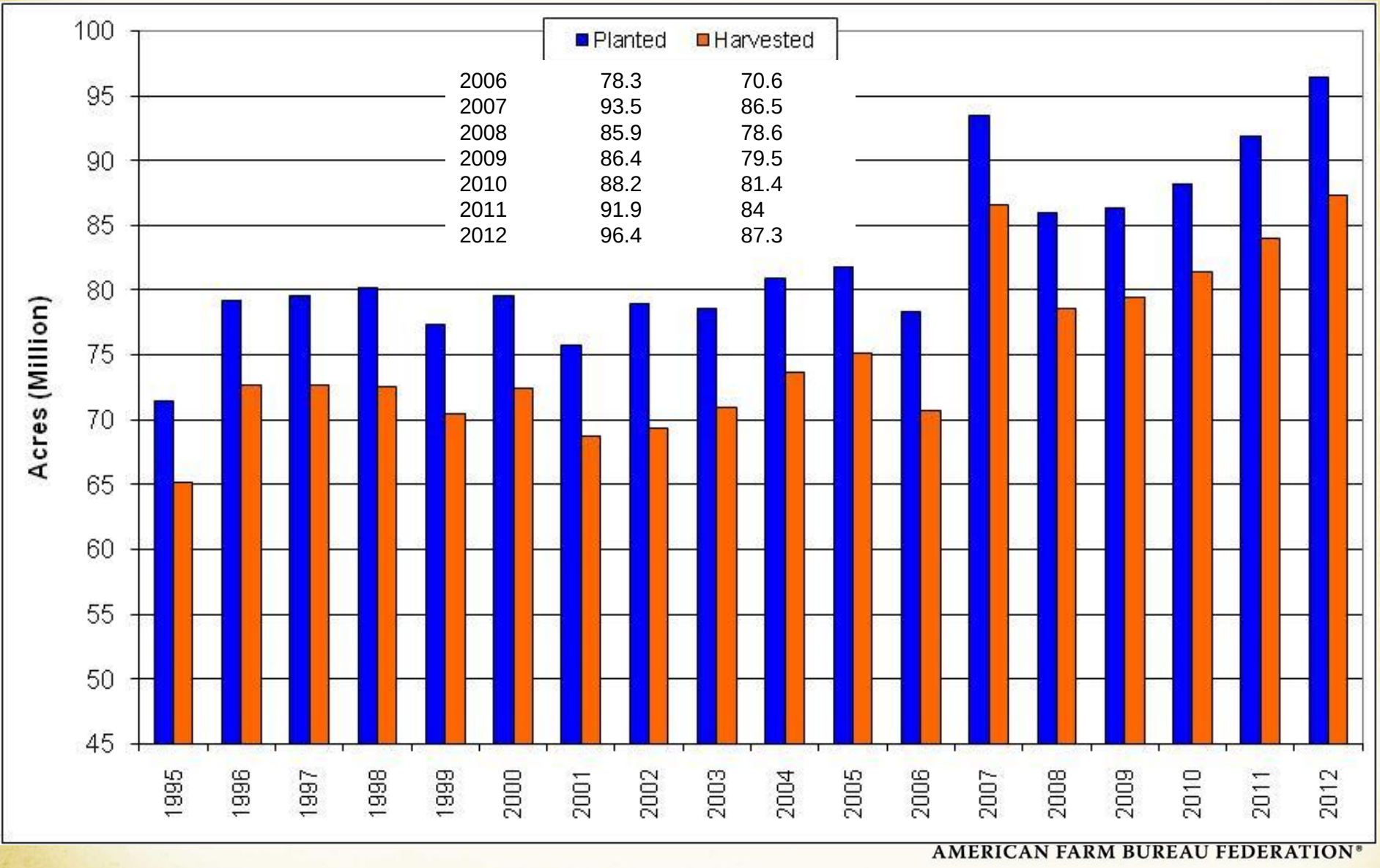
Source: USDA-WAOB: *WASDE. September 2012.*

Corn Balance Sheet Changes from 2011-12 to 2012-13



Source: USDA-WAOB: *WASDE. September 2012.*

U.S. Corn Planted and Harvested Acres from 1995-2012



2006	78.3	70.6
2007	93.5	86.5
2008	85.9	78.6
2009	86.4	79.5
2010	88.2	81.4
2011	91.9	84
2012	96.4	87.3

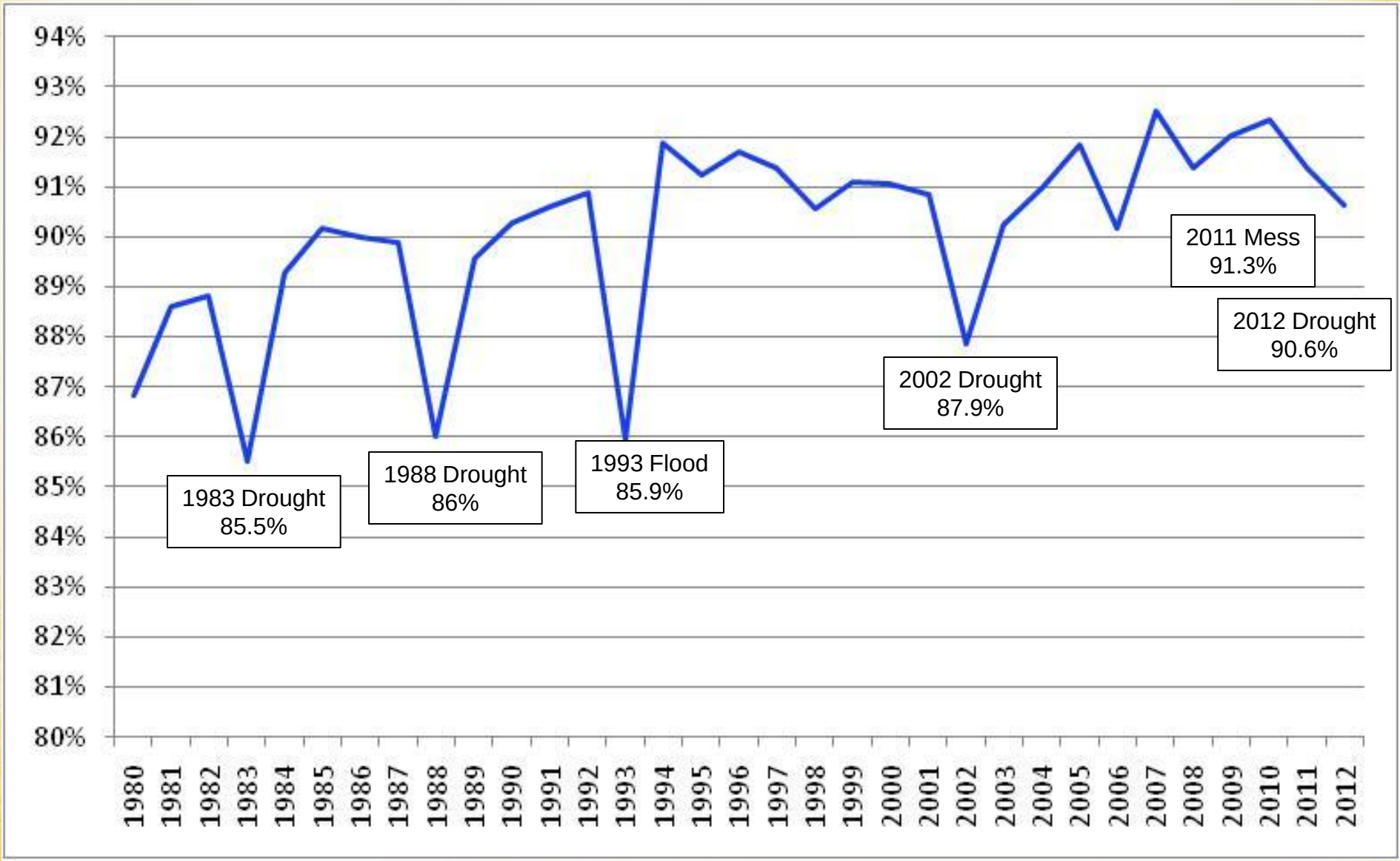
Source: USDA-NASS.

Evolution of 2012 Yield Estimate

February 2012	164	Excluded 2011 Yield
May 2012	166	Early Planting = Higher Yields
July 2012	146	Drought Estimated Yield Loss
August 2012	123.4	Actual Field / Producer Survey
September 2012	122.8	Actual Field / Producer Survey
October 2012	??	Incorporates FSA Certified Acreage, Grain Stocks Survey, and Actual Field / Producer Survey

AMERICAN FARM BUREAU FEDERATION®

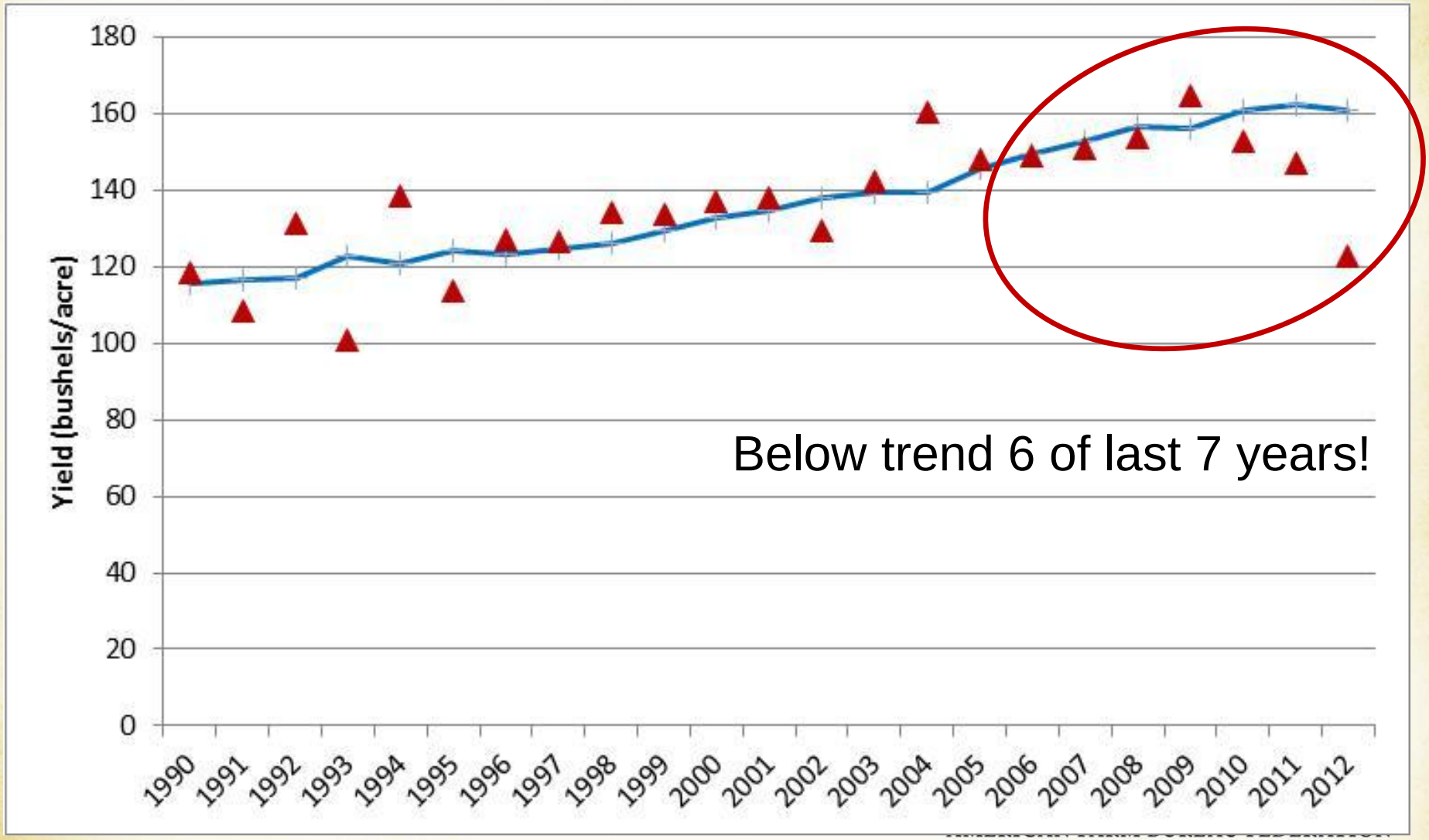
U.S. Corn % Harvested Acreage from 1980-2012*



