FOTC 2014 Fertilizer Outlook & Technology Conference

MAKING THE RIGHT MOVES

OUR CHALLENGES, OUR IMAGE, OUR FUTURE

Rich Pottorff

Chief Economist
Doane Advisory Services

Agricultural Outlook

The Fertilizer Institute
Nourish, Replenish, Grow

Fertilizer Industry Round Table

The Outlook for Agriculture

Presented to:

The Fertilizer Institute

By Rich Pottorff, Chief Economist

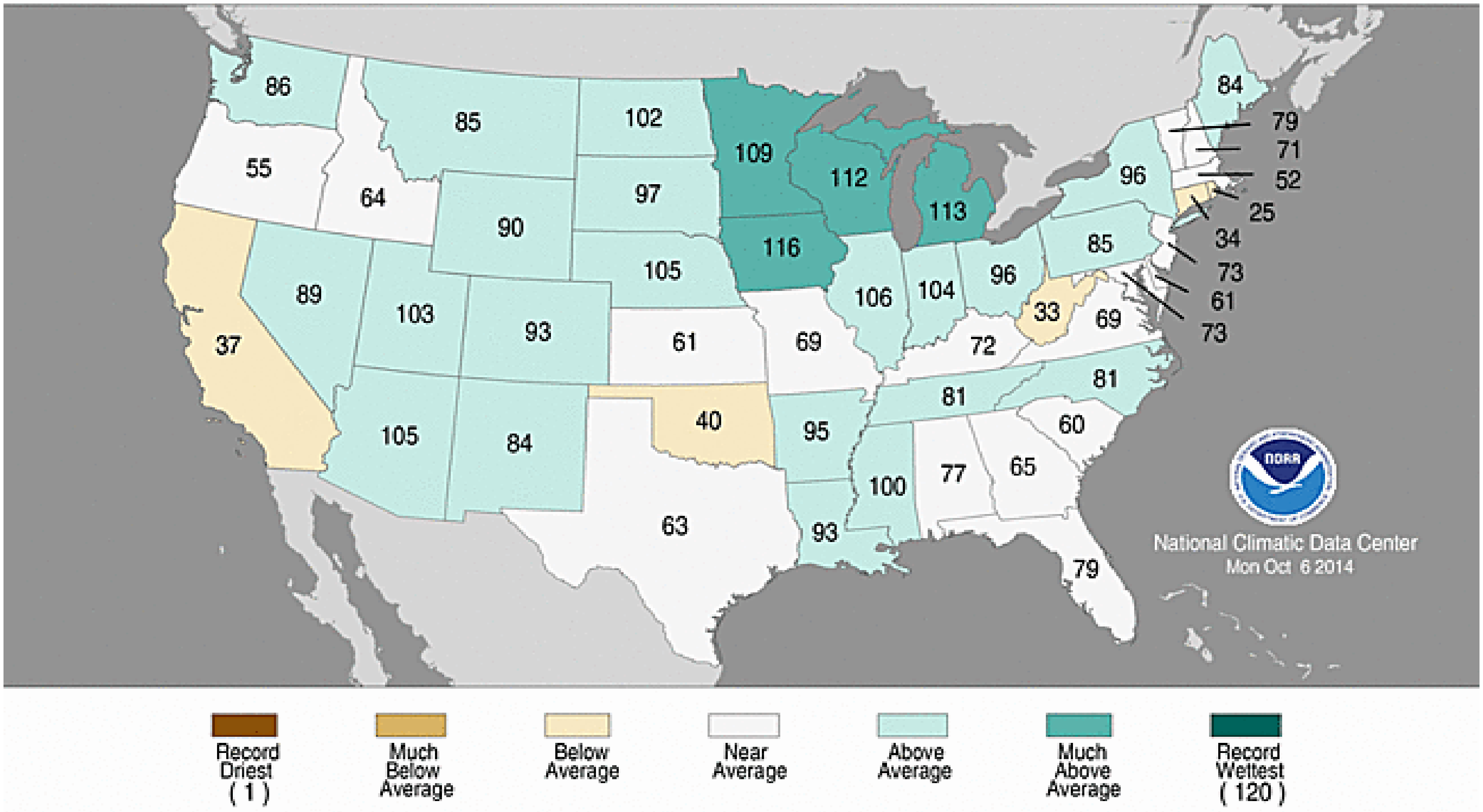
Doane Advisory Services of St. Louis

General Outline

- A few comments about the weather
  - Which is a lot nicer here than in Minnesota
- Key factors for major crops
  - Corn, Soybeans, Wheat and Cotton
- Livestock situation
- The Financial situation for the farm sector
- Closing Comments

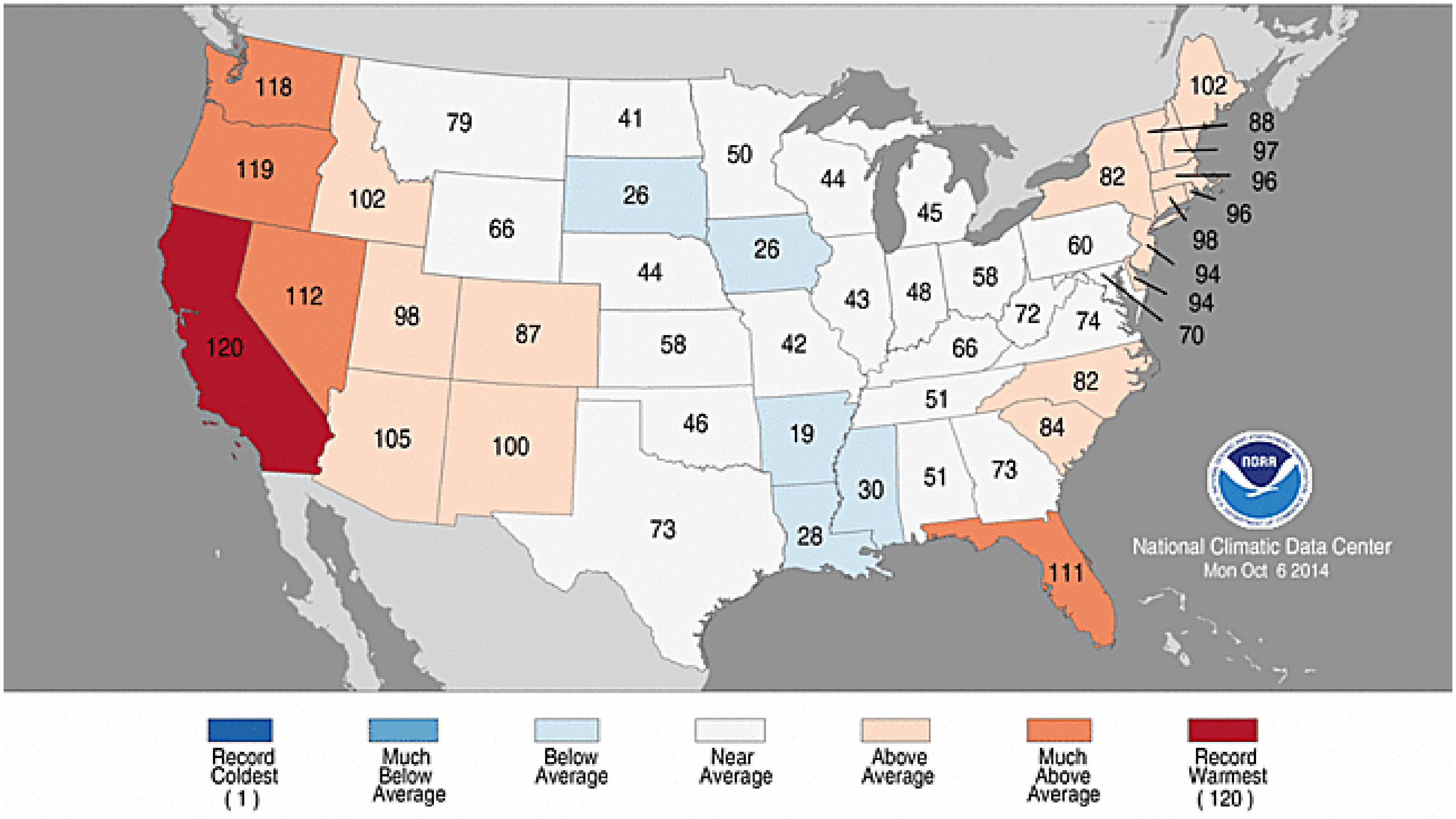
Statewide Precipitation Ranks

April-September 2014 for period 1895-2014



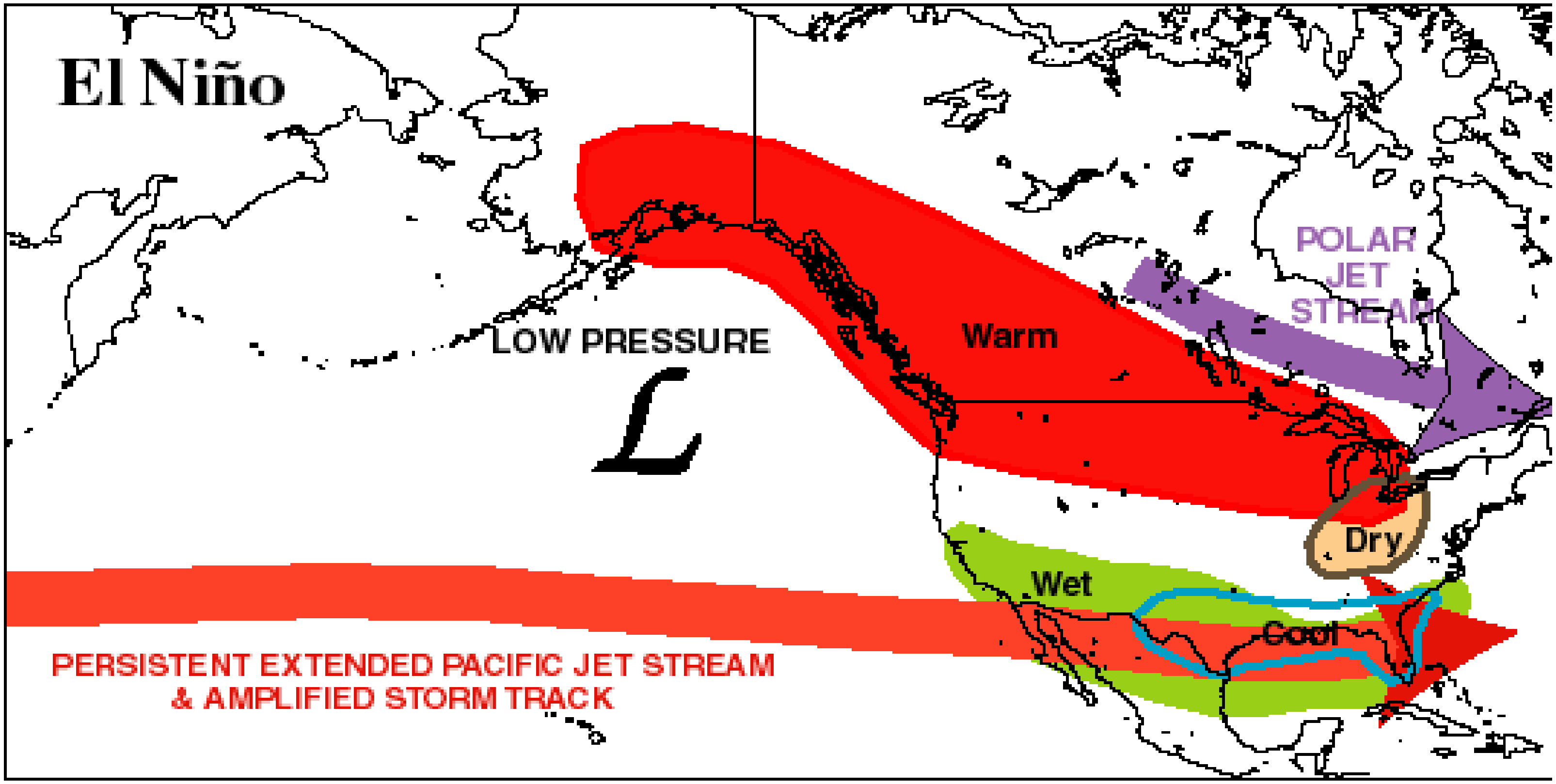
Statewide Average Temperature Ranks

April-September 2014 for period 1895-2014

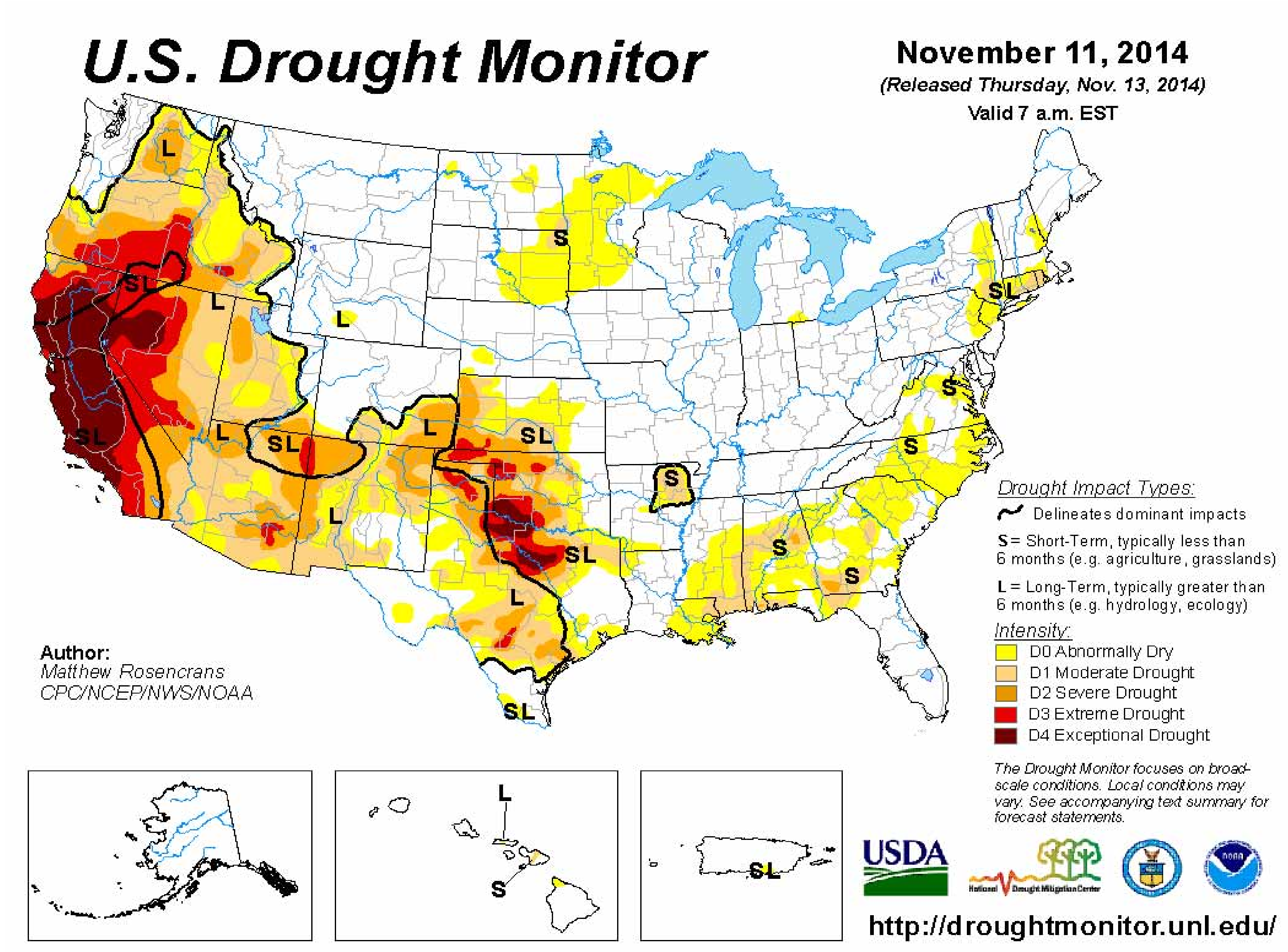


DOANE

Typical January to March Weather Anomalies and Atmospheric Circulation During El Nino