Source: USDA-NASS. *Crop Progress.*

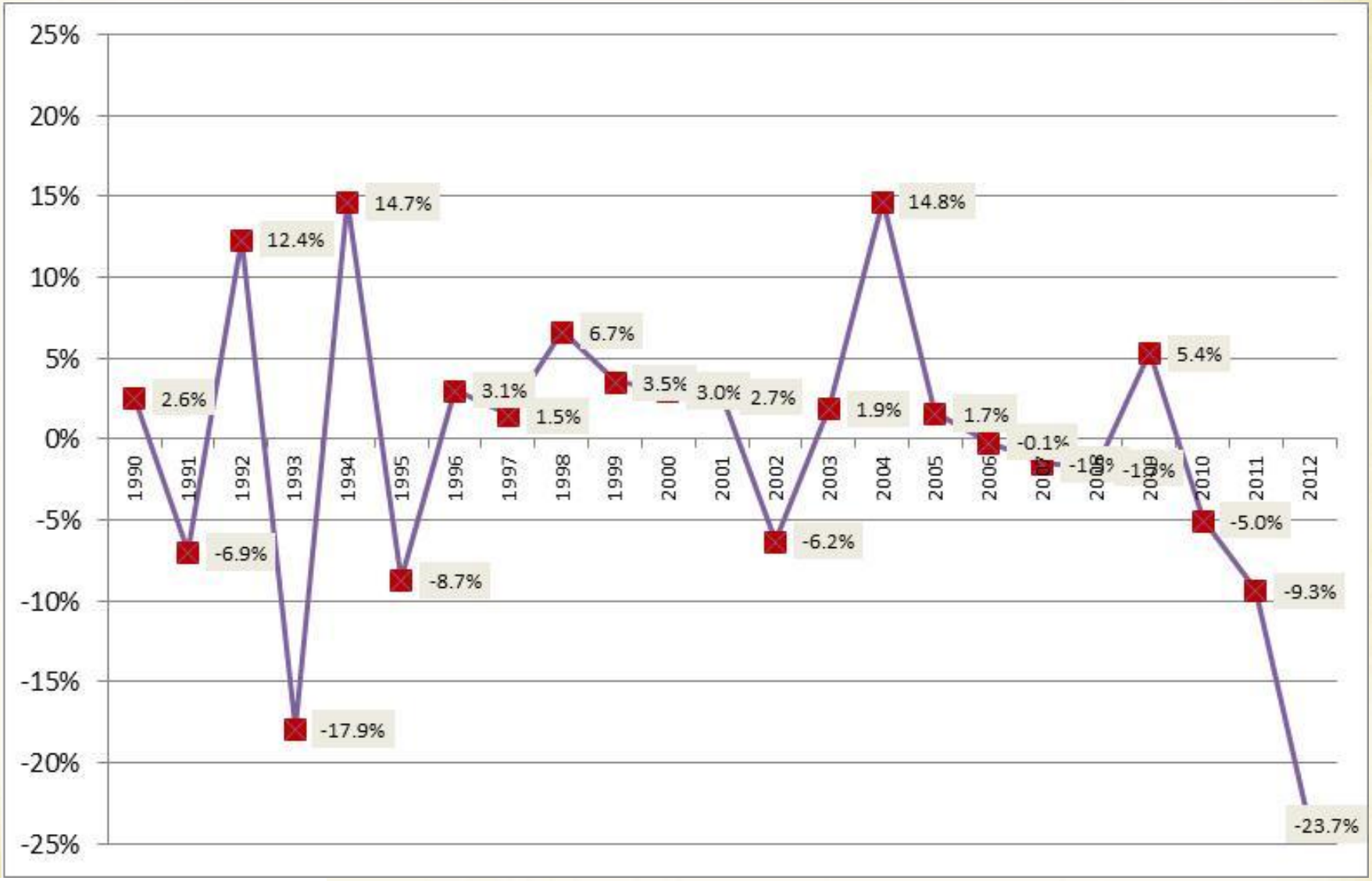
* 2012 is projected from the September USDA: WAOB WASDE.

U.S. Corn Average Yield and 20-Year Rolling-Trend Yield from 1990-2012



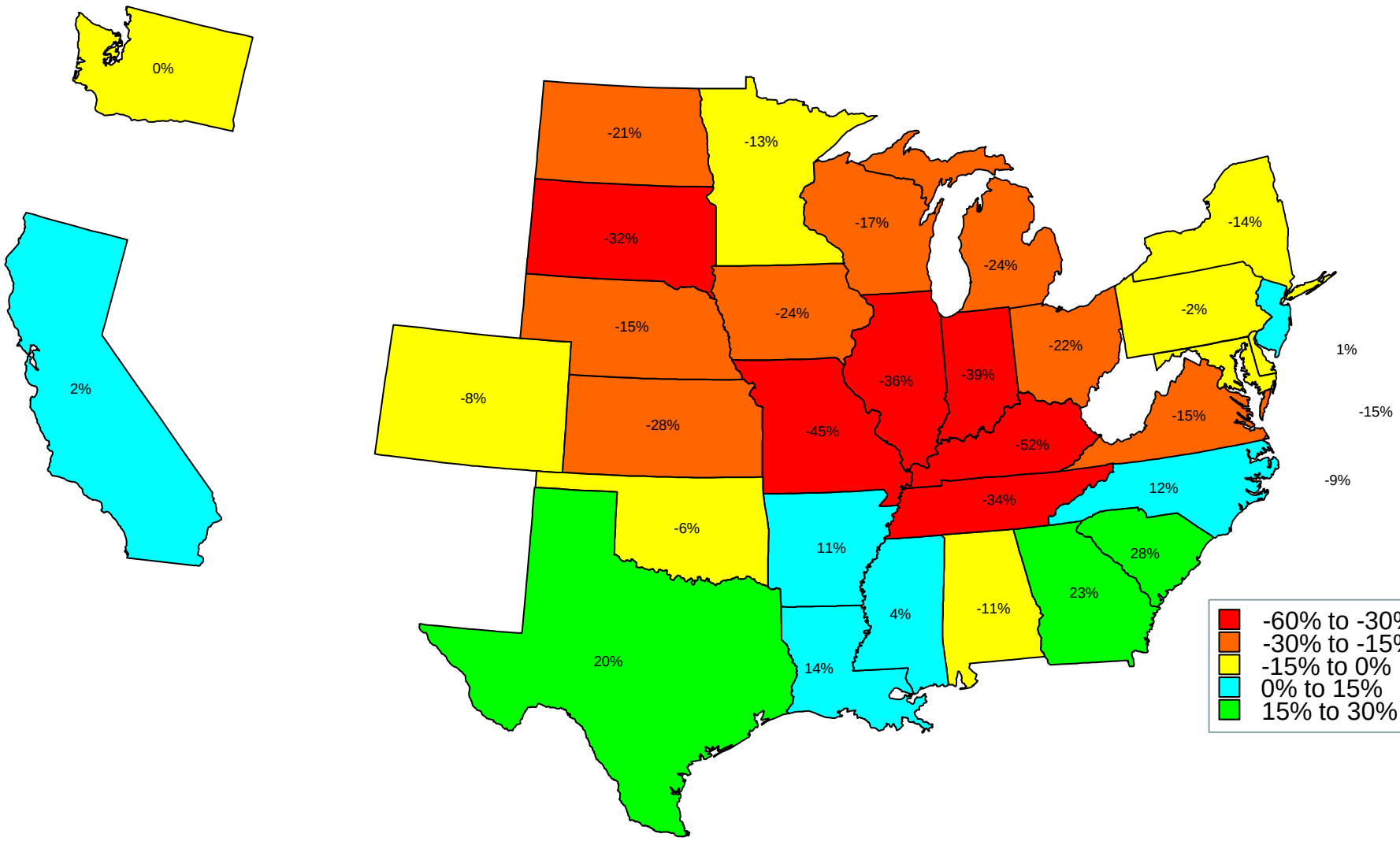
Source: USDA-NASS..

U.S. Corn Yield % Deviation from 20-Year Rolling Trend



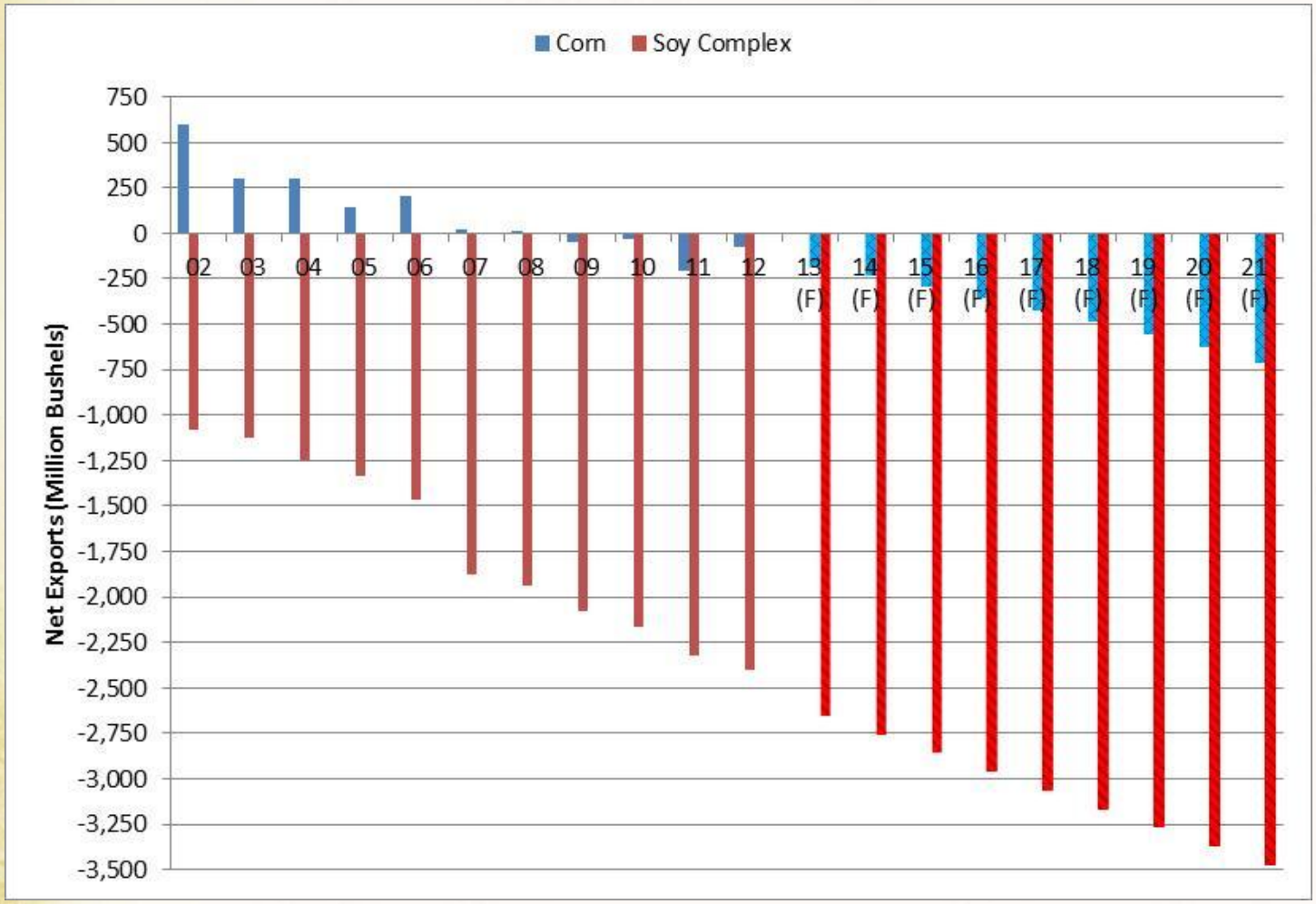
Source: USDA-NASS

State Corn Yield % Deviation from 20-Year Trend



Source: USDA-NASS

China Corn and Soy Complex Net Exports from 2002-2012 with ERS Baseline Projections to 2021