DOANE

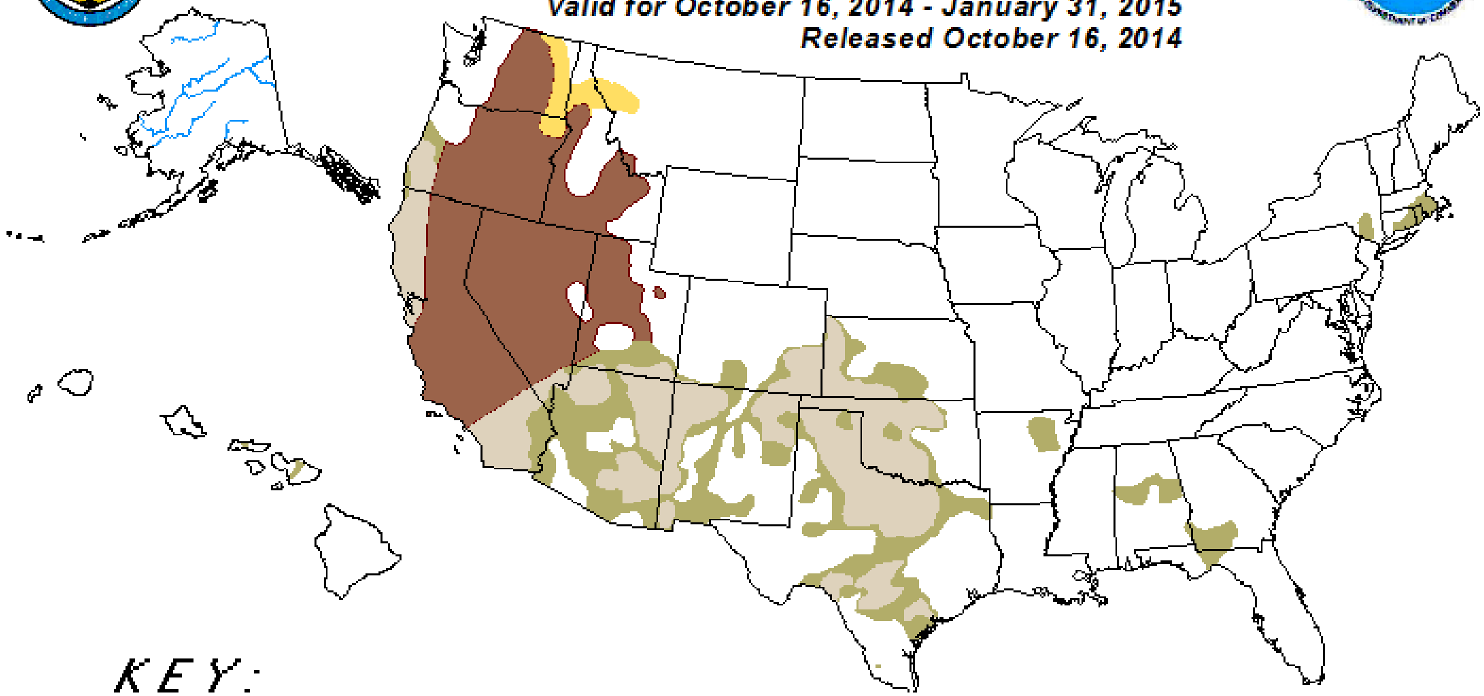

U.S. Drought Monitor
November 11, 2014
(Released Thursday, Nov. 13, 2014)
Valid 7 a.m. EST
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
Author:
Matthew Rosencrans
CPC/NCEP/NWS/NOAA
USDA
http://droughtmonitor.unl.edu/

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for October 16, 2014 - January 31, 2015

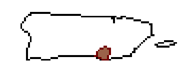
Released October 16, 2014



KEY:

- **Drought persists or intensifies**
- **Drought remains but improves**
- **Drought removal likely**
- **Drought development likely**

Author: Brad Pugh, Climate Prediction Center, NOAA



http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

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 tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.

The Green areas imply drought removal by the end of the period (D0 or none)

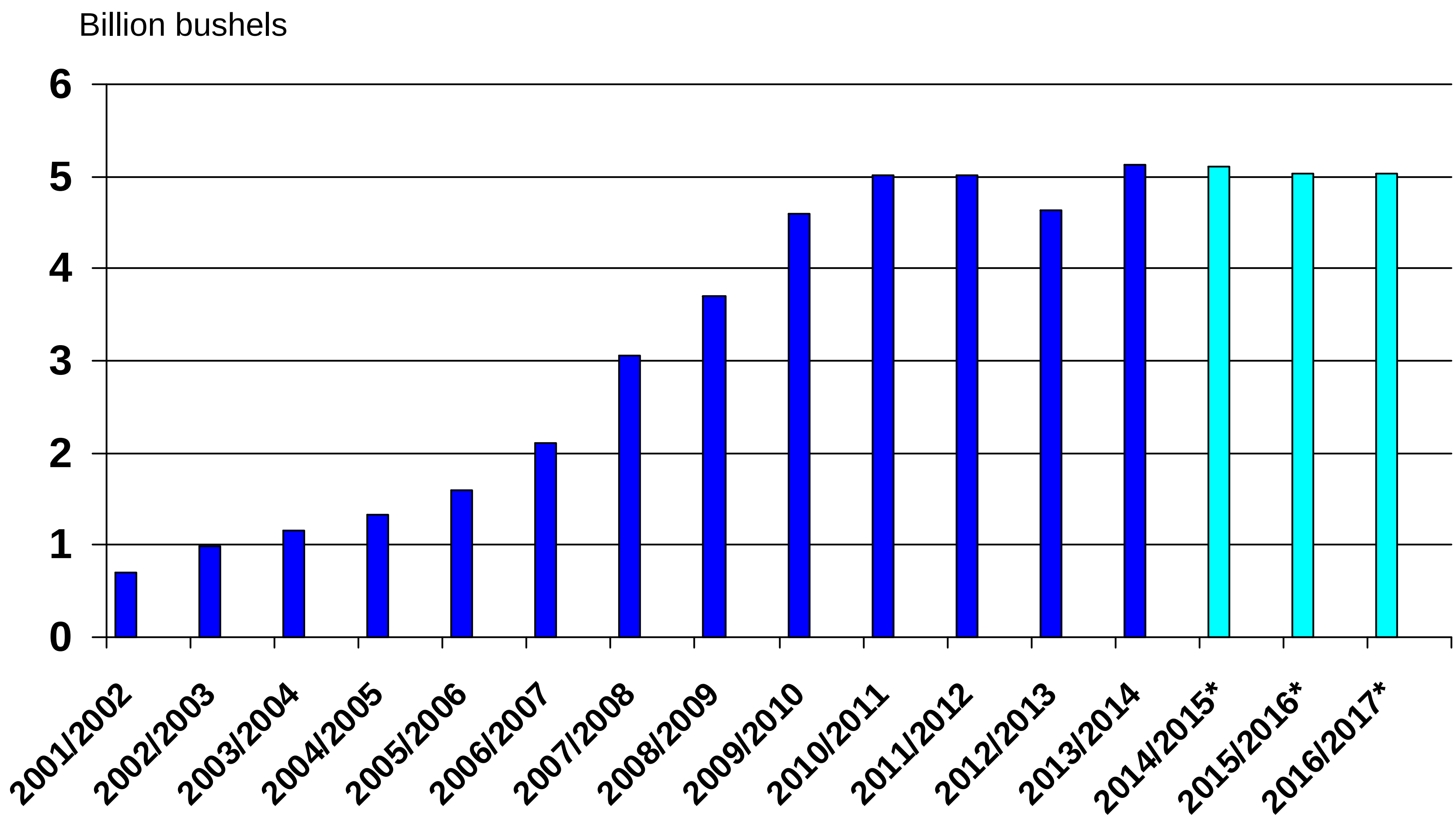
Crop Sector Outlook

Corn

Issues for the Corn Market

- Ethanol
  - The Impact on Acreage
  - The Outlook
- Exports
  - Rising competition
  - China
- How Much Acreage do we Need?