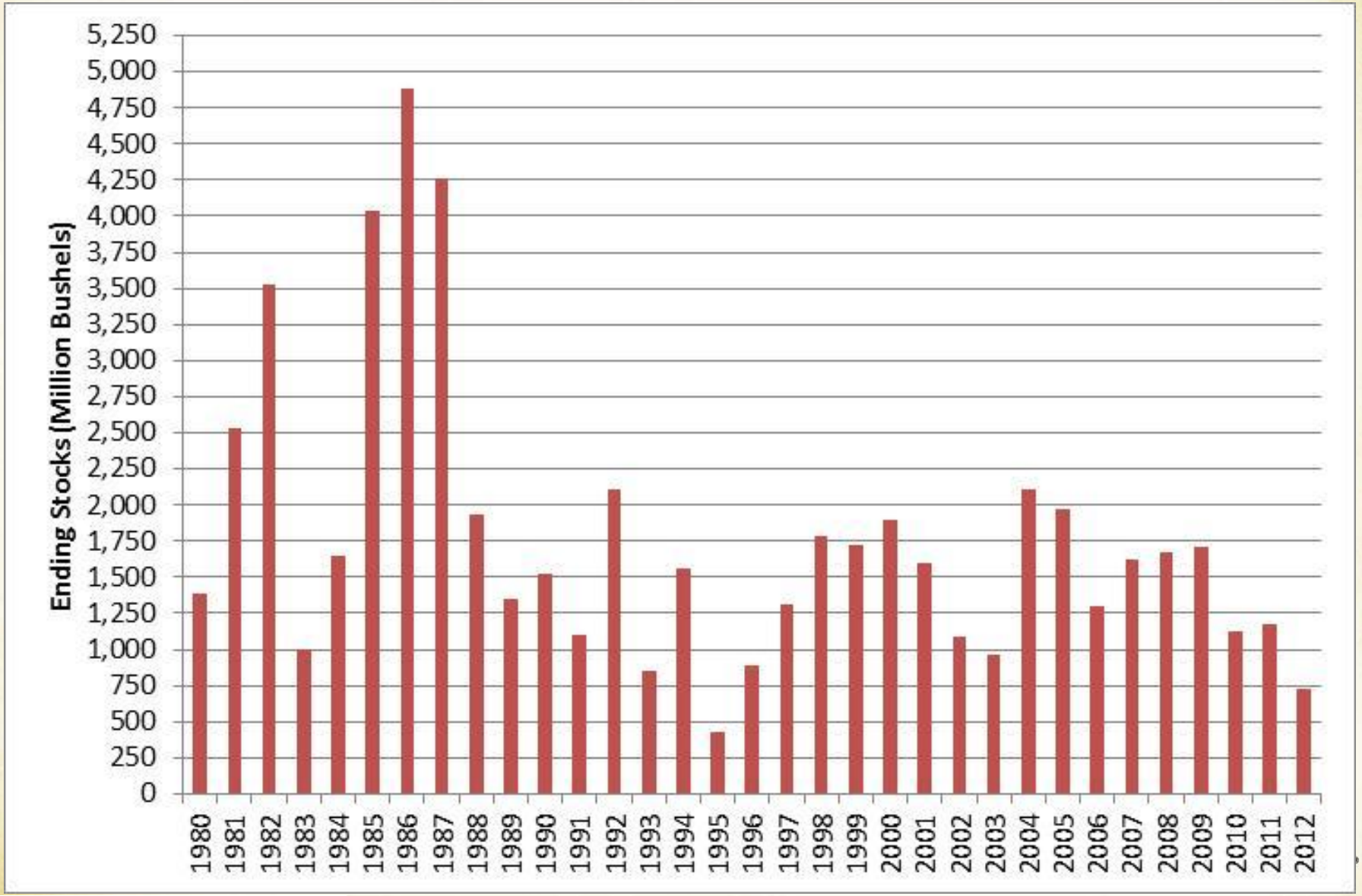


Corn is hoping that China will increase corn imports similar to soy

AMERICAN FARM BUREAU FEDERATION®

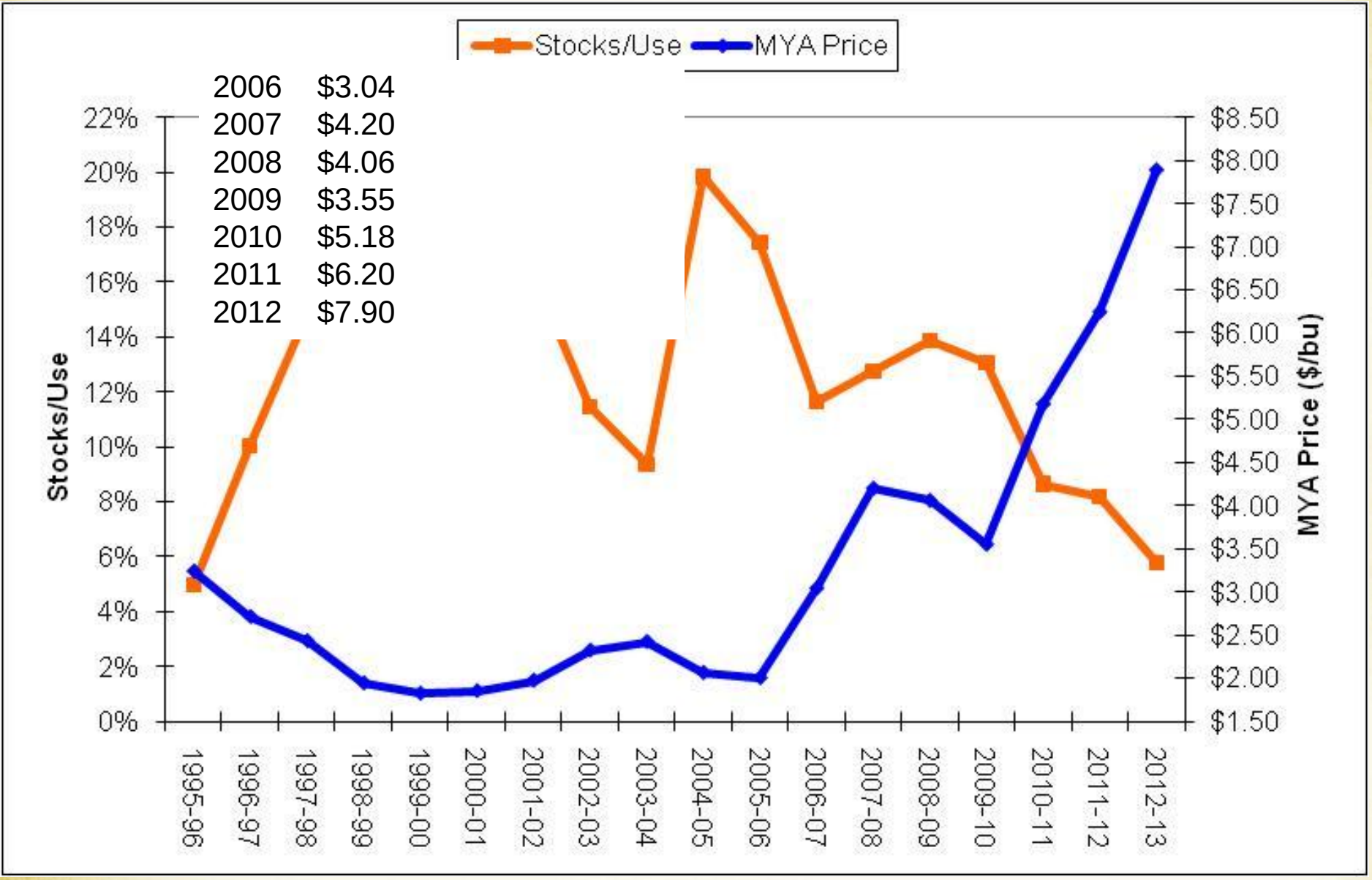
Source: USDA-FAS. *PSD Database and USDA Baseline Projections to 2020*

U.S. Corn Ending Stocks from 1980-2012



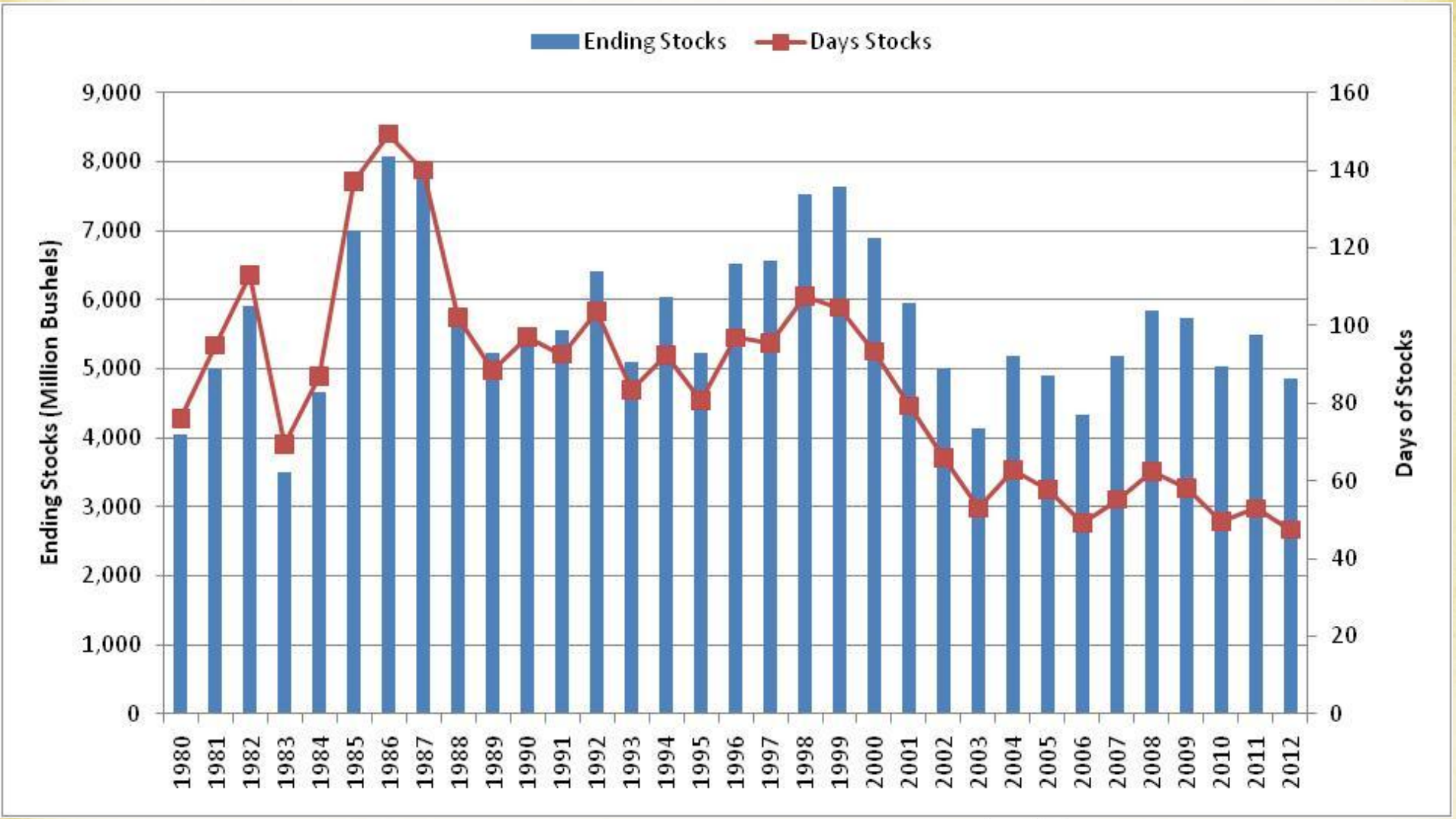
Source: USDA-FAS. *PSD Database*

U.S. Corn Stocks-Use Ratio and Marketing-Year Average Price



Source: USDA-FAS. *PSD Database*

Corn World Ending Stocks and Days of Inventory



AMERICAN FARM BUREAU FEDERATION®

Source: USDA-FAS. *PSD Database*

Impact of Changing Acreage and Yield on Corn Production and Ending Stocks

Planted Acres	Harvested Acres [1]	U.S. Average Corn Yield (bushels/acre)				
		124.8	123.8	122.8	121.8	120.8
----(Million Acres)----		----------(Million Bushels)----------				
96.4	87.4	10,908	10,820	10,733	10,645	10,558
96.4	84.8	10,587	10,502	10,417	10,333	10,248
96.4	82.9	10,346	10,264	10,181	10,098	10,015

1. Abandonment assumed to be -9.3% (Sep WASDE), -12% (2002) and -14% (1988), respectively.

Planted Acres	Harvested Acres	2012-13 Corn Ending Stocks				
		124.8	123.8	122.8	121.8	120.8
----(Million Acres)----		----------(Million Bushels)----------				
96.4	87.4	914	826	739	651	564
96.4	84.8	593	508	423	339	254
96.4	82.9	352	270	187	104	21

Beg. Stocks	1,181
Imports	75
Total Use	11,250

AMERICAN FARM BUREAU FEDERATION®

Source: USDA-WAOB

Impact of Changing Acreage and Yield on Stocks-Use Ratio and Implied Additional Rationing

Planted Acres	Harvested Acres	2012-13 Corn Ending Stocks-Use Ratio				
		124.8	123.8	122.8	121.8	120.8
----(Million Acres)----		----------(Stocks-Use)----------				
96.4	87.4	8.1%	7.3%	6.6%	5.8%	5.0%
96.4	84.8	5.3%	4.5%	3.8%	3.0%	2.3%
96.4	82.9	3.1%	2.4%	1.7%	0.9%	0.2%

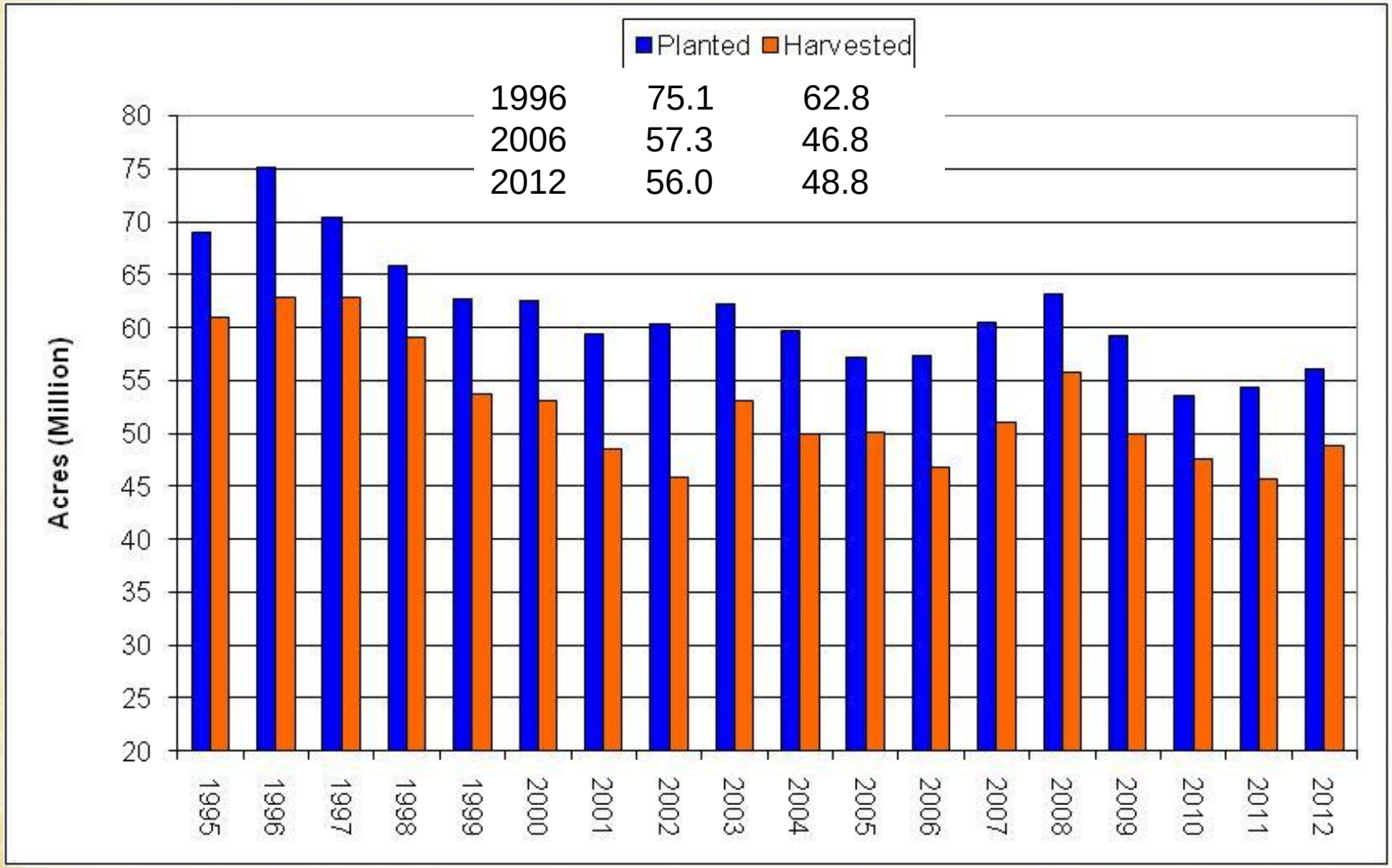
Planted Acres	Harvested Acres	Change in Total Use to Maintain 5% Stocks/Use				
		124.8	123.8	122.8	121.8	120.8
----(Million Acres)----		----------(Days)----------				
96.4	87.4	334	251	168	85	1
96.4	84.8	29	(52)	(132)	(213)	(294)
96.4	82.9	(200)	(279)	(358)	(437)	(516)