Corn Demand for Ethanol

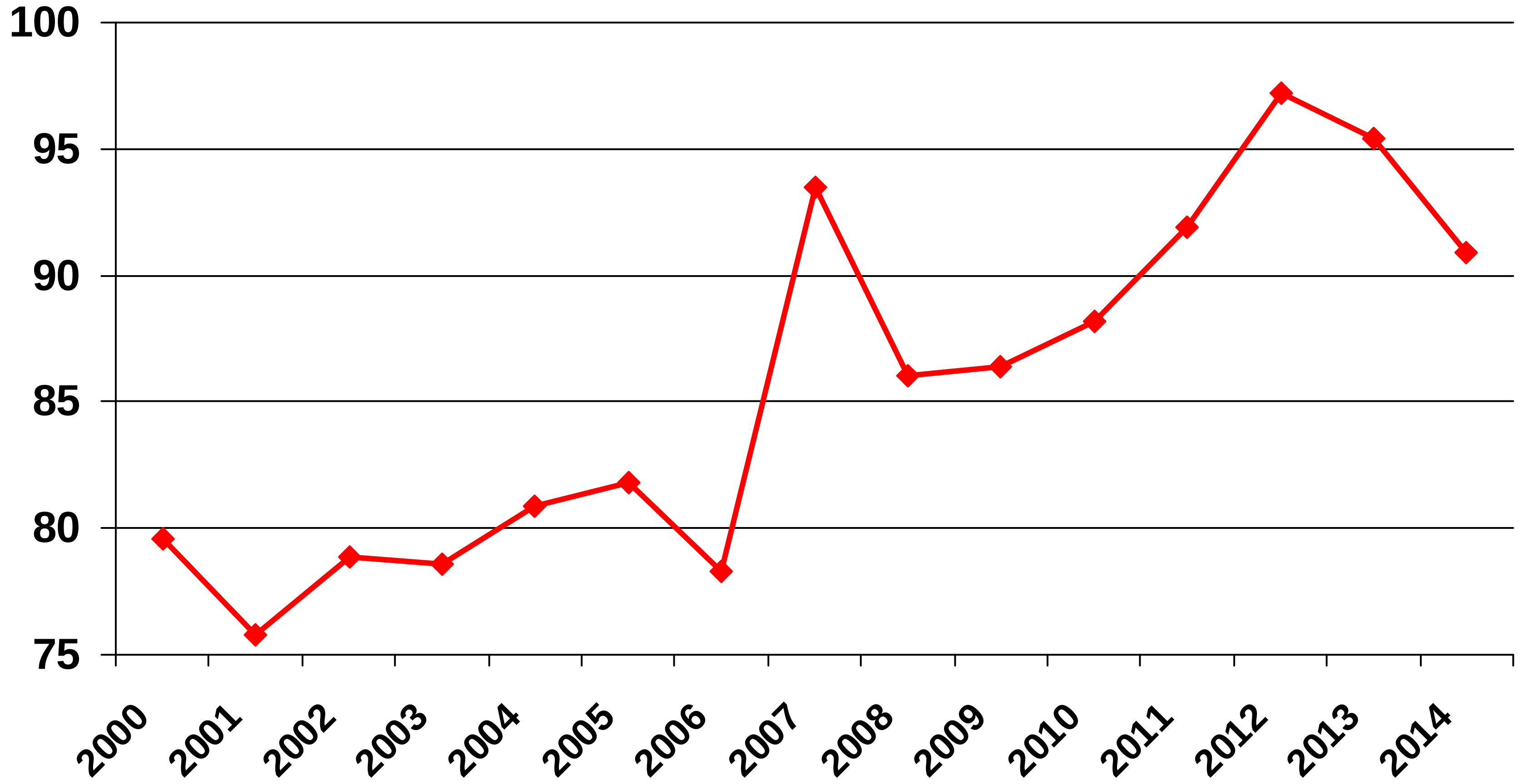


* = Doane Forecasts

DOANE

Corn Acreage

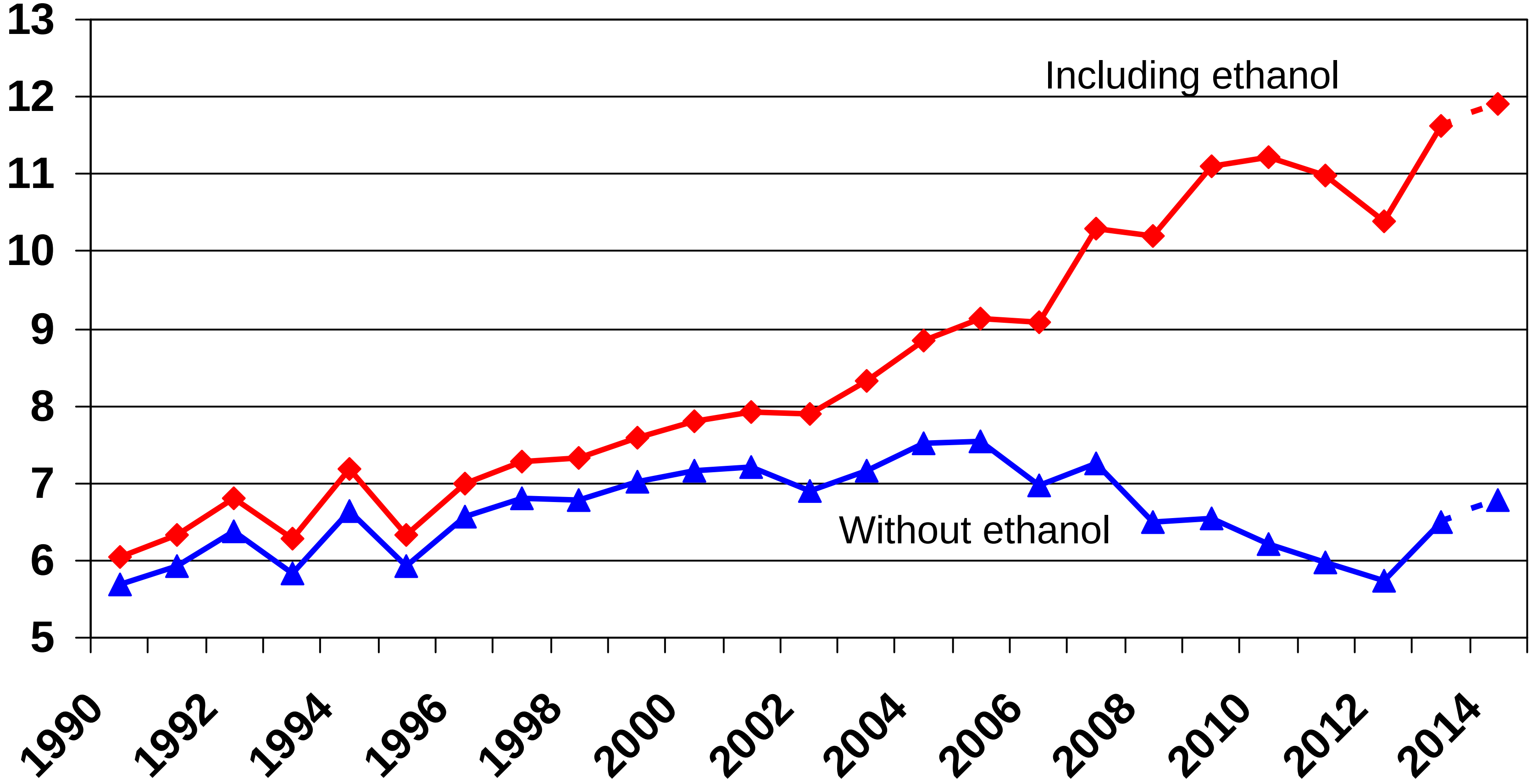
million acres



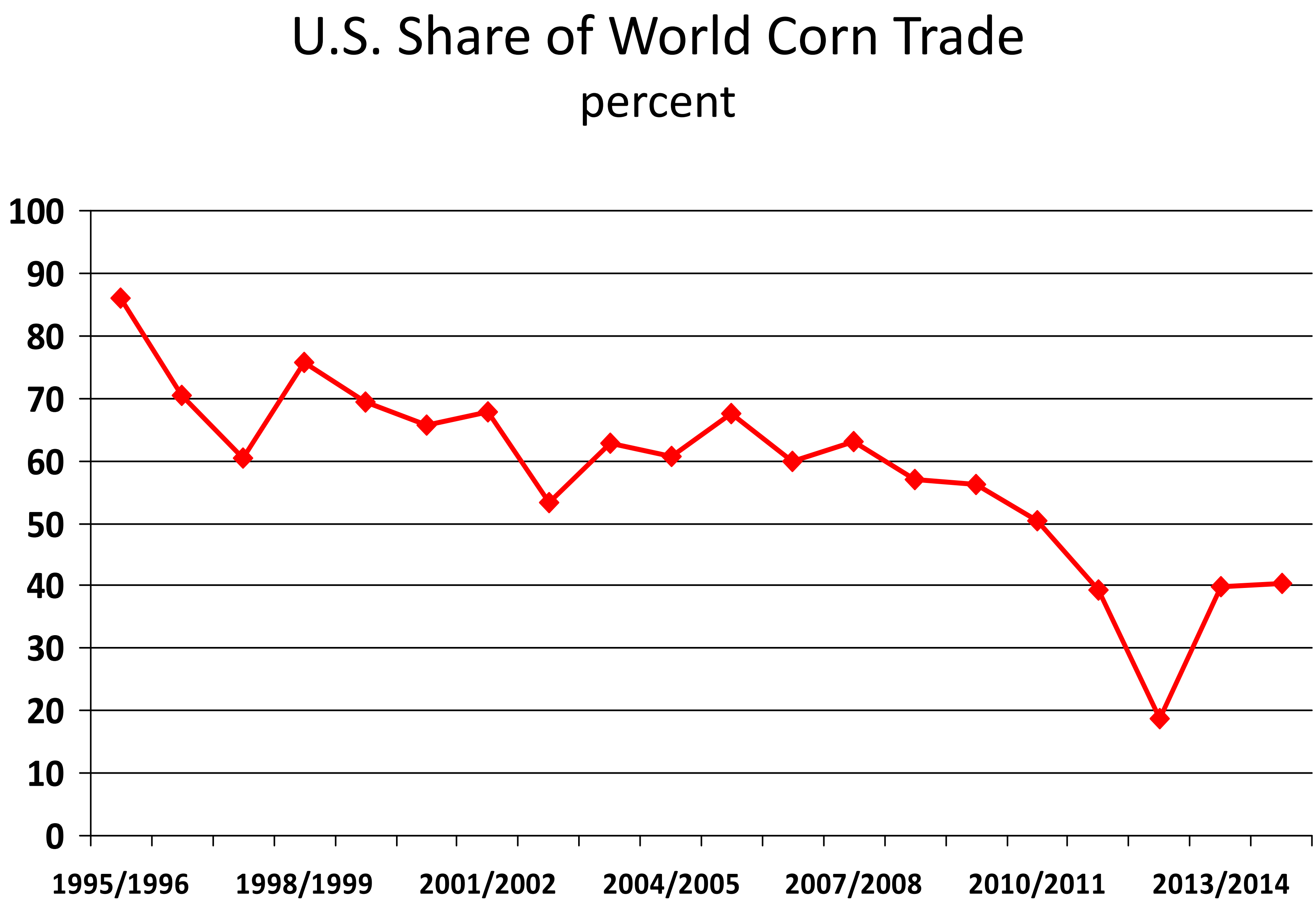
DOANE

Domestic Corn Use

Billion Bushels



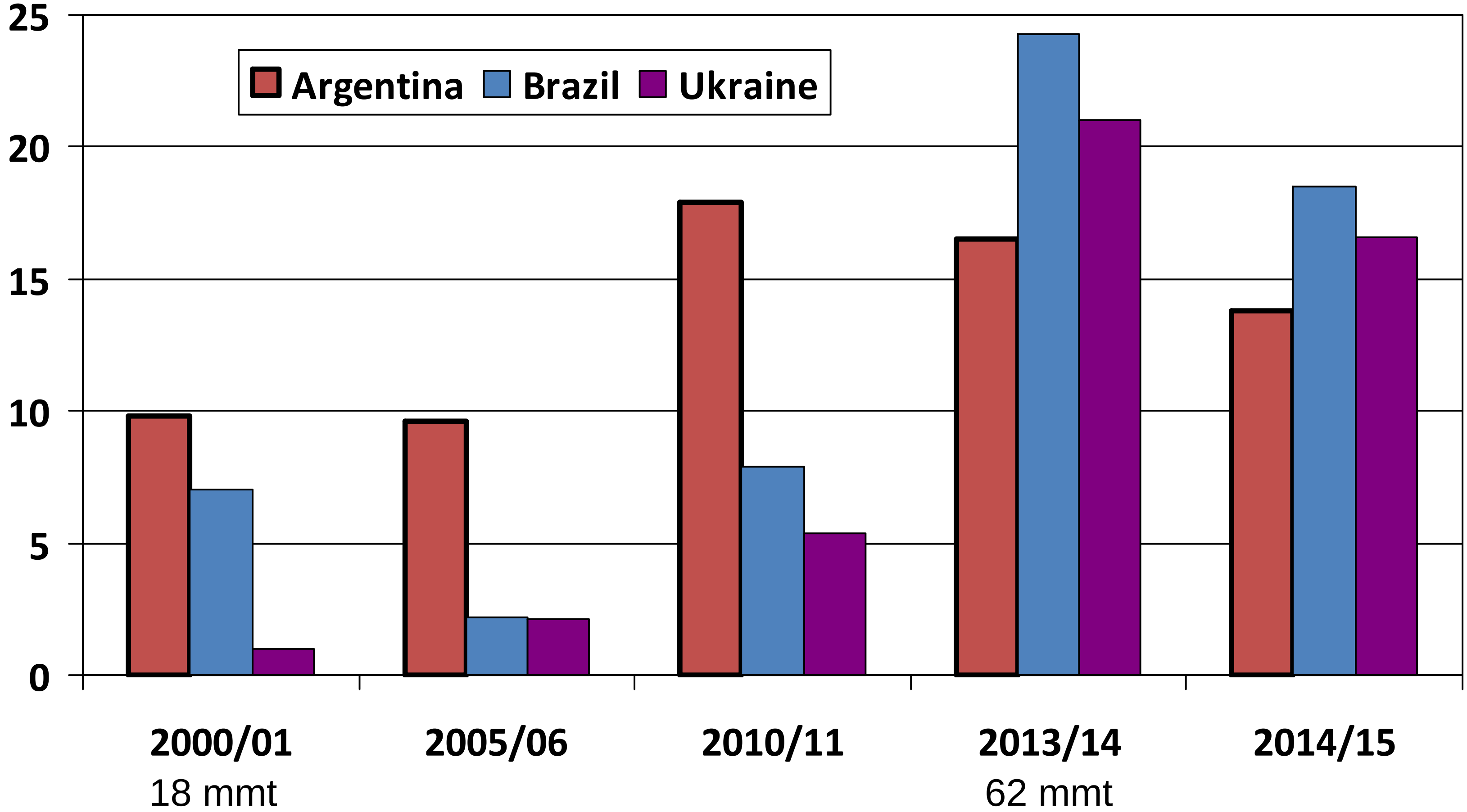
DOANE


U.S. Share of World Corn Trade
percent
100
90
80
70
60
50
40
30
20
10
0
1995/1996
1998/1999
2001/2002
2004/2005
2007/2008
2010/2011
2013/2014