AMERICAN FARM BUREAU FEDERATION®

Source: USDA-WAOB

2012-13 Wheat Situation and Outlook

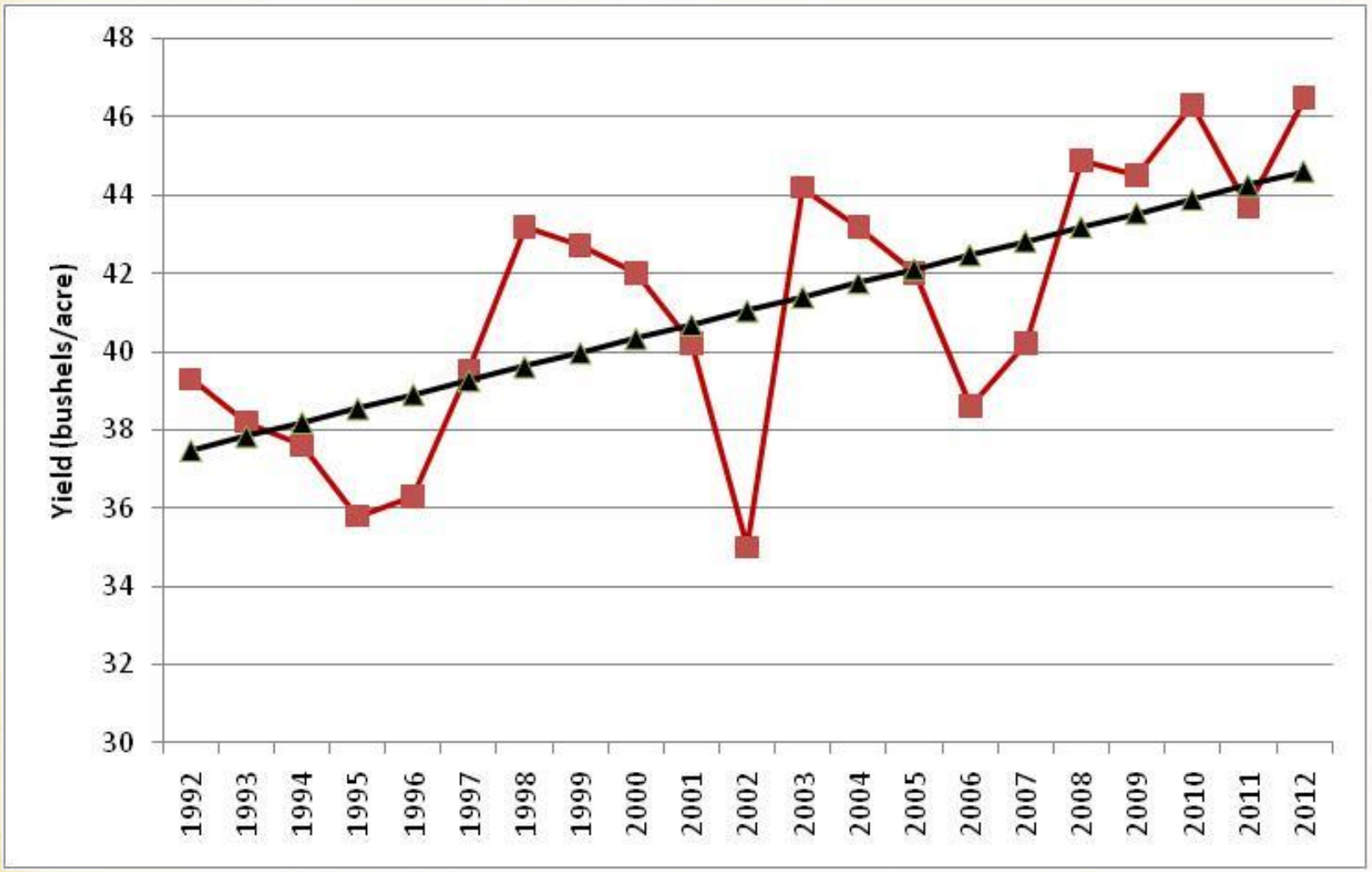
U.S. Wheat Planted and Harvested Acres from 1995-2012



AMERICAN FARM BUREAU FEDERATION®

Source: USDA-NASS.

U.S. Average Wheat Yield and Trend Yield from 1992-2012



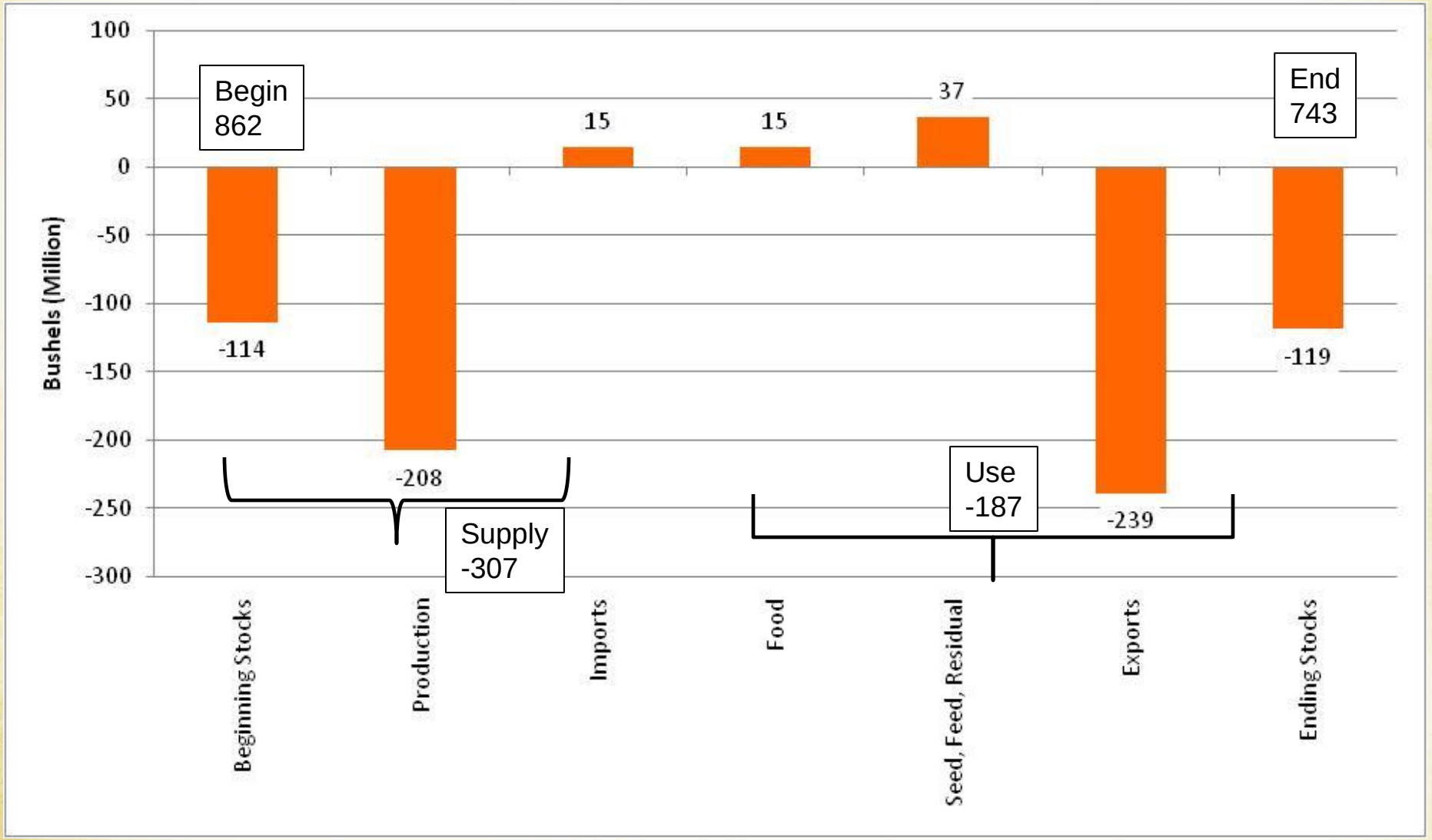
AMERICAN FARM BUREAU FEDERATION®

Source: USDA-NASS.

U.S. Wheat Supply and Use					
	2009-10 Actual	2010-11 Actual	2011-12 Estimated	2012-13 Sep. Forecast	Change from 2011-12
			Million Acres		
Planted Acres	59.2	53.6	54.4	56.0	+1.6
Harvested Acres	49.9	47.6	45.7	48.8	+3.1
% Abandoned	-15.7%	-11.2%	-16.0%	-12.9%	+3.1%
			Bushels per Acre		
Yield	44.5	46.3	43.7	46.5	+2.8
			Million Bushels		
Beginning Stocks	657	976	862	743	-119.0
Production	2,218	2,207	1,999	2,268	+269.0
Imports	119	97	112	130	+18.0
Total Supply	2,993	3,279	2,974	3,141	+167.0
Food	917	926	941	950	+9.0
Seed, Feed & Residual	219	203	240	293	+53.0
Exports	881	1,289	1,050	1,200	+150.0
Total Use	2,018	2,417	2,231	2,443	+212.0
Ending Stocks	976	862	743	698	-45.0
Avg. Farm Price	$4.87	$5.70	$7.24	$8.10	+$0.86
Stocks-Use	48.4%	35.7%	33.3%	28.6%	-4.7%
Days of Ending Stocks	177	130	122	104	-17.3

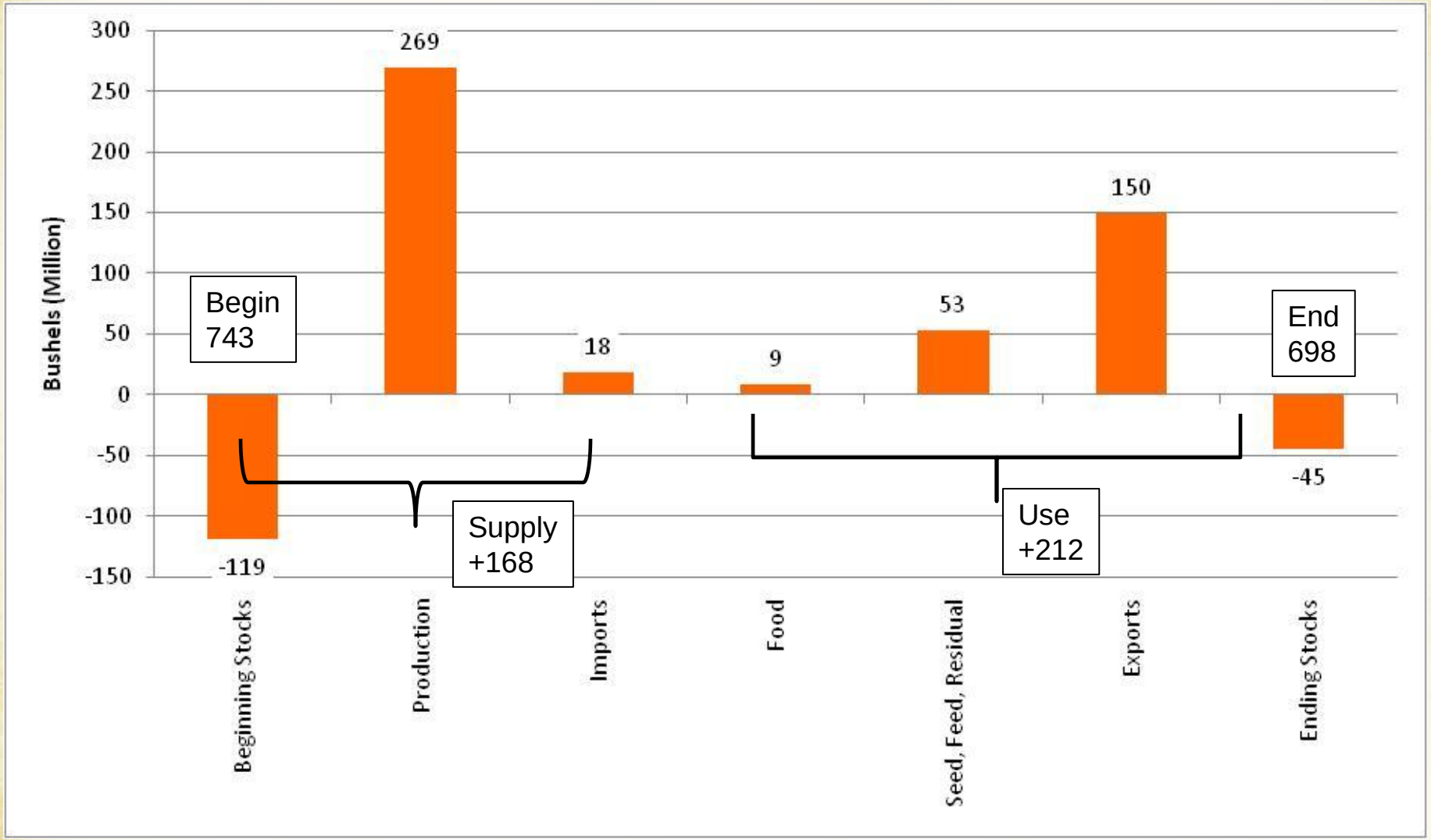
Source: USDA-WAOB: *WASDE. September 2012.*