DOANE

Corn Surplus

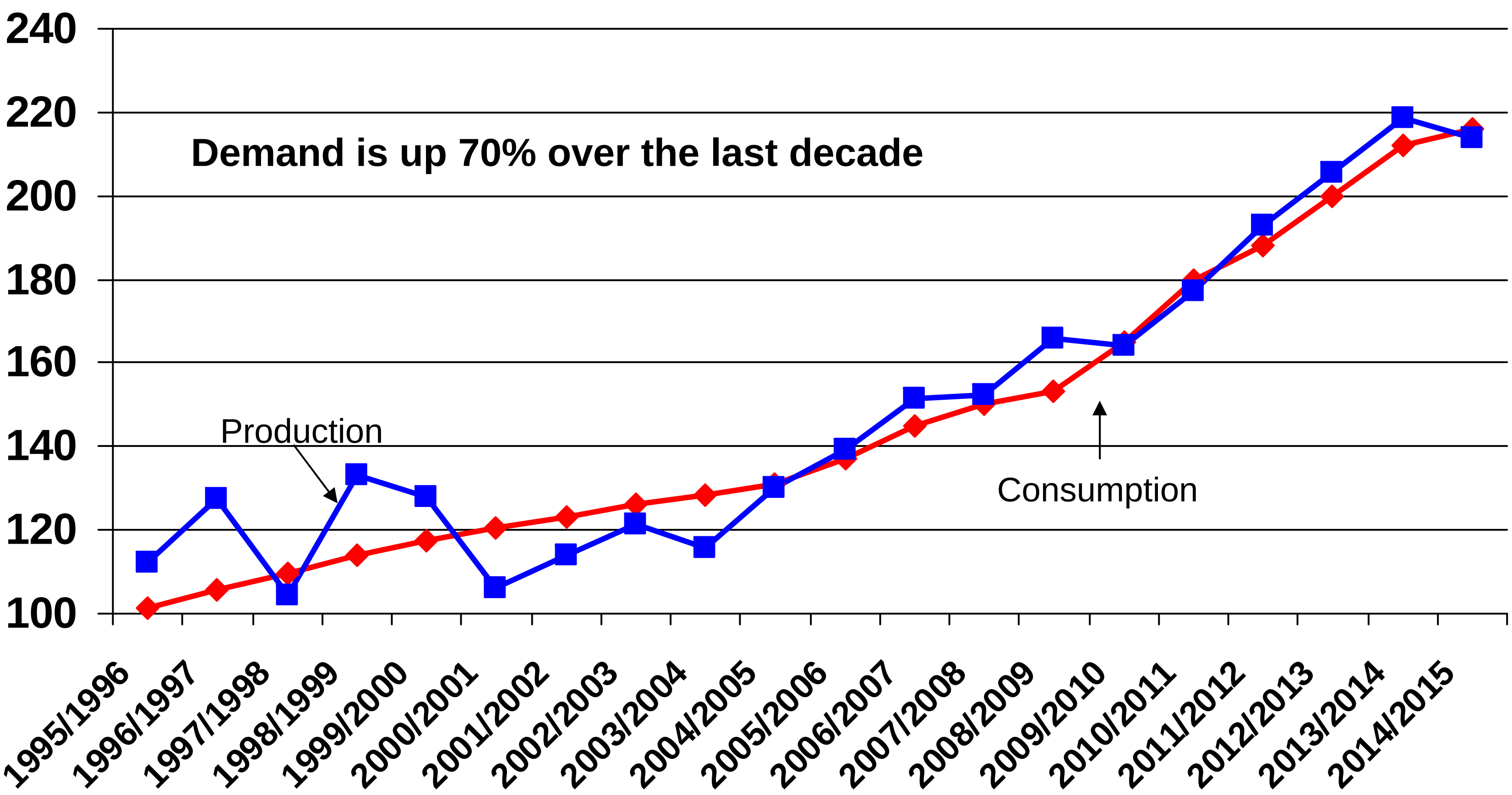
million metric tons



DOANE

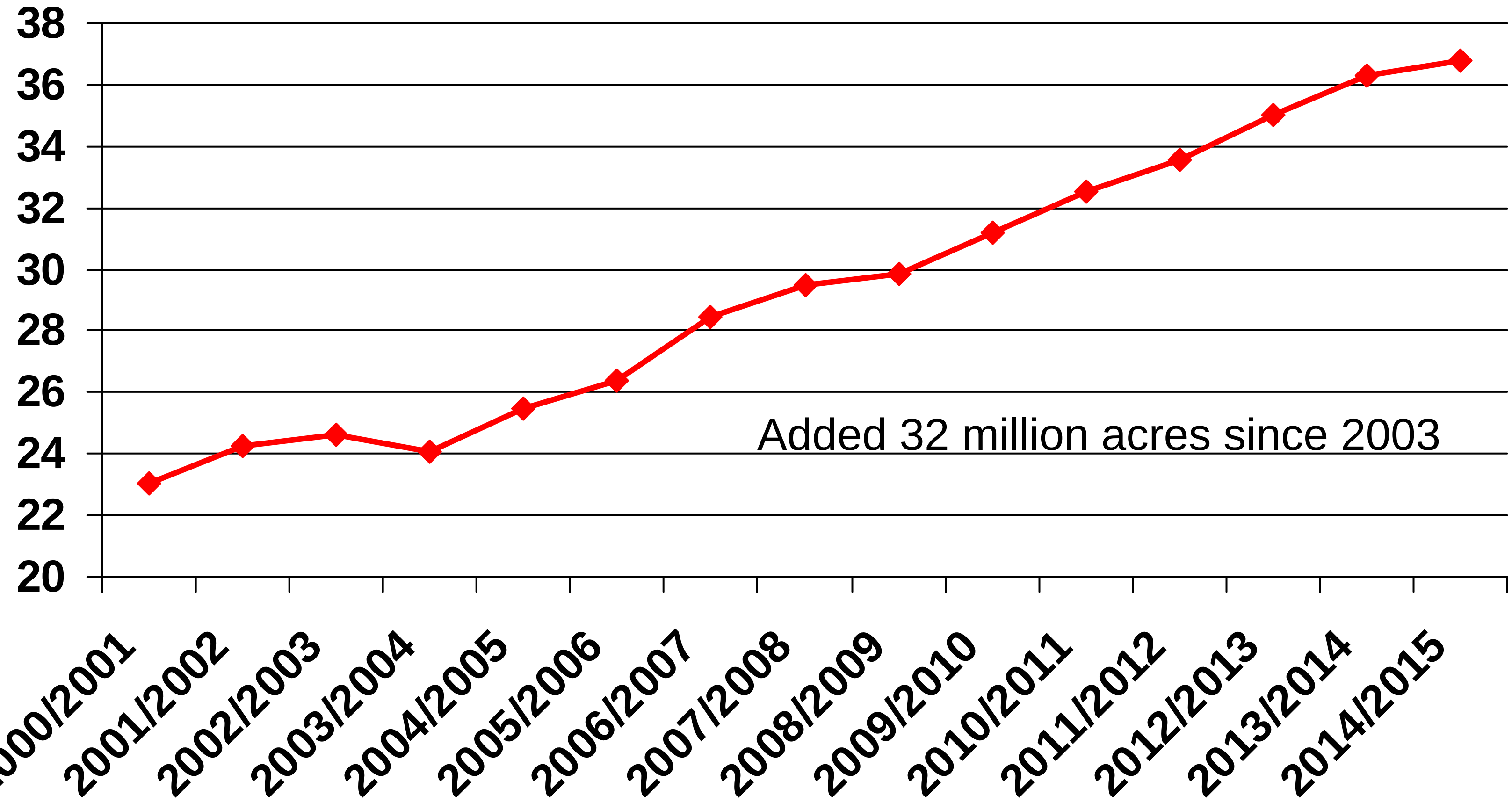
China’s Corn Production & Consumption

million tonnes

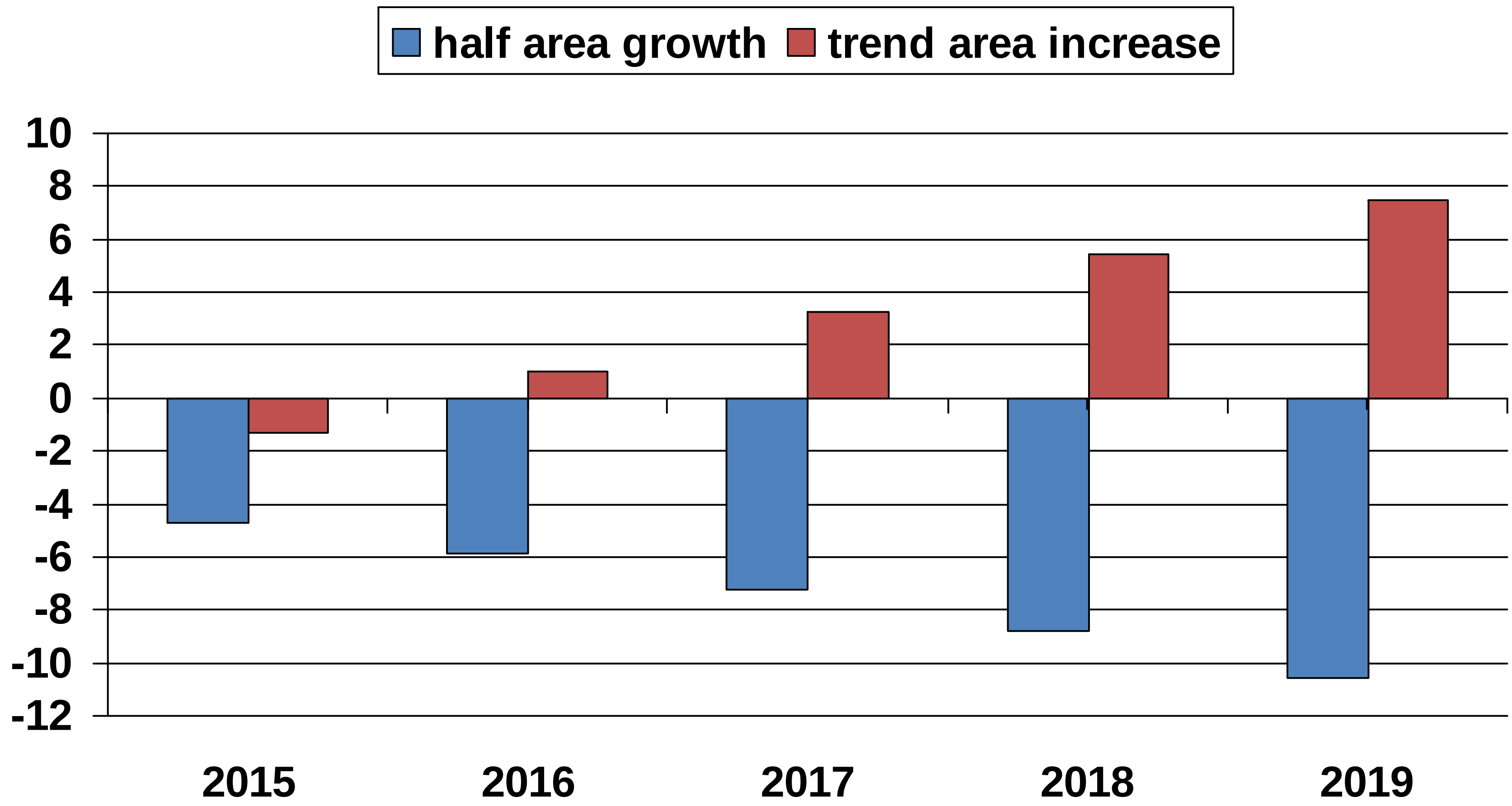


But China’s Production Has Generally Kept Pace With Consumption

China’s Corn Area
million hectares



China’s Corn Deficit
million tonnes



Let's Do The Math for 2015

- Corn feed use ~ 5.4 billion bushels
- Ethanol use ~ 5.1 billion bushels
- Other FSI use ~ 1.5 billion bushels
- Exports ~ 1.8 billion bushels

- Total 13.8 billion bushels

- We need about 89 million acres planted
    - But that would leave stocks above 2 billion bushels

Yield ~ 168 bu/acre

DOANE

Crop Budgets for 2015
dollars per acre

	Corn		Soybeans
Revenue	709		454
Operating Costs	366		185
Allocated Costs	330		301
Total Costs	696		486
Net over Operating Costs	343		270
Net over all costs	12		-31

Based on $4.26 per bushel corn and $10.26 per bushel soybeans

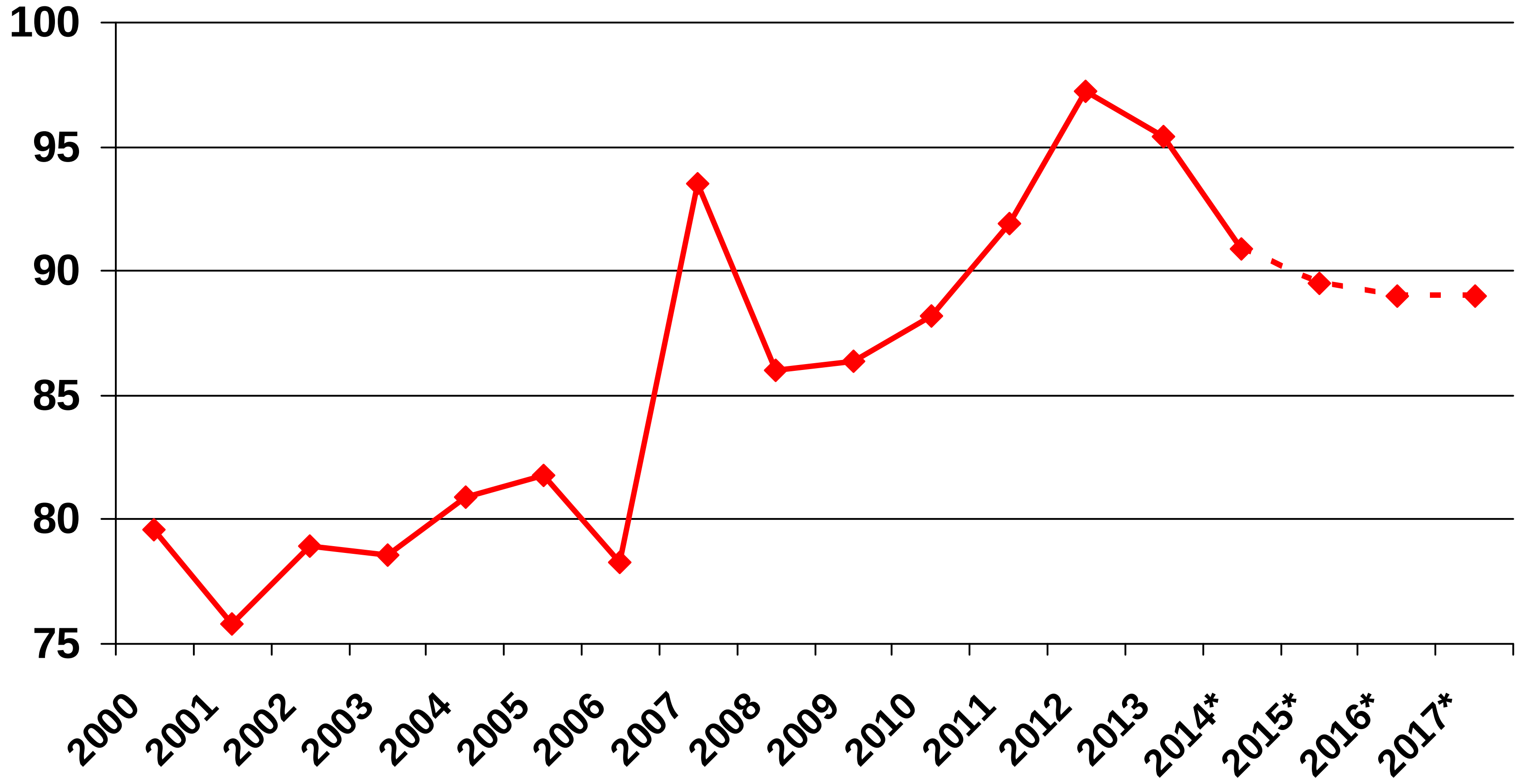
Crop Budgets for 2015
dollars per acre

	Corn-Corn		Soybeans
Revenue	666		454
Operating Costs	383		185
Allocated Costs	330		301
Total Costs	713		486
Net over Operating Costs	283		270
Net over all costs	-47		-31

Corn on corn 10% more fert and 6% lower yield

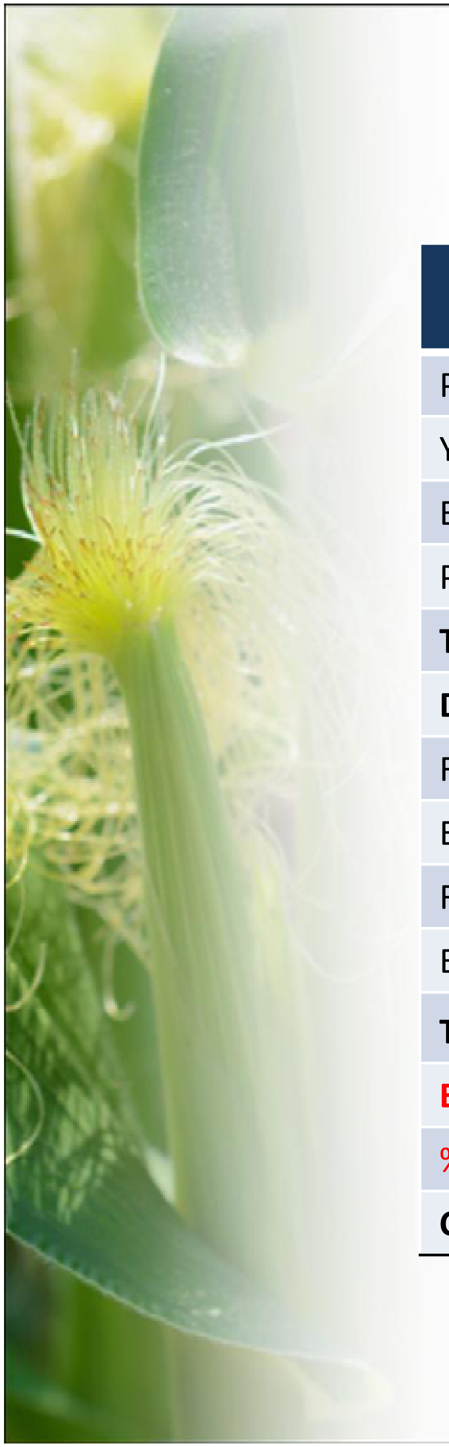
Corn Acreage

million acres



* = Doane Forecasts

DOANE



2015-16 Yield Scenarios

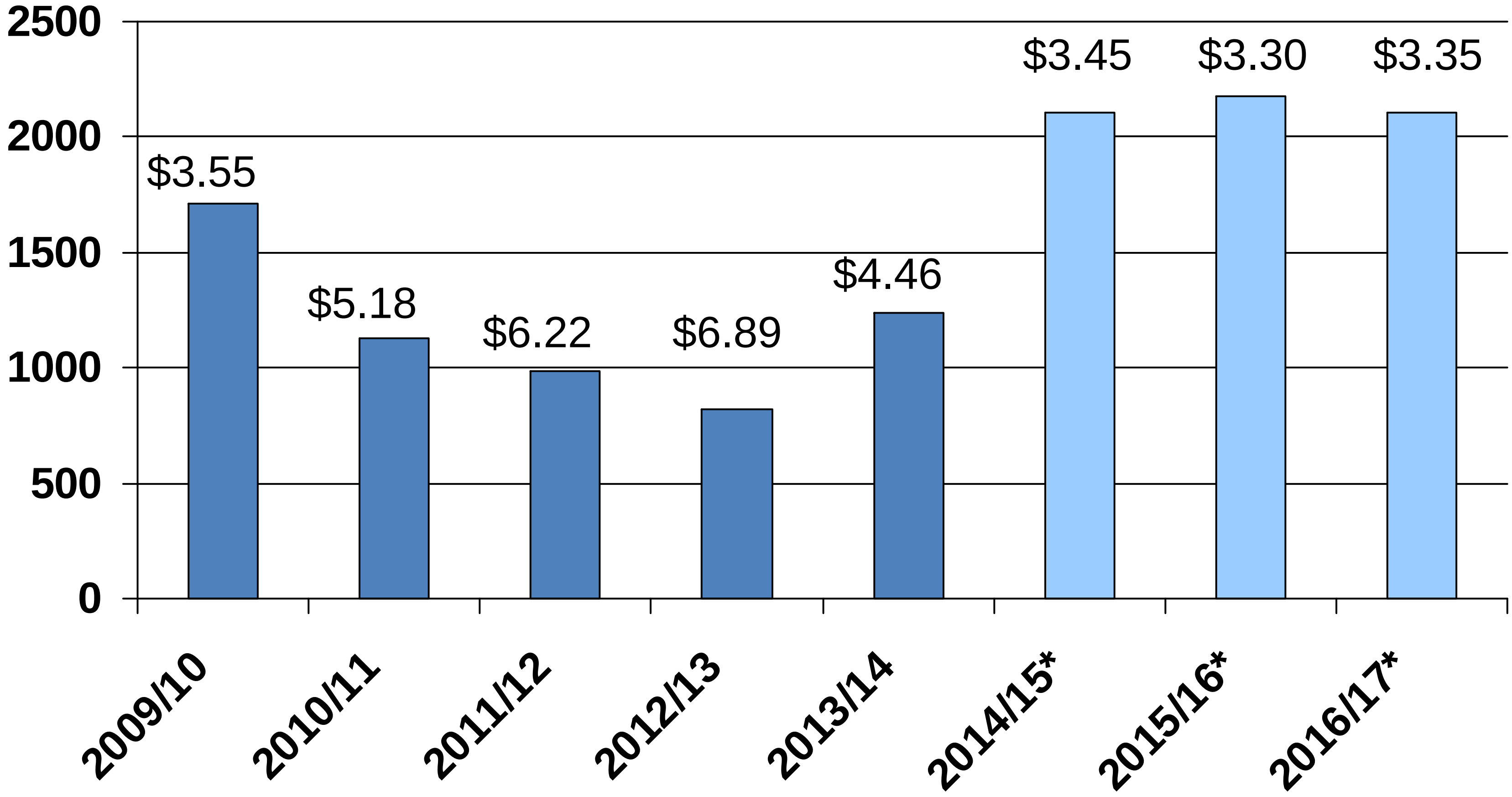
(thousand bushels)

	2014-15	Poor Yield 2015-16	Norm Yield 2015-16	High Yield 2015-16
Planted Acres (mil ac)	90.9	89.5	89.5	89.5
Yield (bu/ac)	173.4	152.0	168.0	174.0
Beginning Stocks, 9/1	1,236	2,103	2,103	2,103
Production	14,407	12,312	13,776	14,355
Total Supply	15,668	14,440	15,894	16,473
Disappearance				
Food, Seed	1,390	1,375	1,420	1,430
Ethanol	5,100	4,950	5,050	5,100
Feed/Residual	5,350	5,250	5,450	5,500
Exports	1,725	1,725	1,800	1,850
Total Disappearance	13,565	13,300	13,720	13,880
Ending Stocks	2,103	1,140	2,174	2,593
% Stocks to Use	15.5	8.6	15.8	18.7
Corn Price ($/bu)	$3.45	$4.25	$3.30	$3.00

Sources: USDA, Doane forecast

U.S. Ending Corn Stocks and Prices

million bushels & $ per bushel



* = Doane Forecasts

DOANE®

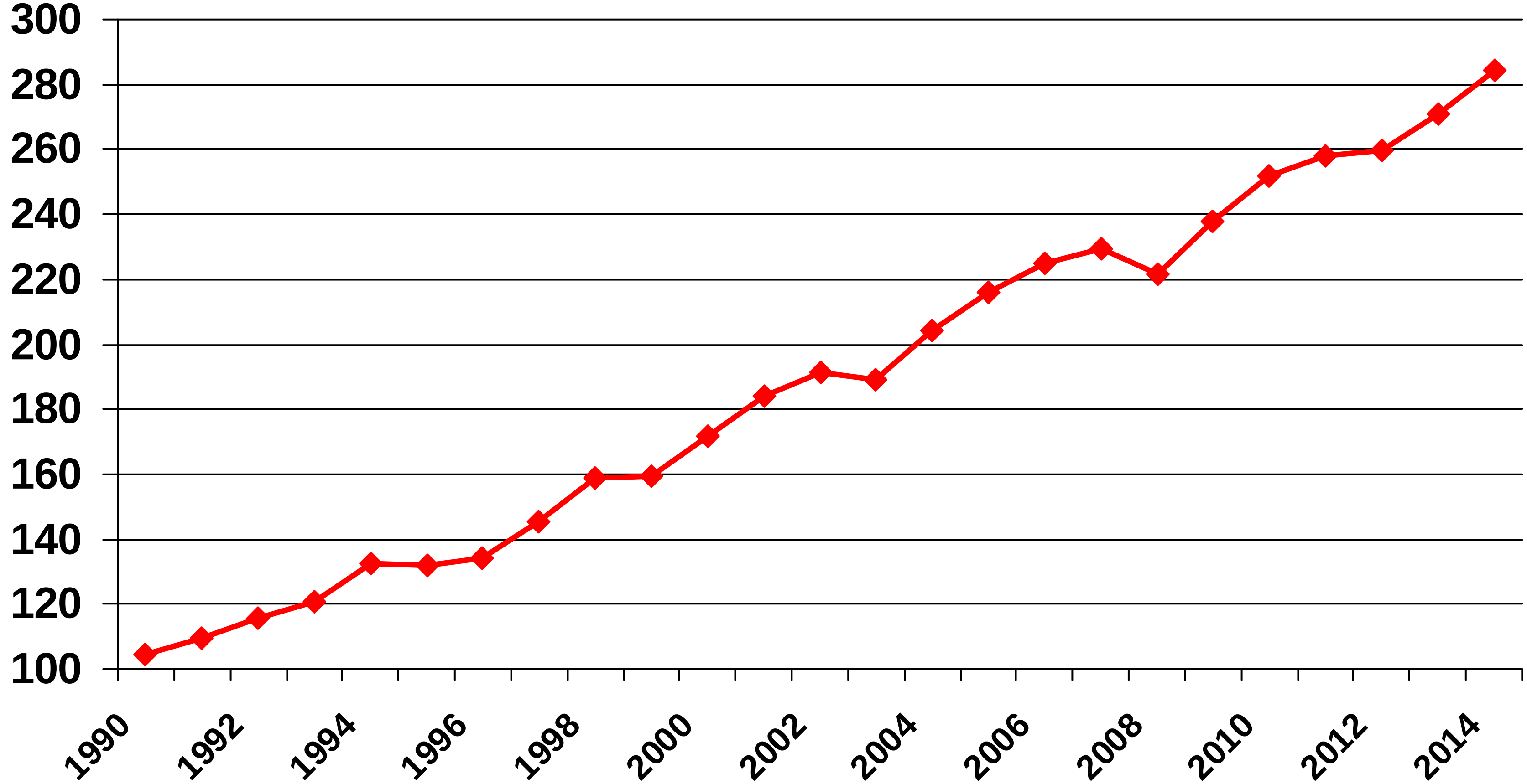
Crop Sector Outlook

Soybeans

Key Points for the Soybean Sector

- China is The primary source of demand growth
  - Soybean imports by the rest of the world are actually declining
- The U.S. is positioned for a very good year
  - Argentina farmers are not selling
- Even higher U.S. acreage is likely for 2015

World Soybean Demand
million tonnes



Soybean Area Harvested

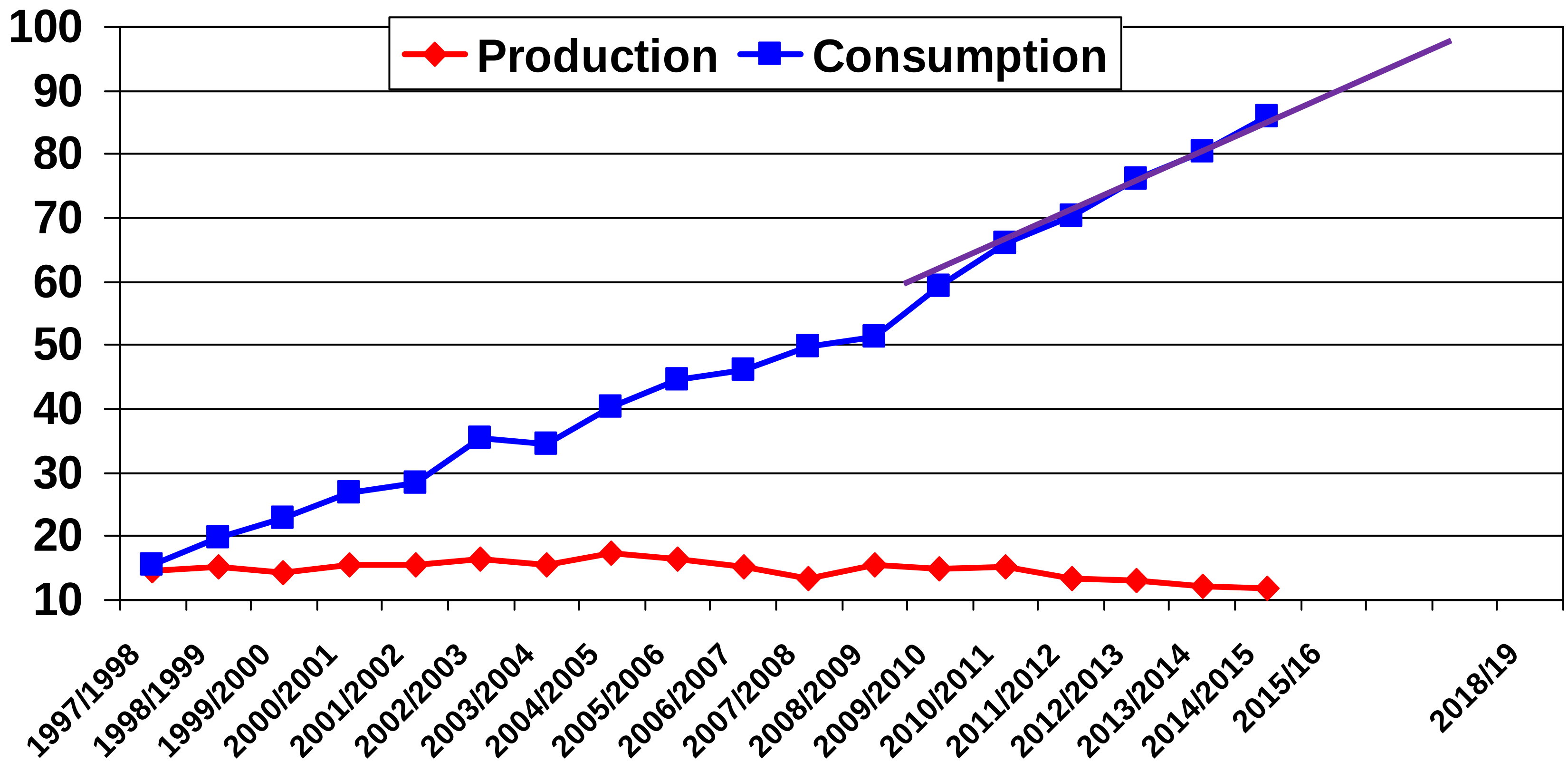
million hectares

	2003	2013		Change	Million acres
Argentina	14	19.8		5.8	14.3
Brazil	21.5	30.1		8.6	21.3
Canada	1.1	1.8		0.8	2.0
China	9.3	6.9		-2.5	-6.2
India	6.5	12.2		5.8	14.3
Oth. Latin America	3.2	5.7		2.5	6.2
USA	29.3	30.9		1.5	3.8
Others	3.8	5.9		2.1	5.2
World total	88.6	113.2		24.6	60.8

U.S. area is up 10 million acres if we go out to 2014 – and will likely be higher in 2015

China's Soybean Balance

million tonnes



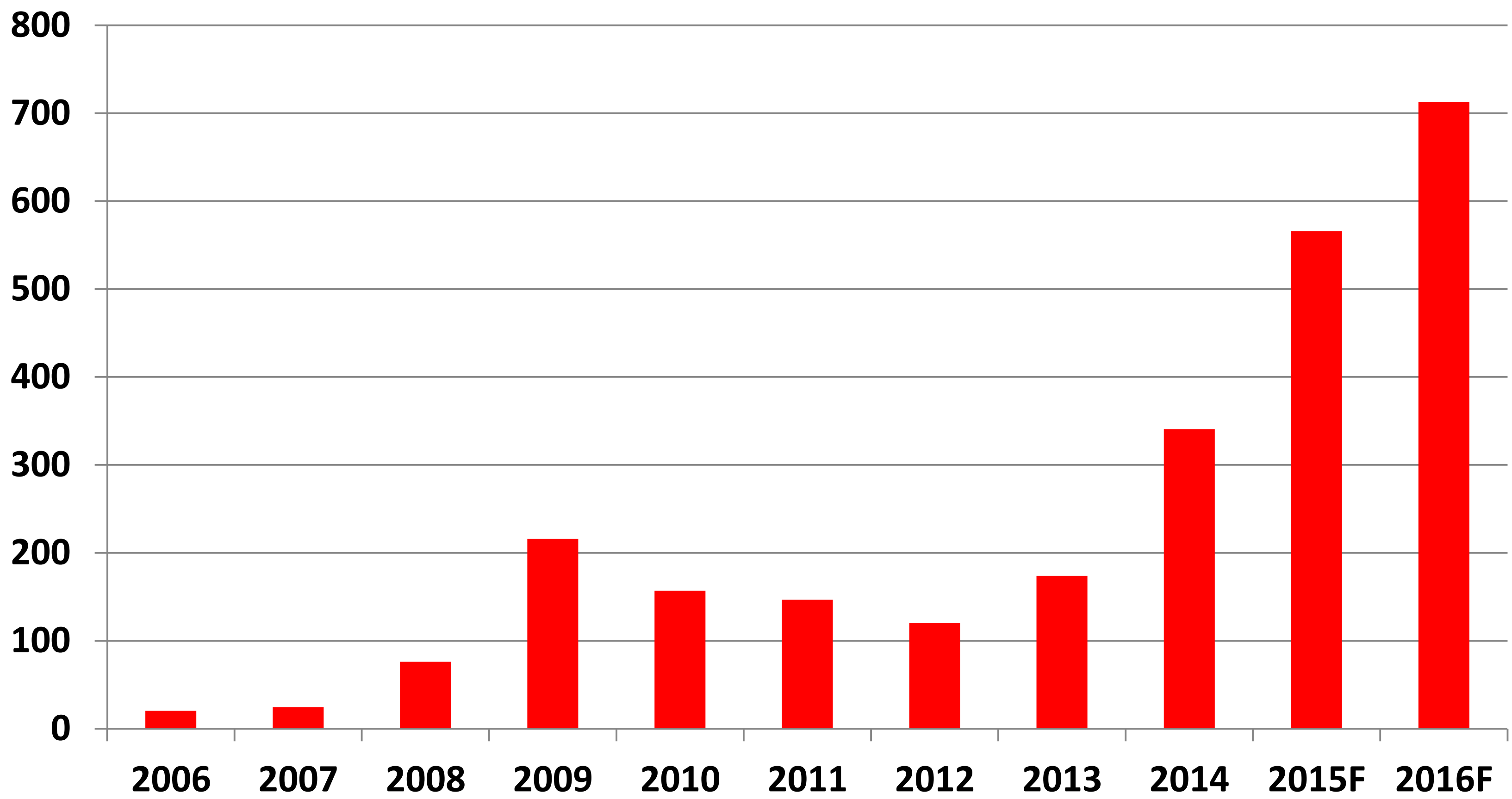
Deficit in 2018/19 is about 86 mmt compared to 74 million this year

We need to add nearly 2 million acres per year – just for China

DOANE

Argentina April 1 Soybean Carryout Stocks

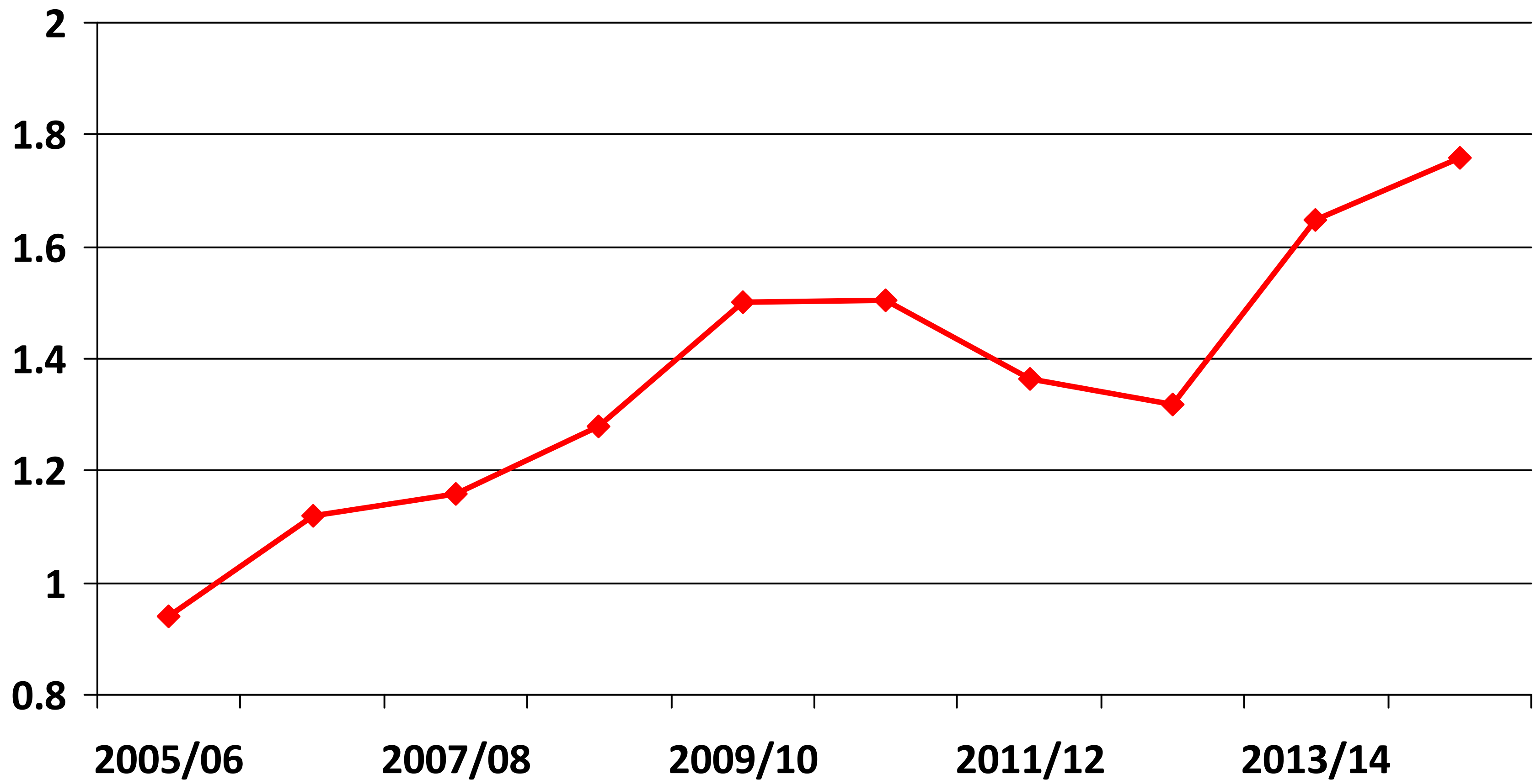
(Million bushels)