Change in Wheat Balance Sheet from 2010-11 to 2011-12



Source: USDA-WAOB: *WASDE. September 2012.*

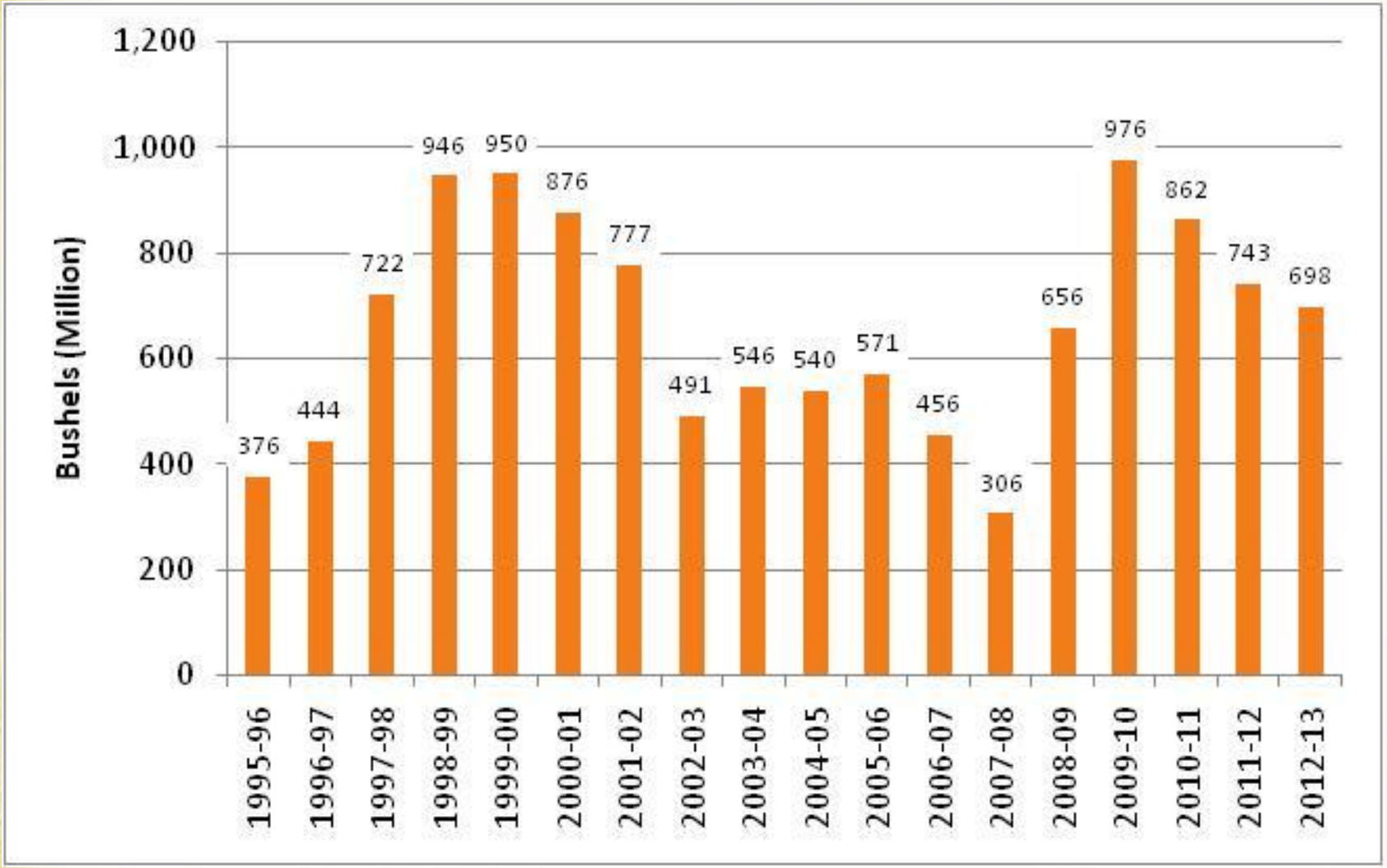
Change in Wheat Balance Sheet from 2011-12 to 2012-13



AMERICAN FARM BUREAU FEDERATION®

Source: USDA-WAOB: *WASDE. September 2012.*

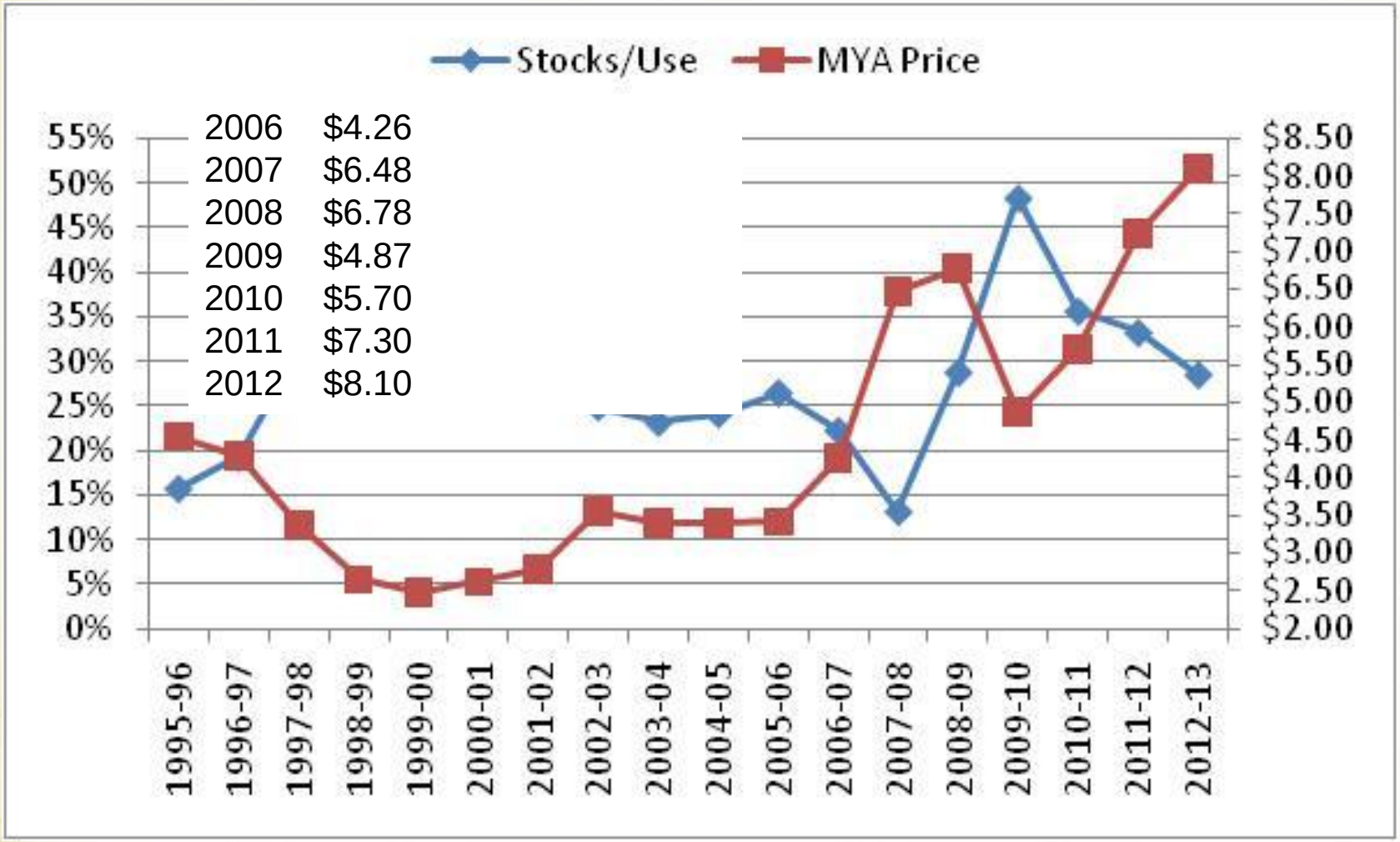
U.S. Wheat Ending Stocks from 1995-2012



AMERICAN FARM BUREAU FEDERATION®

Source: USDA-FAS. *PSD Database*

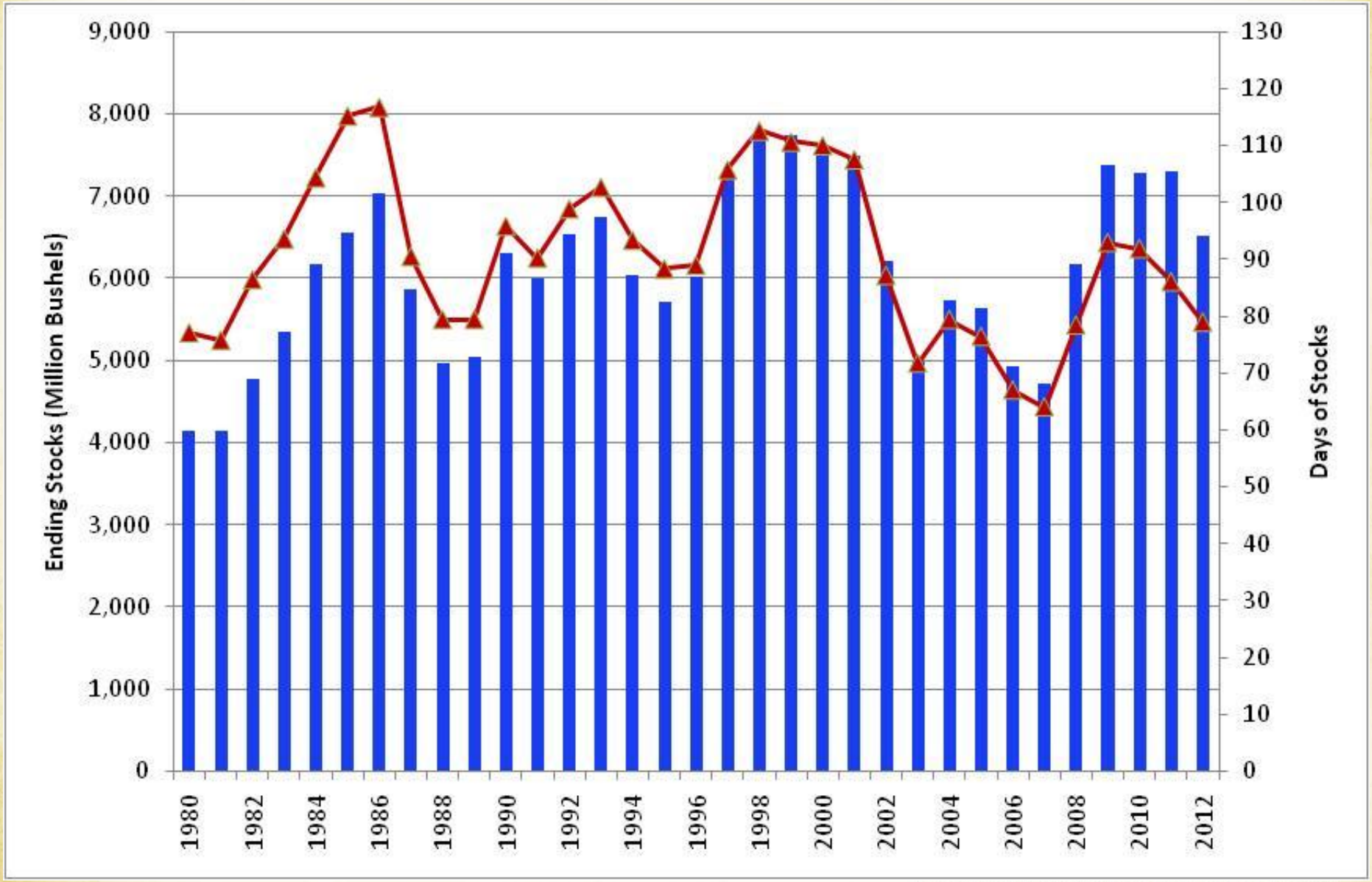
U.S. Wheat Stocks/Use and Marketing-Year Average Price