Source: USDA

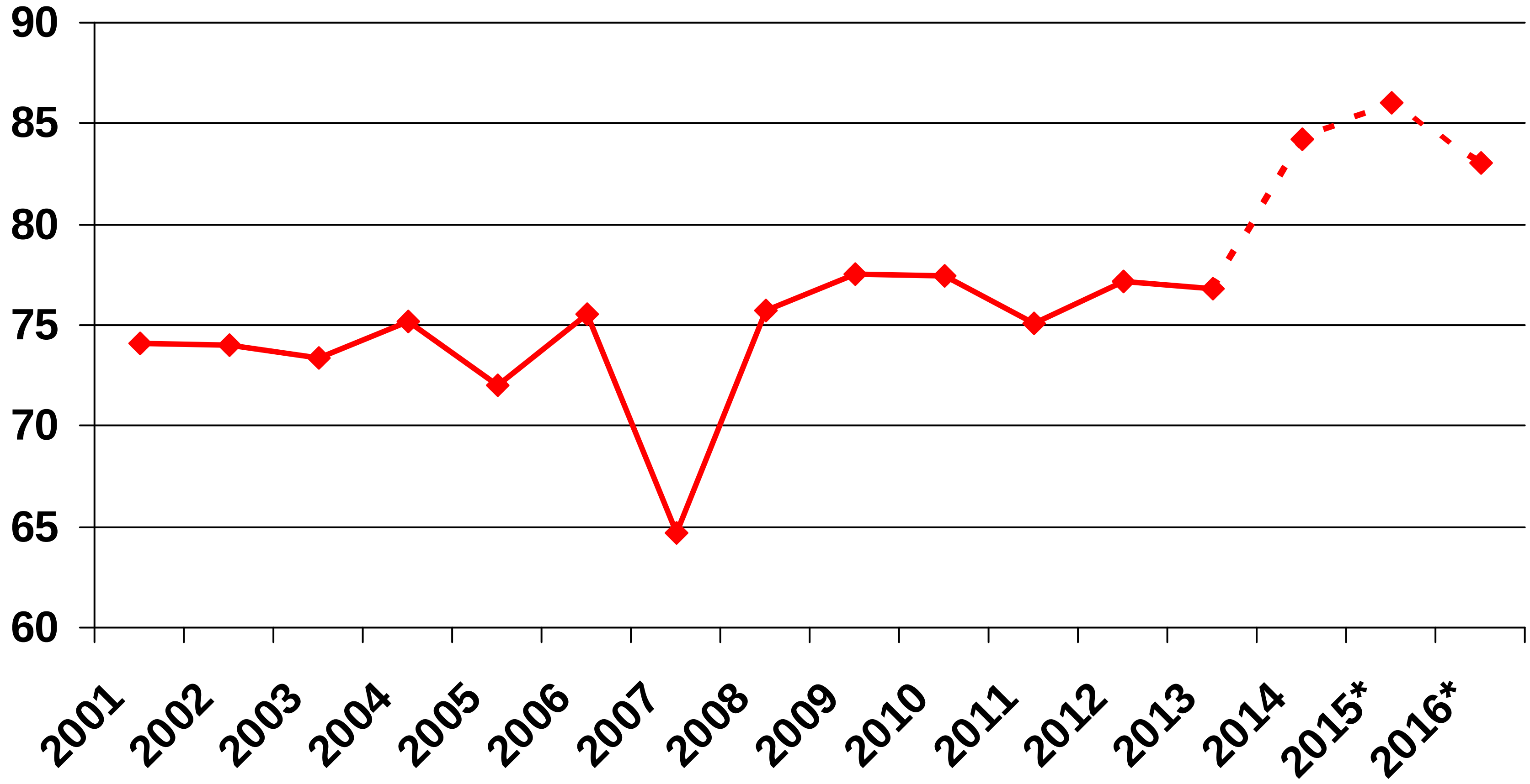
U.S. Soybean Exports

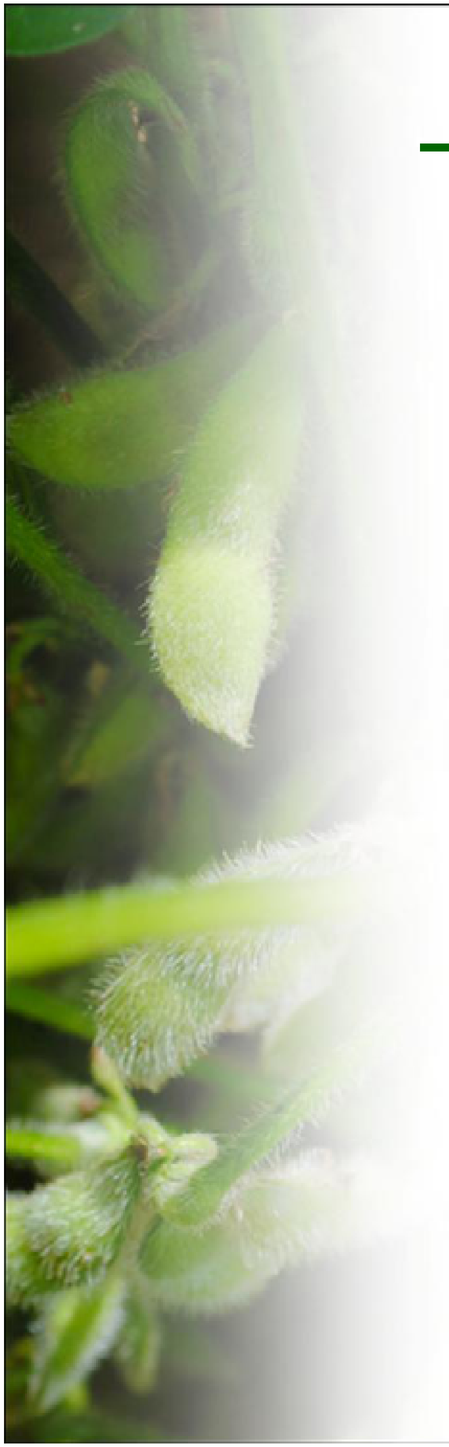
billion bushels



U.S. Soybean Acreage

million acres





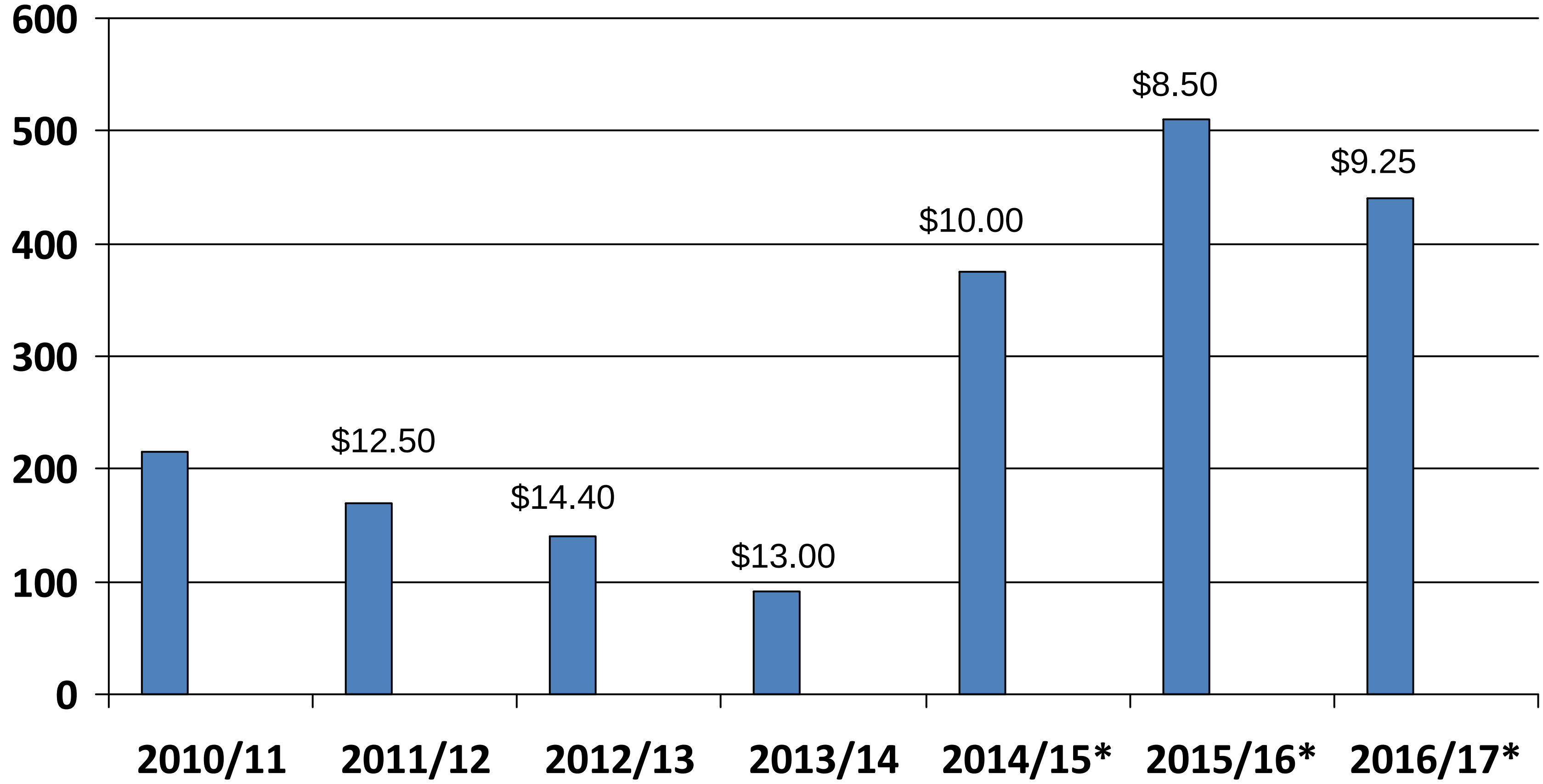
2015/16 Soybean S/D Scenarios for 86 Million Planted Acres

(million bushels)

	Doane 2014-15	Below Avg Wx 2015-16	Average Wx 2015-16	Above avg Wx 2015-16
Yield (bu/a)	47.5	42.5	45.0	47.5
Production	3,958	3,610	3,825	4,040
Total Supply	4,065	4,000	4,215	4,430
Crush	1,800	1,805	1,805	1,840
Exports	1,760	1,775	1,775	1,825
Carryover	375	295	510	640
Stocks-to-use	10.2%	8.0%	13.8%	16.9%
Price $/bu	$10.00	$10.50	$8.50	$7.50

Sources: Doane, USDA

U.S. Soybean Ending Stocks
million bushels

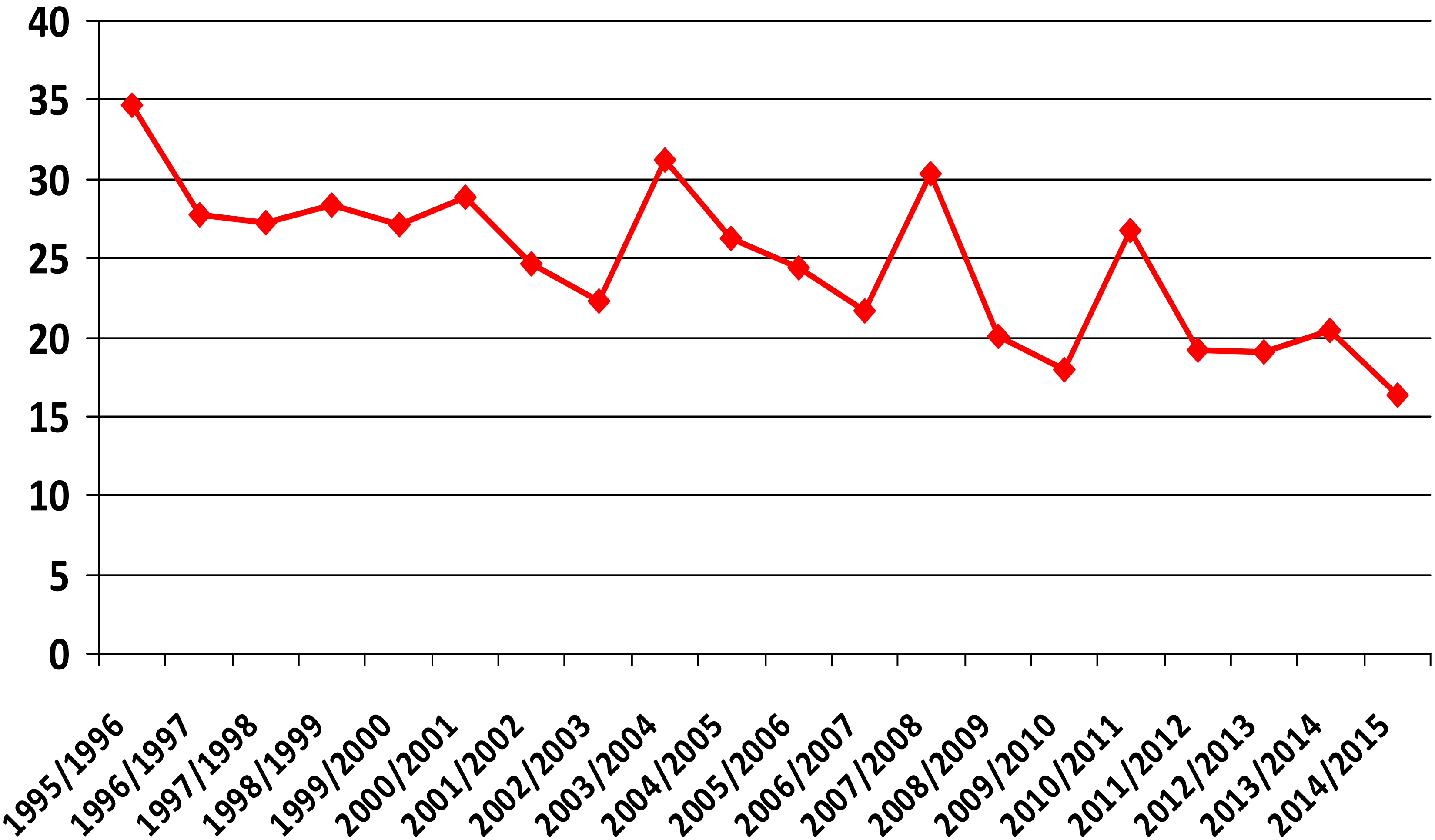


Crop Sector Outlook

Wheat

U.S. Share of World Wheat Trade

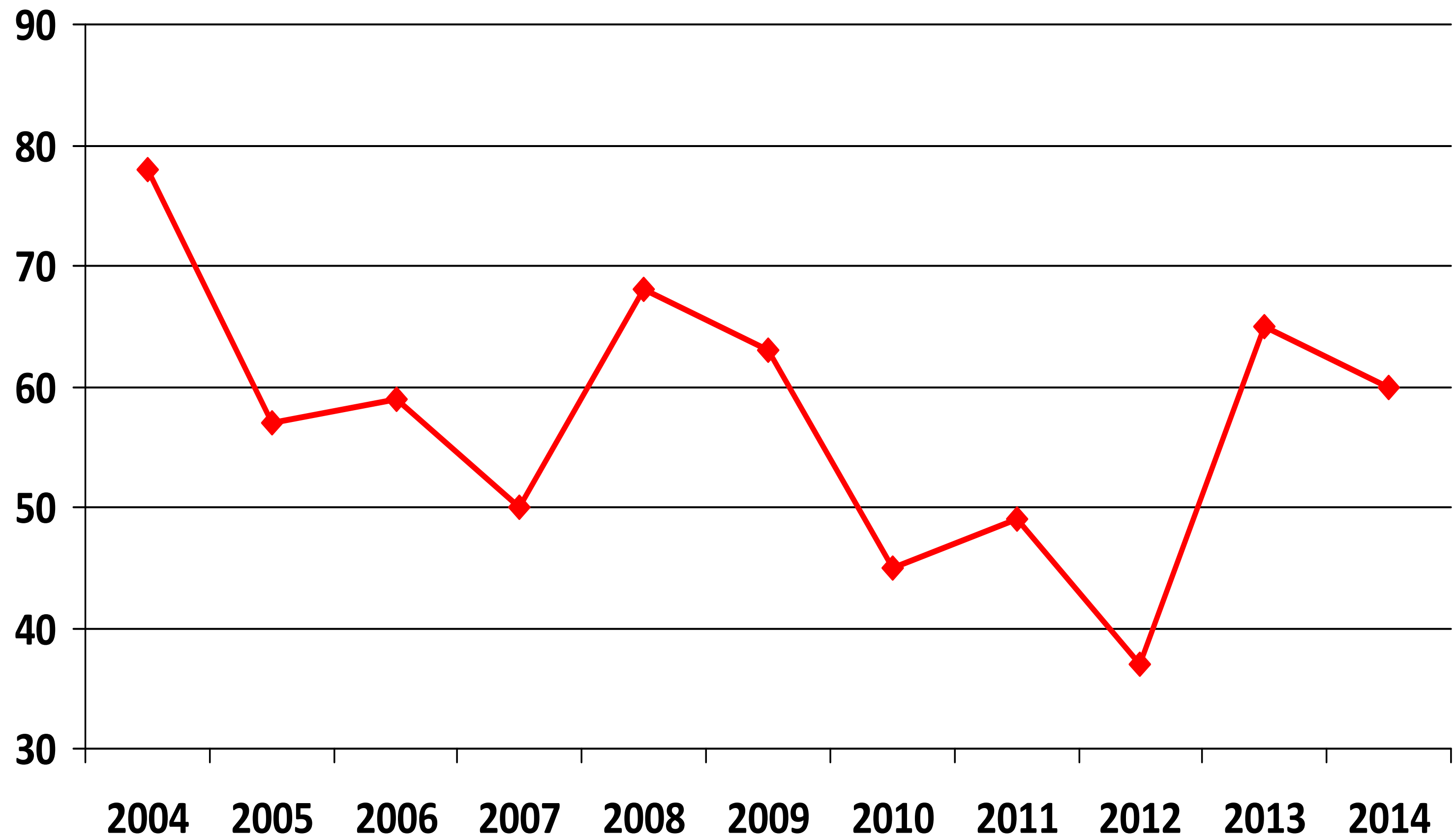
percent



DOANE

Winter Wheat Condition Rating

share rated good or excellent



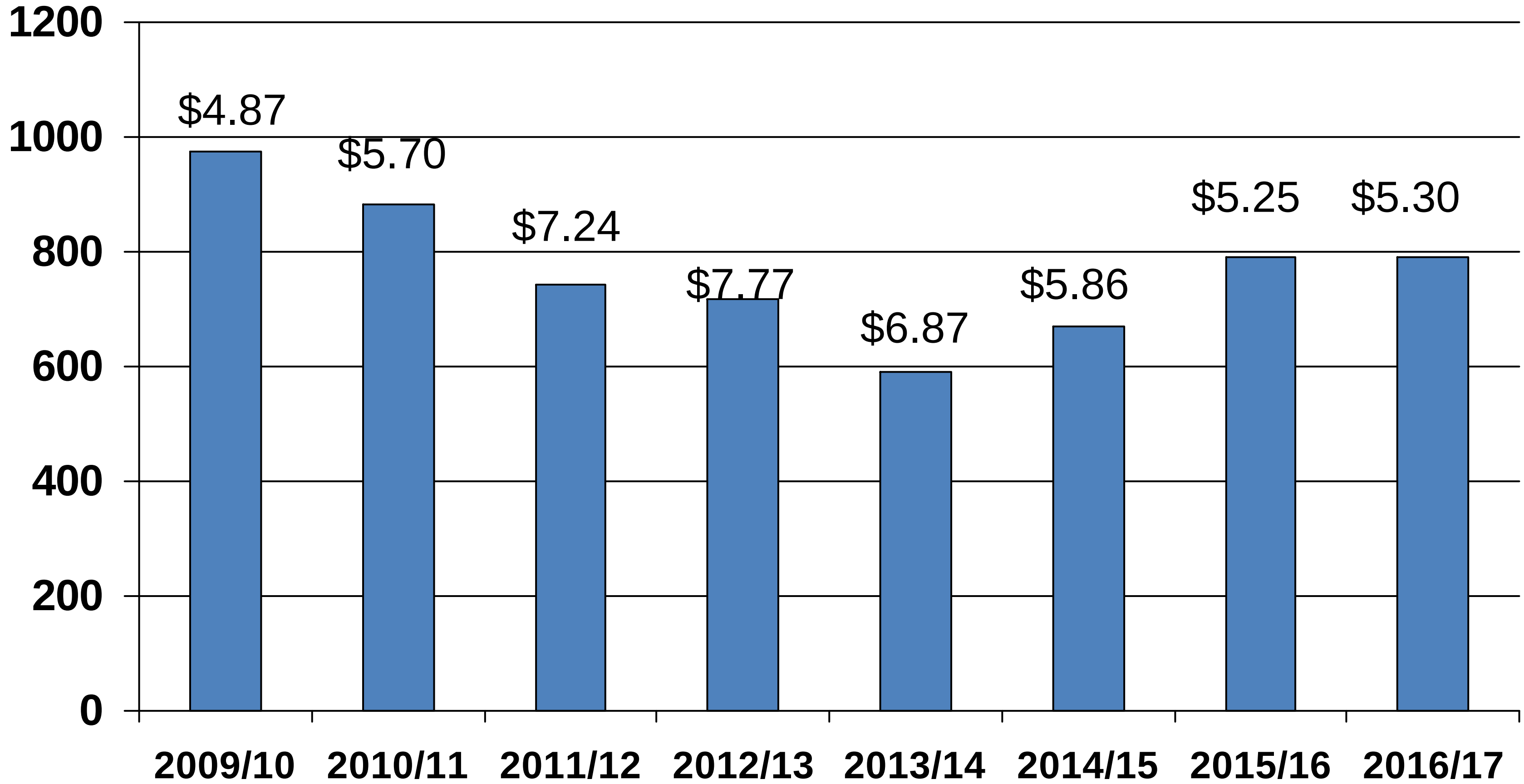
Wheat Sector Outlook

billion bushels

	2013/14	2014/15	2015/16
Planted Acres (mil)	56.2	56.8	57.3
Production	2.13	2.03	2.26
Domestic Use	1.25	1.22	1.21
Exports	1.18	.91	1.05
Total Use	2.43	2.13	2.26
Ending Stocks	.590	.669	.750
Price ($/bushel)	$6.87	$5.86	$5.25