AMERICAN FARM BUREAU FEDERATION®

Source: USDA-FAS. *PSD Database*

Wheat World Ending Stocks and Days of Stocks



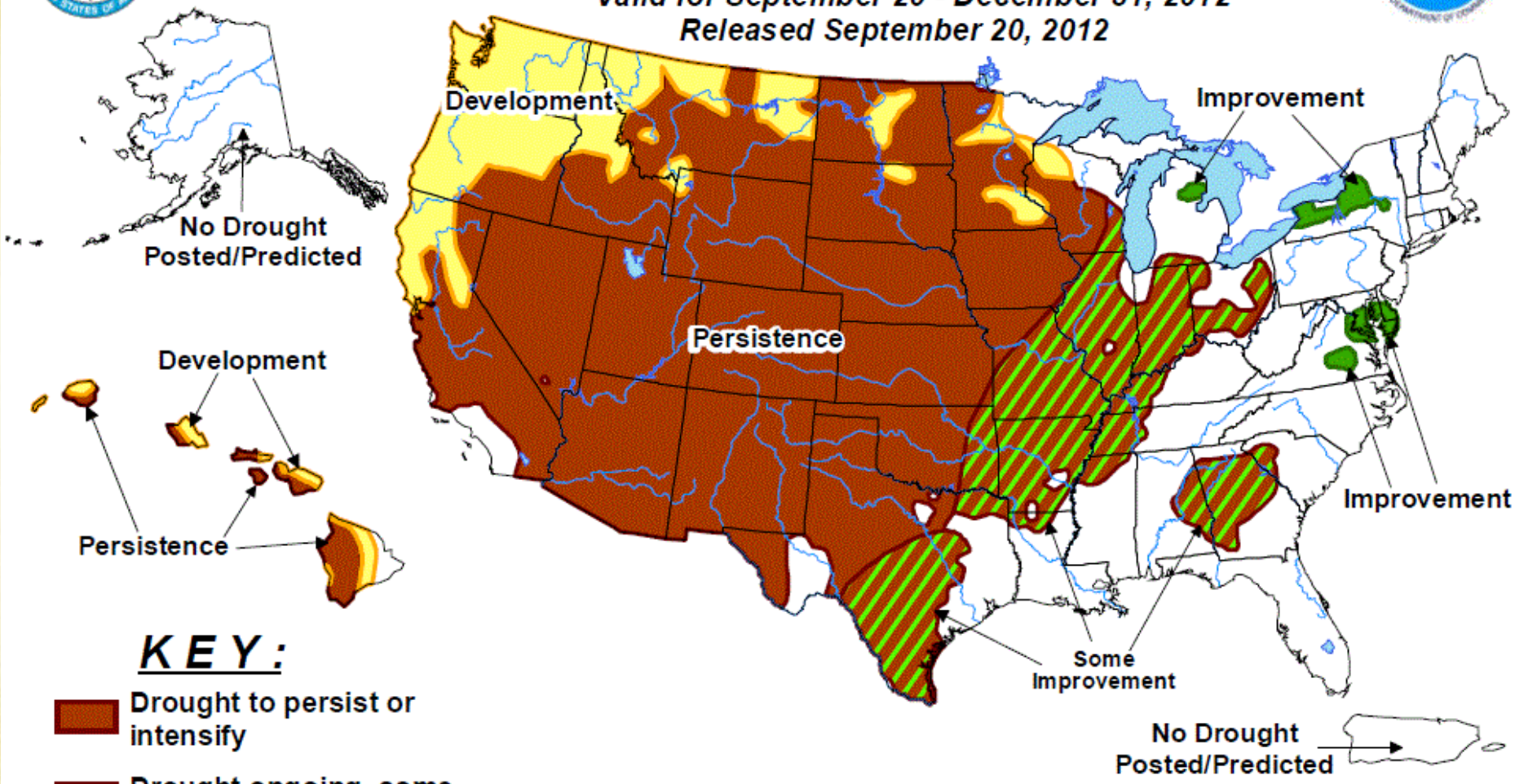
Source: USDA-FAS. *PSD Database*

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for September 20 - December 31, 2012

Released September 20, 2012

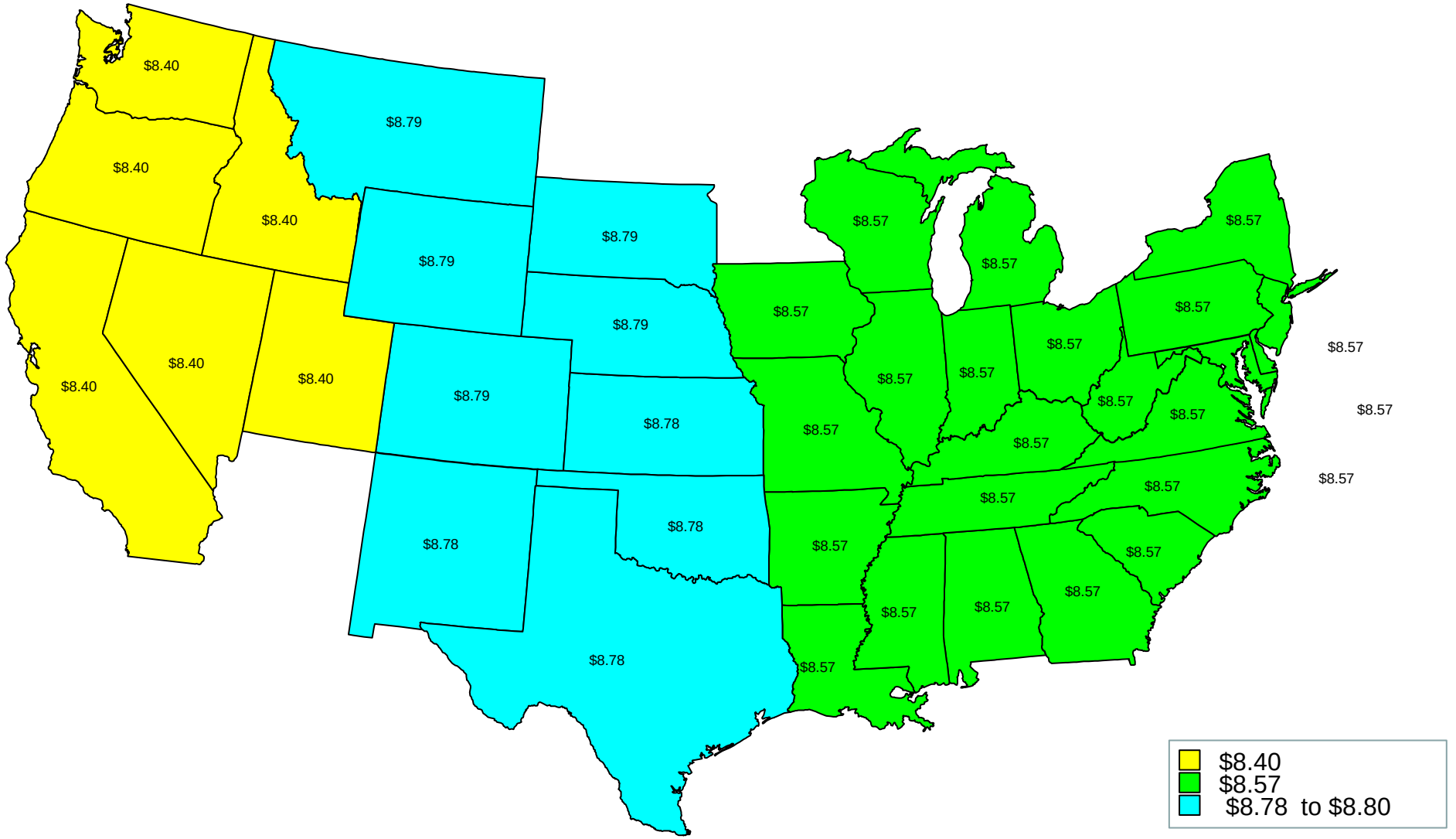


KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

2013 Winter Wheat Projected Price



U.S. Sorghum Supply and Use					
	2009-10 Actual	2010-11 Actual	2011-12 Estimated	2012-13 Sep. Forecast	Change from 2011-12
			Million Acres		
Planted Acres	6.63	5.40	5.48	6.21	+0.7
Harvested Acres	5.52	4.81	3.93	5.10	+1.2
% Abandoned	-17%	-11%	-28%	-18%	+10.4%
			Bushels per Acre		
Yield	69.4	71.8	54.6	48.3	-6.3
			Million Bushels		
Beginning Stocks	54.7	41.3	27.4	27.0	-0.4
Production	383.0	345.6	214.4	246.0	+31.6
Imports	0.0	0.0	0.0	0.0	+0.0
Total Supply	437.7	387.0	242.0	273.0	+31.0
Feed & Residual	140.7	122.8	75.0	70.0	-5.0
Food, Seed & Industrial	90.0	85.0	85.0	80.0	-5.0
Exports	165.8	151.7	55.0	100.0	+45.0
Total Use	396.4	359.5	215.0	250.0	+35.0
Ending Stocks	41.3	27.4	27.0	23.0	-4.0
Avg. Farm Price	$3.22	$5.02	$6.10	$7.50	+$1.40
Stocks-Use	10.4%	7.6%	12.6%	9.8%	-2.7%
Days of Ending Stocks	38	28	46	36	-10

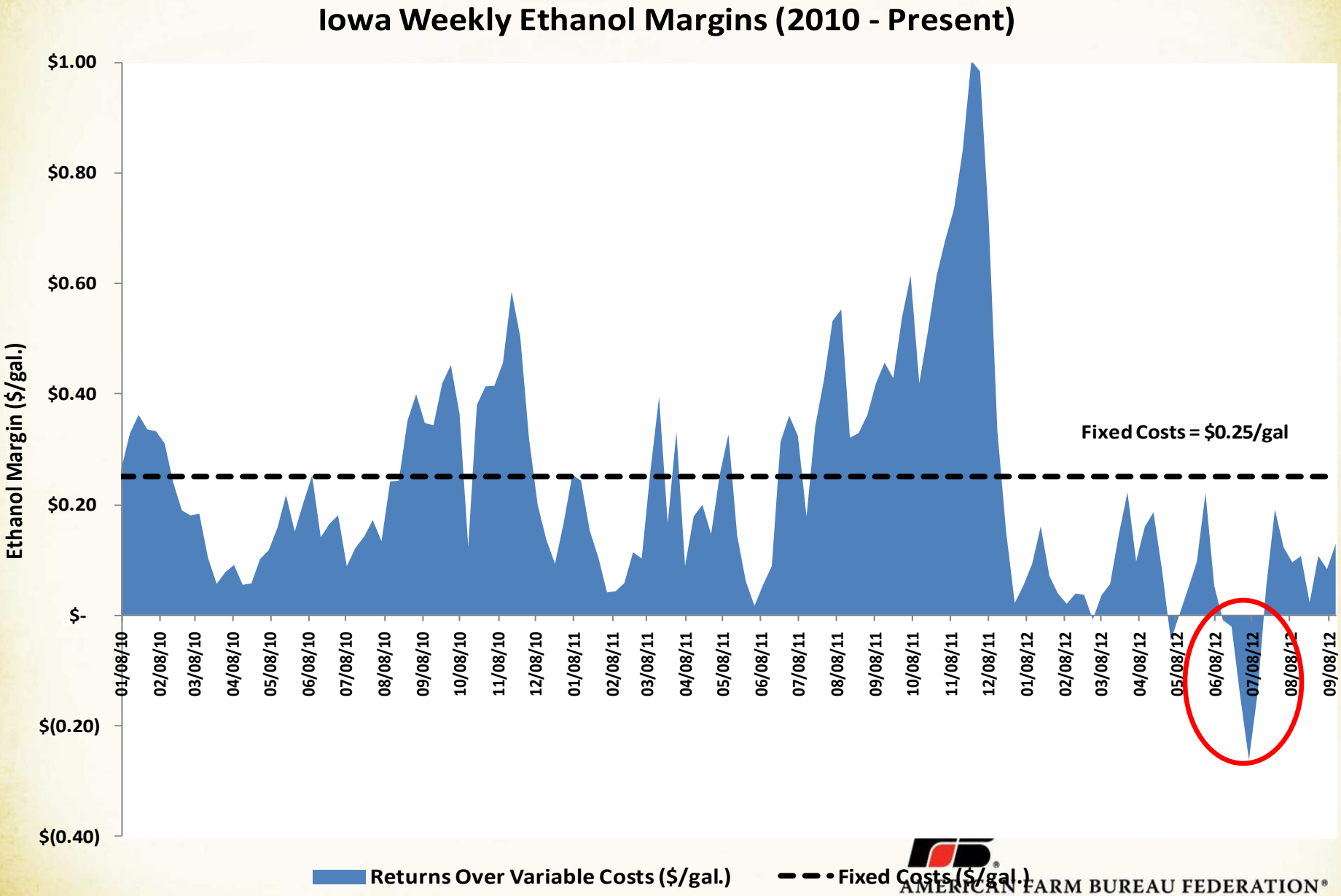
AMERICAN FARM BUREAU FEDERATION®

Source: USDA-WAOB: *WASDE. September 2012.*

Renewable Fuels Standard (RFS2)

Year	Conventional Renewable Fuels (Grandfathered or 20% Reduction)	Advanced Biofuel (Nested Standards)				Total Renewable Fuel
		Biomass-Based Diesel (50% Reduction)	Non Cellulosic Advanced (50% Reduction)	Cellulosic Biofuel (60% Reduction)	Total Advanced Biofuel	
2008	9.00					9.00
2009	10.50	0.5	0.10		0.60	11.10
2010	12.00	0.65	0.20	0.10	0.95	12.95
2011	12.60	0.8	0.30	0.25	1.35	13.95
2012	13.20	1	0.50	0.50	2.00	15.20
2013	13.80	1	0.75	1.00	2.75	16.55
2014	14.50	1	1.00	1.75	3.75	18.25
2015	15.00	1	1.50	3.00	5.50	20.50
2016	15.00	1	2.00	4.25	7.25	22.25
2017	15.00	1	2.50	5.50	9.00	24.00
2018	15.00	1	3.00	7.00	11.00	26.00
2019	15.00	1	3.50	8.50	13.00	28.00
2020	15.00	1	3.50	10.50	15.00	30.00
2021	15.00	1	3.50	13.50	18.00	33.00
2022	15.00	1	4.00	16.00	21.00	36.00

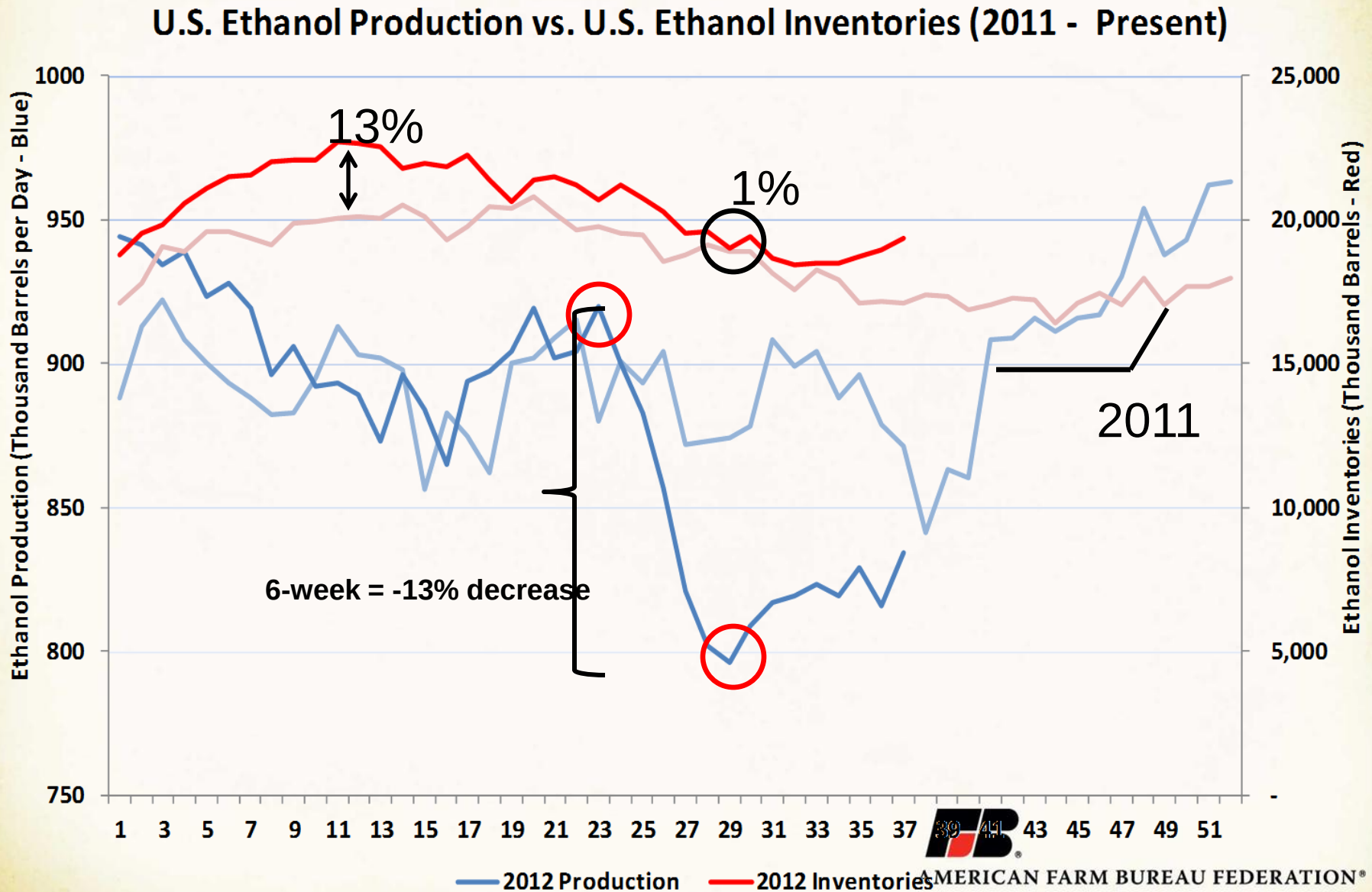
Ethanol Margins - Iowa



AMERICAN FARM BUREAU FEDERATION®

Source: AFBF - Author Calculations

Ethanol Production & Inventories



RFS Waiver Petition

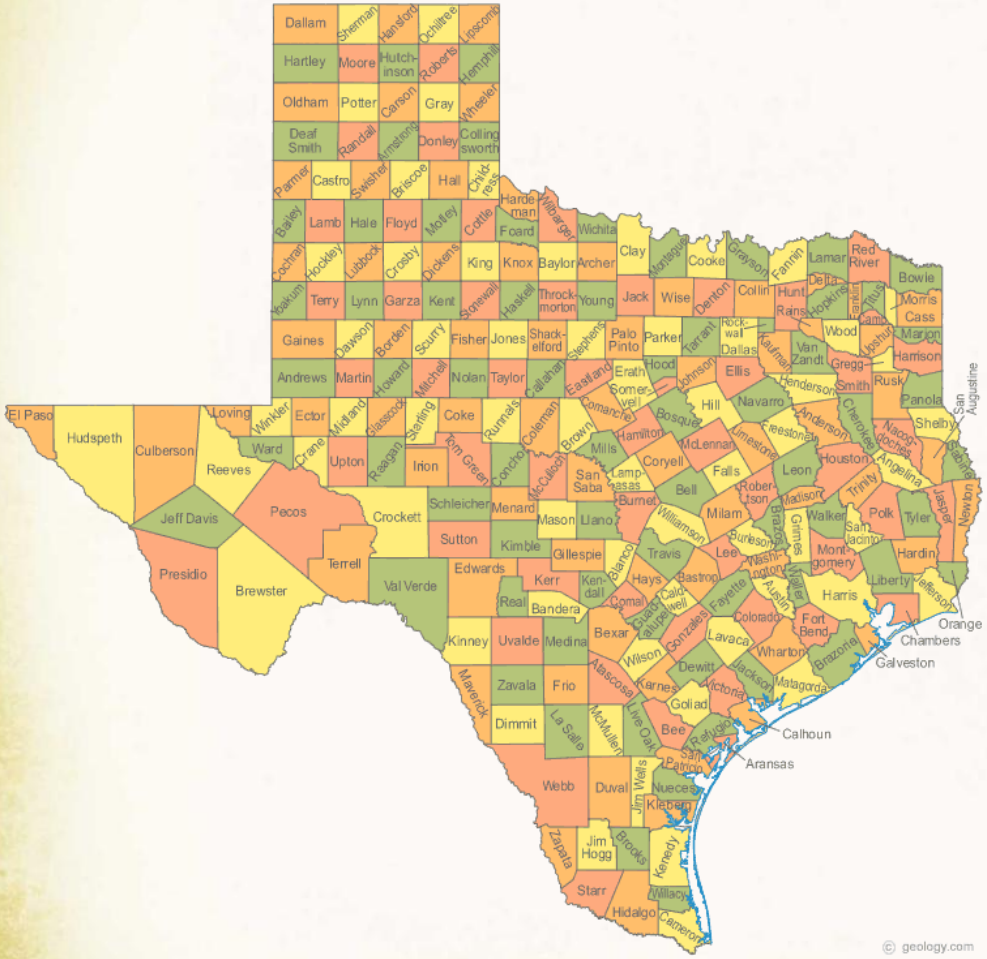
States requesting a waiver: AR, DE, GA, MD, NC, NM, TX, and VA

Letters encouraging waivers from a coalition of livestock, poultry, meat, dairy, and feed organizations

Letters from 156 Representatives and 34 Senators

AMERICAN FARM BUREAU FEDERATION®

2008 Texas Waiver Request (Cattle)



Section 211(o)(7) of the Clean Air Act allows the Administrator of EPA, in consultation with the Secretaries of Agriculture and Energy, to waive the requirements of the national renewable fuel standard, in whole or in part, if the Administrator determines, after public notice and opportunity for public comment, ***"that implementation of the RFS requirements would severely harm the economy or environment of a State, a region, or the United States."***

AMERICAN FARM BUREAU FEDERATION®

Discussion of the Potential of a RFS Waiver

Where is the greatest value of using corn through a tail pipe?

Let's Talk about RINS

RIN = Renewable Identification Number

How EPA accounts for meeting mandate

Can buy excess RIN's to use to meet commitment

Blender's can carry-forward 20% excess years into next year

AMERICAN FARM BUREAU FEDERATION®

Example: 20% "Banking" Provision

Blender "X"

1.3 Bn RINs → ***1.6 Bn RINs*** →

Obligated | Actual

Balance
+300 million
Surplus

"Bank" Provision: 20% of 1.3 Bn = 260 million

Remaining 40 million = sold to obligated parties

Table 1: Production, Net Exports, Mandates, and Estimated RIN Stocks for Conventional Ethanol, 2007-2011

	Conventional Ethanol					
Year	Beginning RIN Stocks	+ Production	Net - Exports	- Mandate =	Potential Ending RIN Stocks	**Ending RIN Stocks**
2007	0	6,521	(439)	4,700	2,260	**940**
2008	940	9,309	(530)	9,000	1,778	1,778
2009	1,778	10,938	(198)	10,500	2,414	**2,100**
2010	2,100	13,298	383	12,000	3,015	**2,400**
2011P[a]	2,400	13,852	1,004	12,600	2,648	**2,520**

Sources: Production and Net Export from the Energy Information Administration, Mandate levels from EPA, RIN Stock levels calculated by the author.

[a]Production and Net Exports for 2011 were only available through November 2011 at the time of this writing. These values were scaled by a factor of 1.091 (12/11) to arrive at annual estimates for 2011.

Source: U of I farmdocdaily

Purdue University Study

2013 partial RFS waiver: $0.00 - $1.30/bu. impact on corn prices.

A lot depends on blender flexibility…

- If there is no flexibility, issuing a waiver will do little to change the current market's status quo.
- If there is flexibility, waiver helps livestock producers and consumers of livestock products (hurts crop growers and ethanol producers).

Currently and projected, there's an incentive for blenders to blend 10% ethanol in gasoline – even during $8/bu. corn!

AMERICAN FARM BUREAU FEDERATION®

RFS Outlook and Conclusions

The RFS provides flexibility

- **2012**: RFS mandate will be met; **2013:** conditions warrant uncertainty
  - **For 2012**: 2.5 Bn RINs for carry-over + over 796 million gallons in storage

Waiving RFS for 2013 has uncertain impacts on corn prices.

- Purdue University study: Corn prices decreasing $0.00 - $1.30/bu.
- Still incentive for blender to blend 10% ethanol with gasoline even at $8/corn.

Structural inflexibility would limit any response to a waiver.

AMERICAN FARM BUREAU FEDERATION®

AMERICAN FARM BUREAU FEDERATION®

General Fearmongering

1. El Nino or La Nina or whatever? Currently the El Nino is weak. A strong El Nino would bring rain to South America (help their corn, soybean crop) and increase likelihood of breaking Midwest drought.
2. Australia has been dry while Argentina is too wet. Black Sea has short wheat crop and will have limited exports. Potential for wheat exports = greater Springtime bidding for acres.
3. Climatologist study of droughts from 1890-today: Shortest drought was 18 months – the 1930/1950 droughts were 51 and 47 months, respectively. The 2012 drought started in July so a short drought would cover the 2013 crop year.
4. Barge traffic – low river levels make it more costly and difficult to ship through port of New Orleans. What about fertilizer imports flowing upriver?
5. Seed supply. Will producers' first choice be available in sufficient quantities?

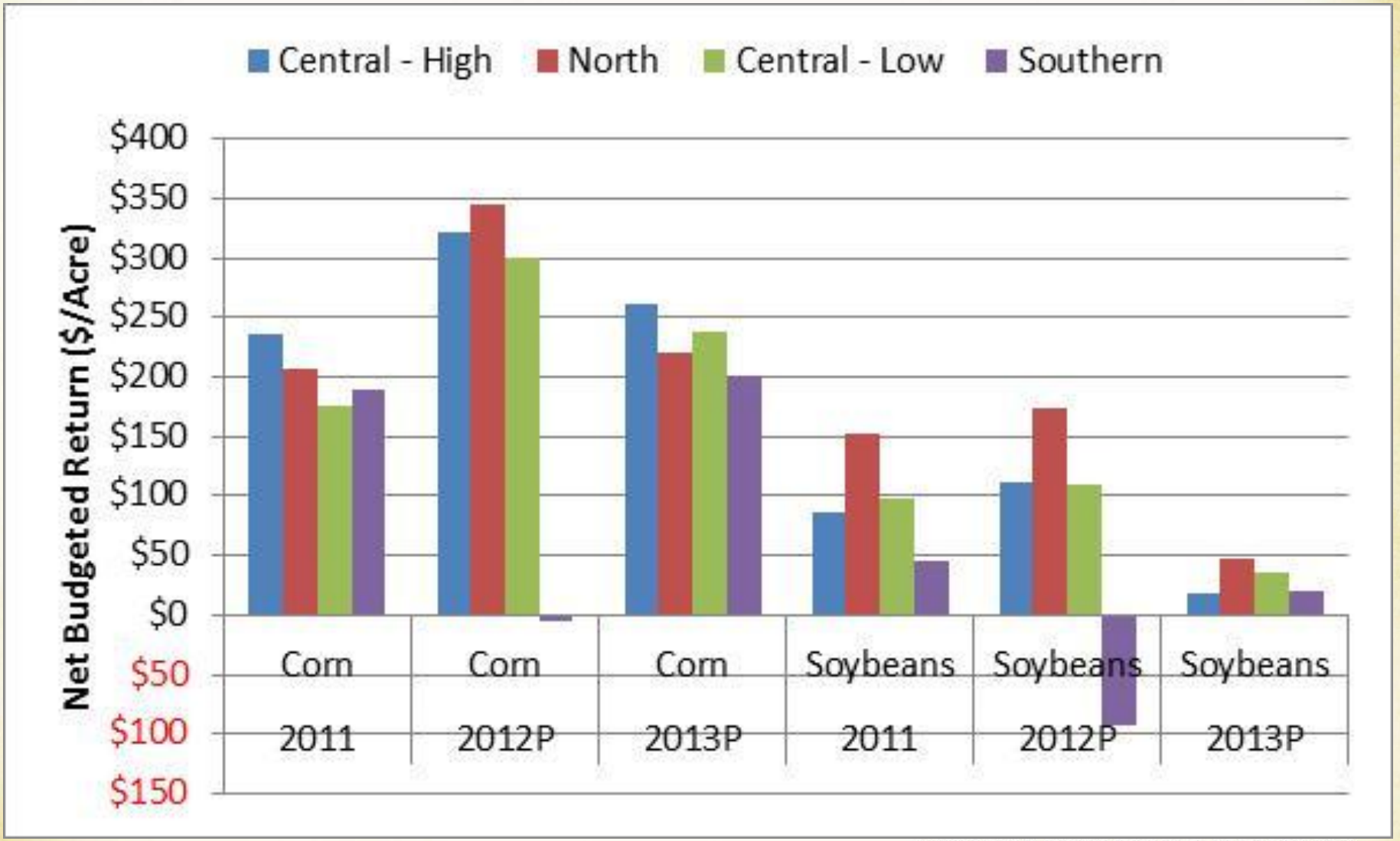
6. How long will it take to recover from demand destruction?

- Corn for feed: 3-years after 1983 & 1988 drought and 4 years after 1995 drought

- Soybean crush: 3-years after 1983 & 1988 drought and 1 year after 1995 drought

- Soybean exports: 16 years after the 1983 drought and 4 years after the 1988 drought. Exports snapped-back immediately after the 1995 drought

University of Illinois Budgeted Profitability Comparison for 2013 Corn vs. Soybeans



Source: www.farmdoc.uiuc.edu. August 21, 2012/

Farm Futures Survey

- Survey of subscribers (1800 producers) in August (released August 28, 2012) of their 2013 Planting Intentions
- Plan to plant 93.1 million corn acres (down 4%) and 78.1 million soybean acres (up 1.2%)
- Similar shift to soybeans in North America as in South America
- Respondents indicated a desire to get rotations back aligned with less continuous corn

AMERICAN FARM BUREAU FEDERATION®

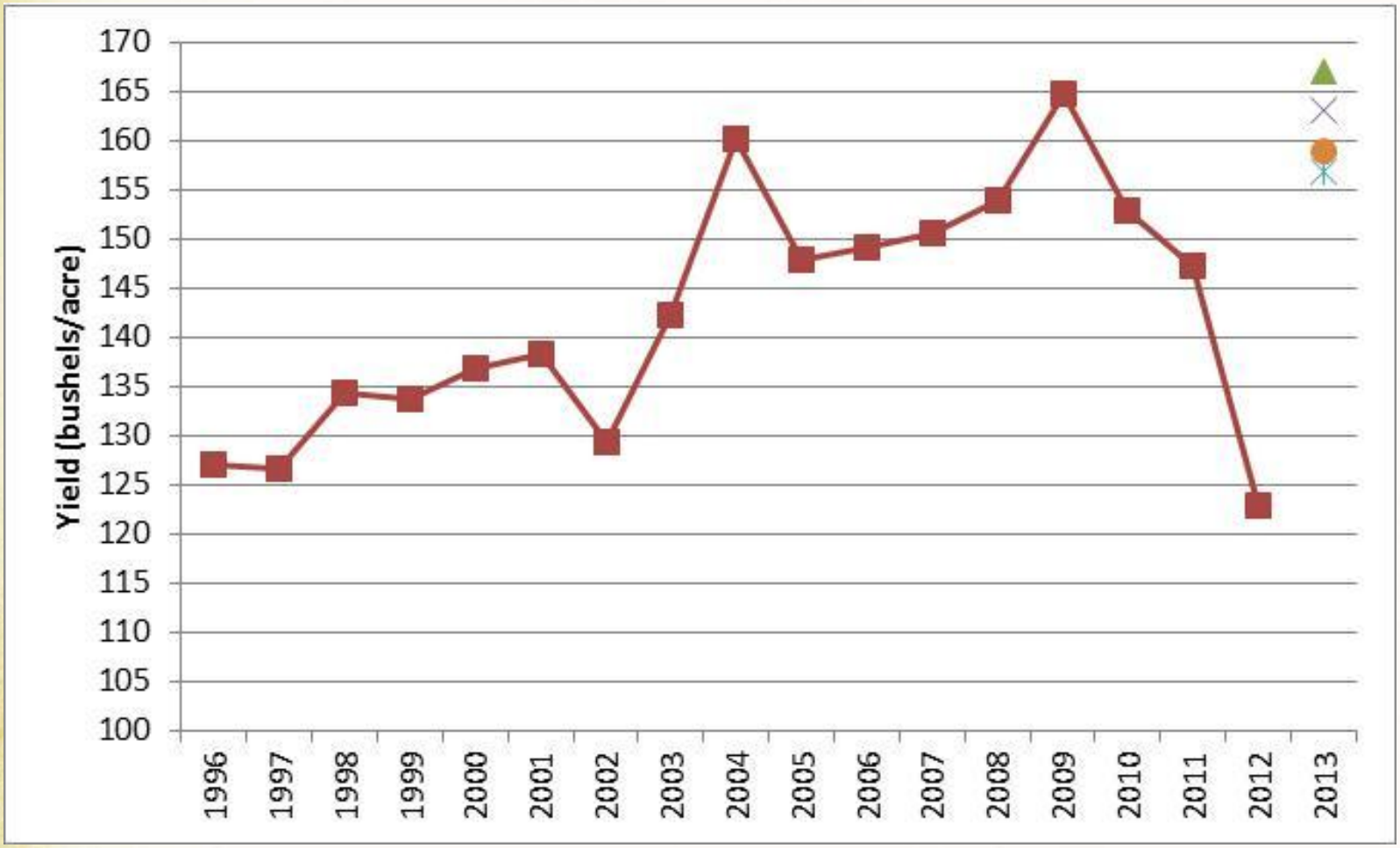
Informa Economic's 2013 Planting Intentions Projections

	2013 Planted (1,000 Acres)	Change from 2012 (Data from 2012 Acreage report)	% Change
Corn	97,537	1,132	1.2%
Soybeans	79,872	3,792	5.0%
All Cotton	10,017	-2,618	-20.7%
All Wheat	57,127	1,110	2.0%
Grain Sorghum	6,950	740	11.9%
Oats	2,697	-49	-1.8%
Barley	3,679	1	0.0%
Rice	2,580	-81	-3.0%
Sunflowers	1,960	156	8.6%
Total		4,183	

AMERICAN FARM BUREAU FEDERATION®

Source: Informa Economics. .September 21, 2012.

Which Trend Yield Will the WAOB Use?



Exclude 2011+12: 167.1

Exclude 2012: 163.2

20-Yr Trend: 156.9

25-Yr Trend: 159.1

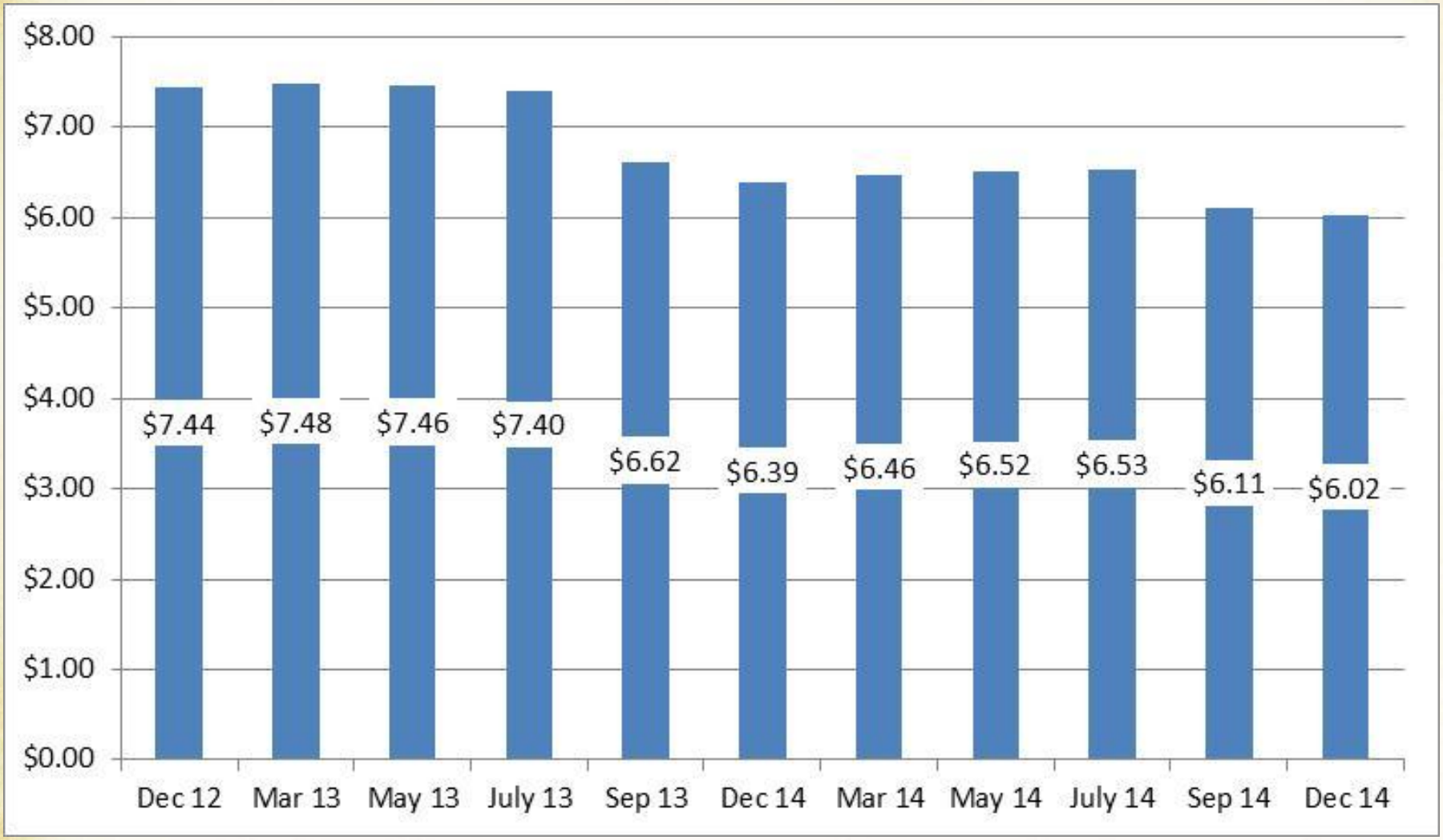
AMERICAN FARM BUREAU FEDERATION®

2013-14 Supply and Use Sensitivity Analysis

	Informa	1993-2012 Trend			4% Below Trend		
Planted Acres (Million)	97.5	96	97	98	96	97	98
% Harvested	92.5%	91.5%	91.5%	91.5%	91.5%	91.5%	91.5%
Harvested Acres (Million)	90.2	87.8	88.8	89.7	87.8	88.8	89.7
Yield (bushels/acre)	162.2	156.9	156.9	156.9	150.6	150.6	150.6
Beginning Stocks	579	733	733	733	733	733	733
Production	14,630	13,782	13,926	14,069	13,229	13,367	13,504
Imports	10	10	10	10	10	10	10
Total Supply	15,219	14,525	14,669	14,812	13,972	14,110	14,247
Total Use	13,230	13,000	13,000	13,000	13,000	13,000	13,000
Ending Stocks	1,989	1,525	1,669	1,812	972	1,110	1,247
Stocks-Use	15.0%	11.7%	12.8%	13.9%	7.5%	8.5%	9.6%
Price	$3.55						

Factors contributing to lower prices: 1. Large South American Soy/Corn crops 2. Large North American crops 3. Demand recovers slowly

Corn Futures Closing Prices for September 25, 2012



AMERICAN FARM BUREAU FEDERATION®

Conclusions

- Corn will drive the markets again but will face greater competition from soybeans than previous years.
- Greater risk of margin squeeze if obtain trend/above trend yields with increased harvested acres
- However, bidding for acres should provide crop insurance price guarantees at levels to help mitigate some of the cost margin squeeze
- Spring wheat could be competitive if winter wheat has production problem in Southern Plains.

AMERICAN FARM BUREAU FEDERATION®

Thank you!

I will be happy to answer any questions you may have.

Todd Davis

202-406-3621

tdavis@fb.org

AMERICAN FARM BUREAU FEDERATION®