U.S. Ending Wheat Stocks and Prices

million bushels & $ per bushel



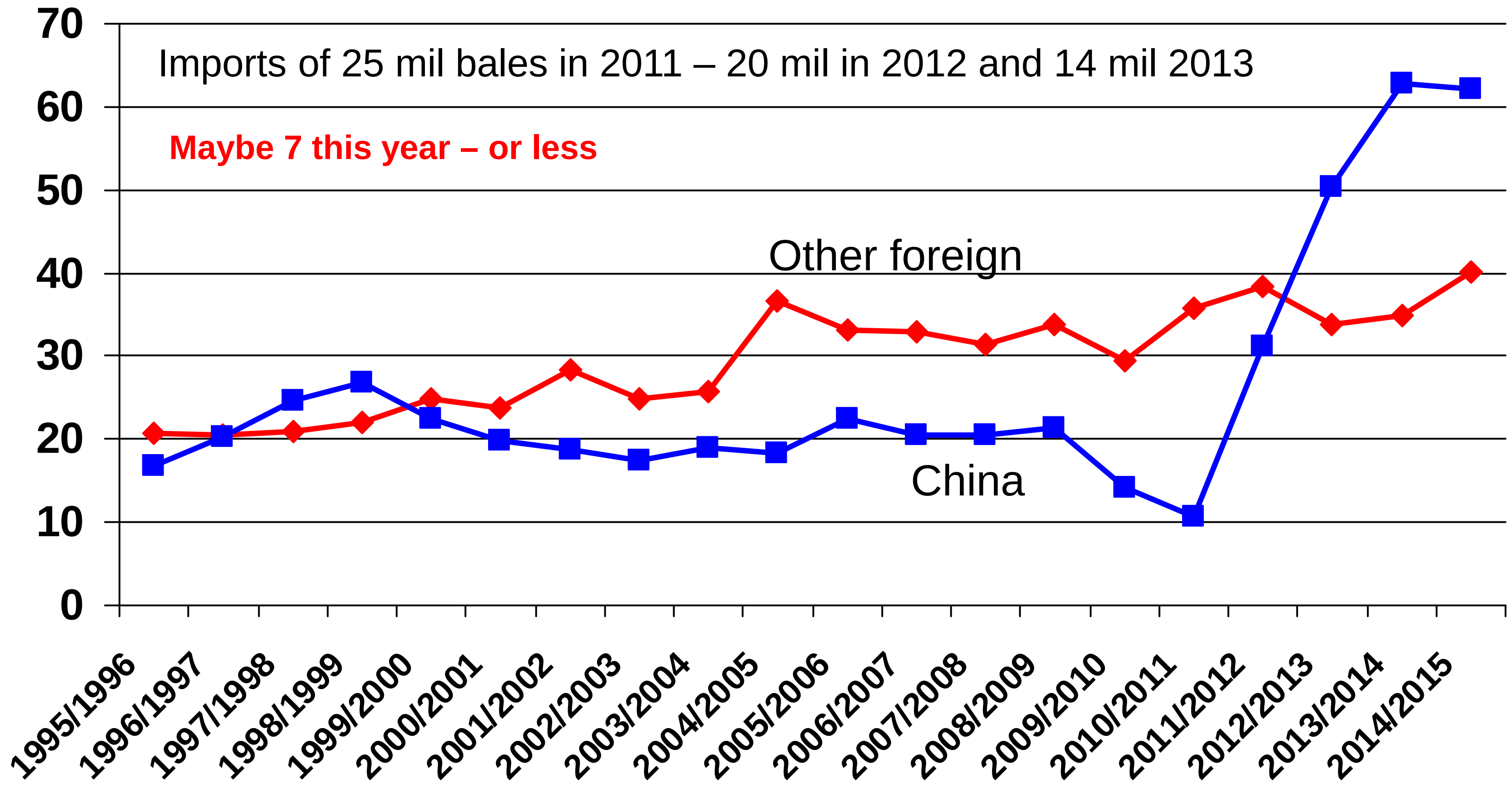
Crop Sector Outlook

Cotton

Cotton Stocks

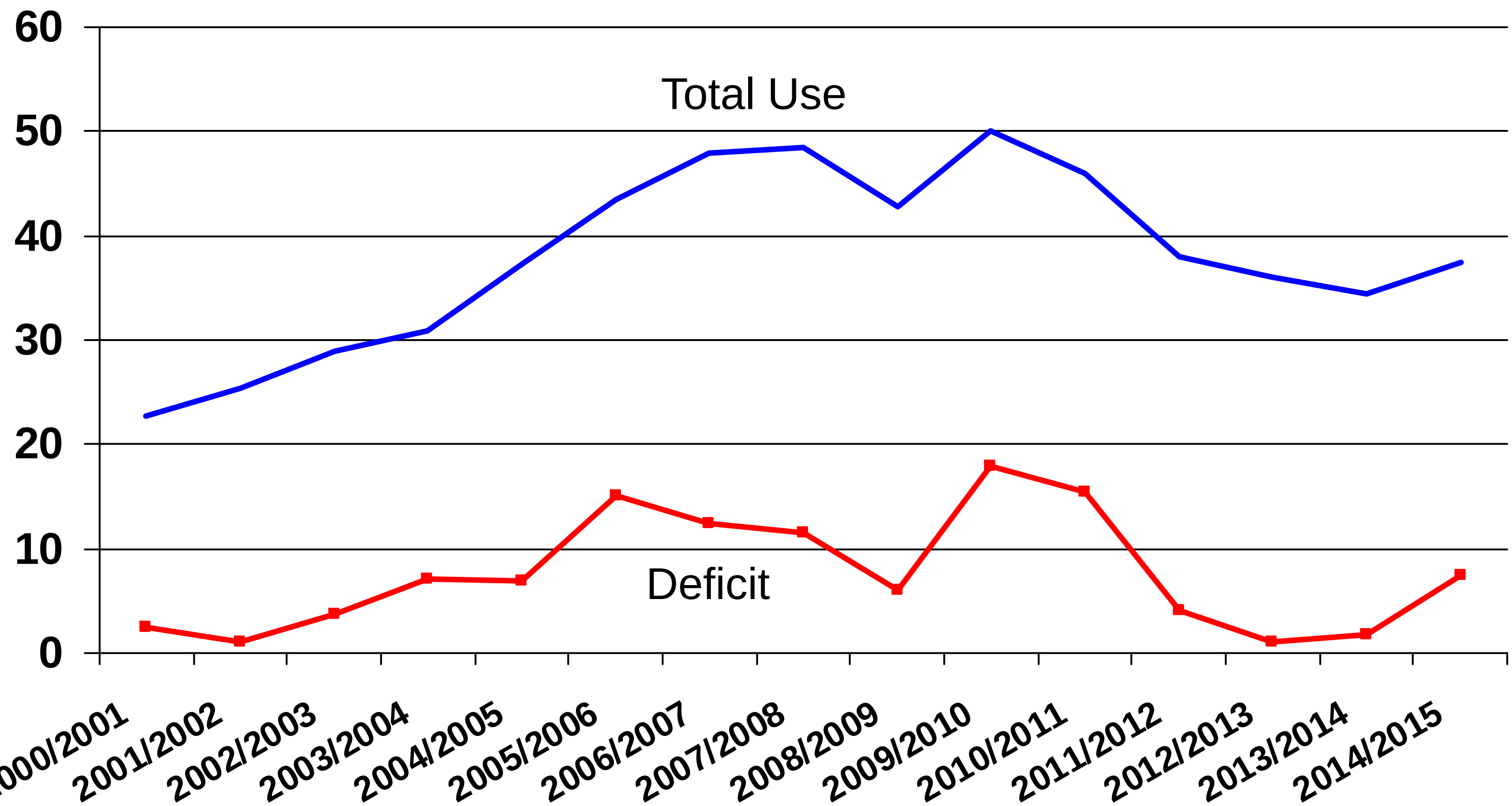
million bales

Stocks-to-use ratio = 166% in China   55% in other foreign



China's Cotton Demand

million bales

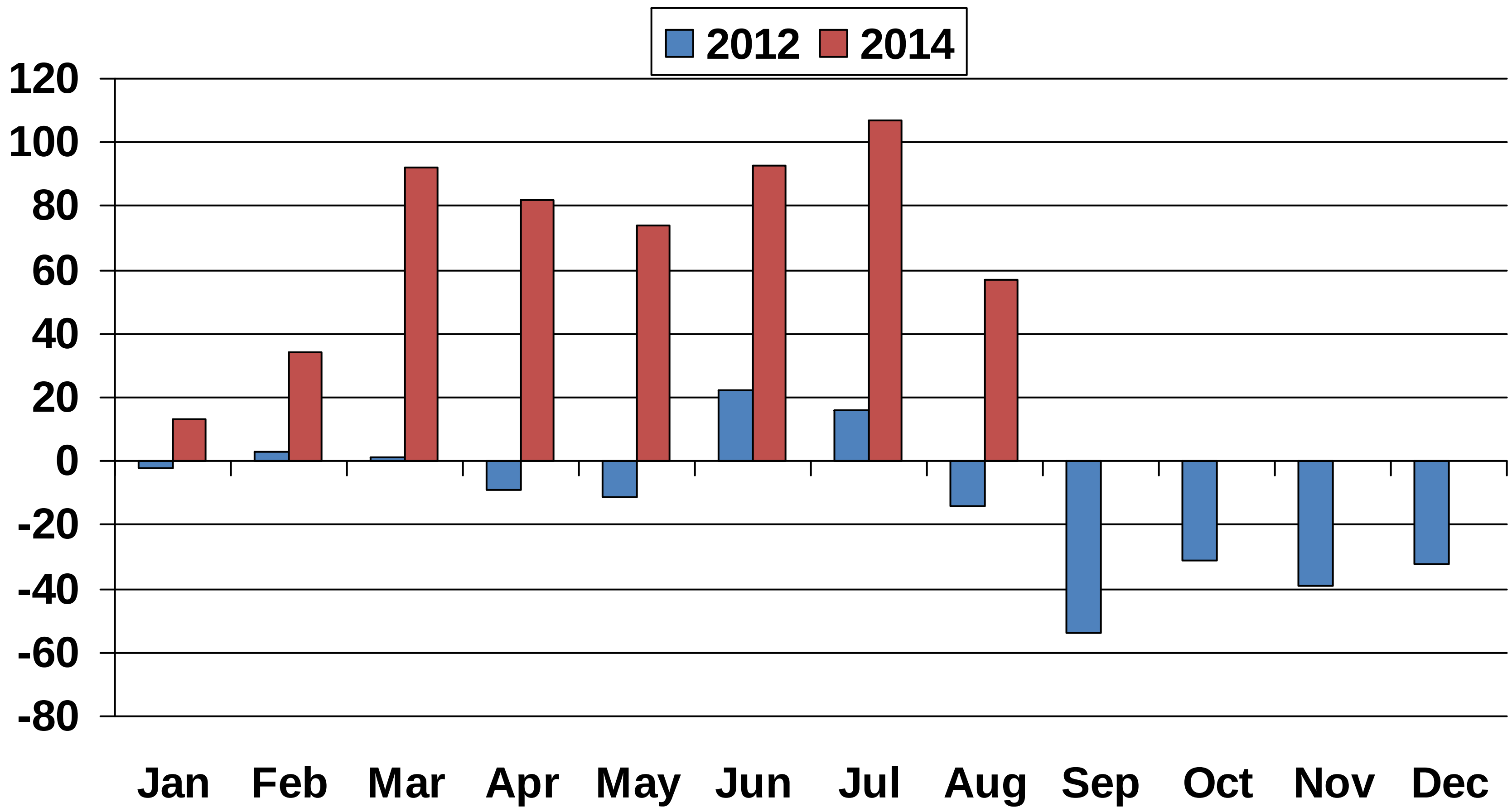


Crop Sector Summary

- Ethanol Driven Demand Boom is Probably Over
  - Production will stay high – just not increase as it has over the last decade
- Expect More Regulations
  - But new Congress may derail some EPA efforts
- More Stalemate in Washington

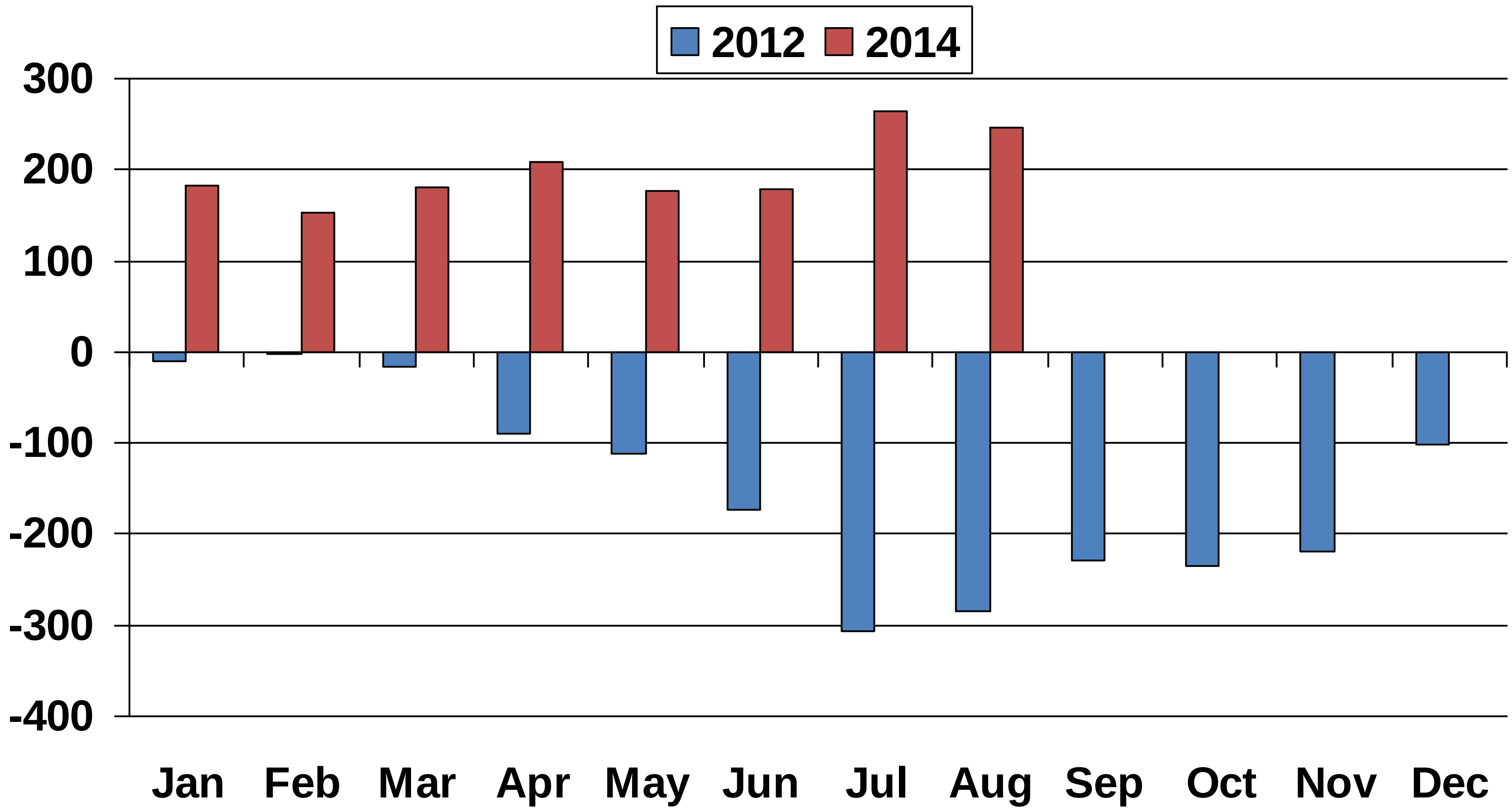
Livestock Sector Outlook

Hog Profitability
dollars per head



Fed Steer Profitability

dollars per head

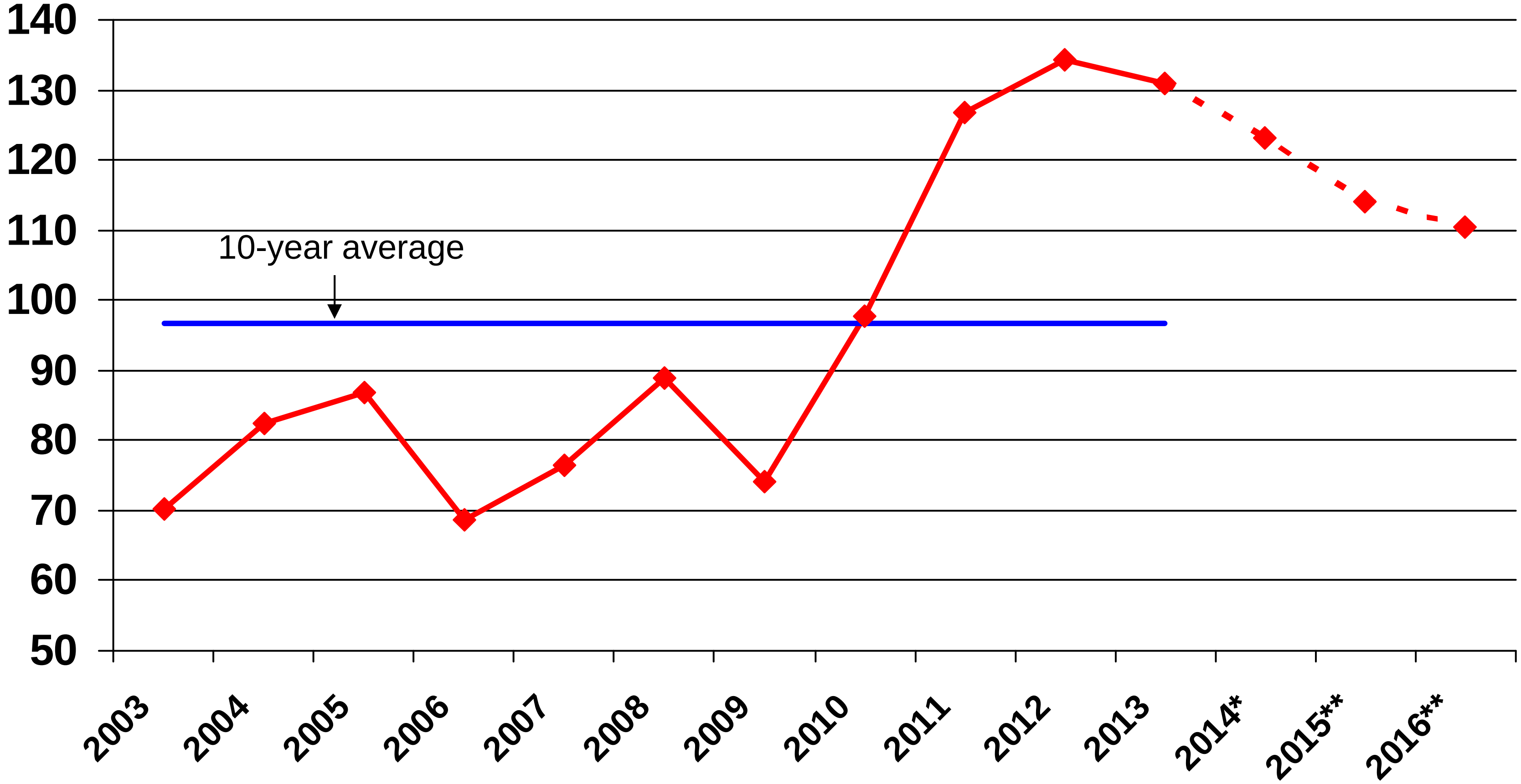


Livestock Sector

- A Rebound in Beef Production is years away
  - Cattle prices should stay high through 2016 at least
- Pork production will rebound next year unless the PED virus gets worse
  - But hog production profits should continue
- Drought may slow milk production increase
  - 40% of output is from states in drought area

Financial Overview

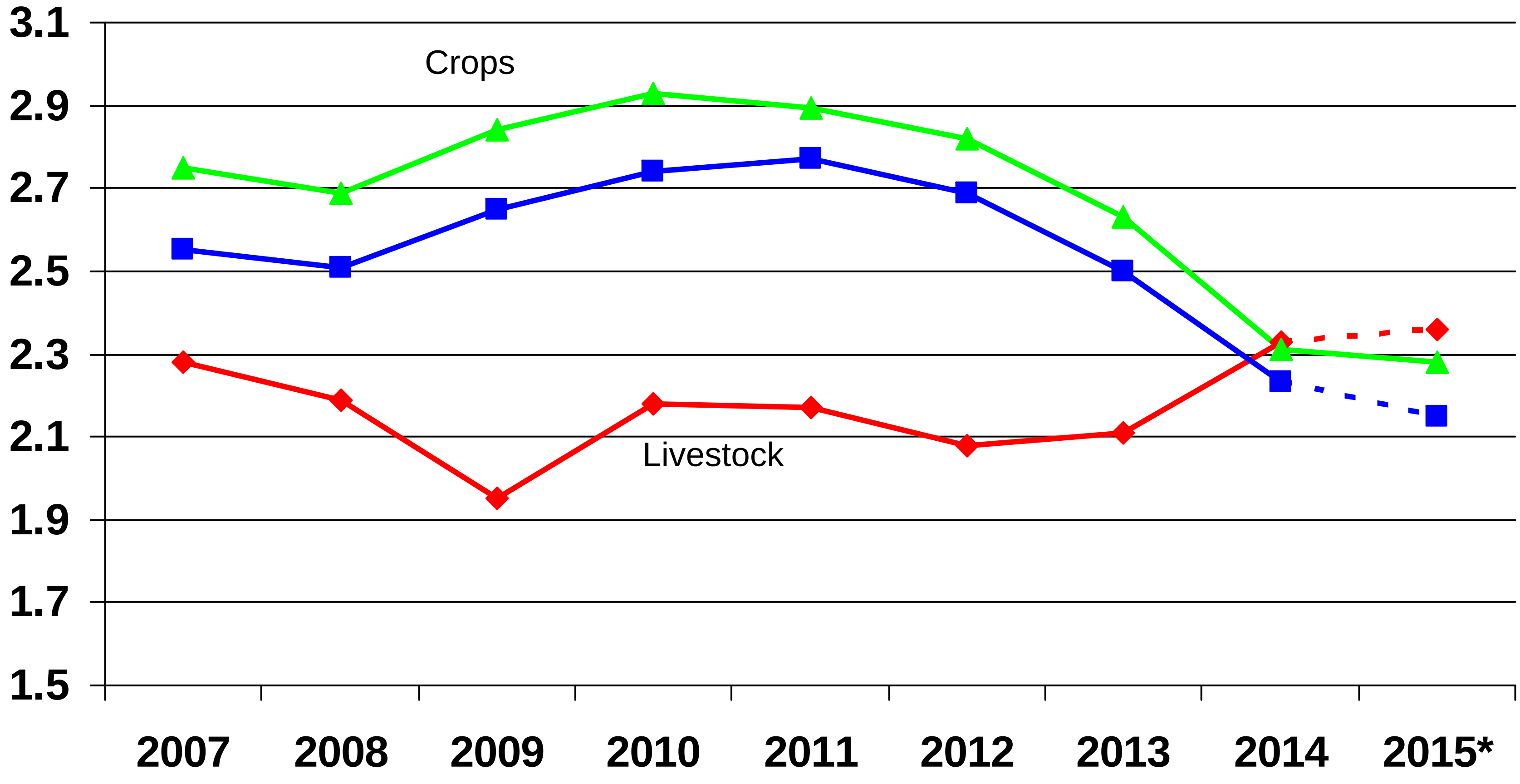
Net Cash Farm Income
billion dollars



* USDA August Forecast ** Doane Projections

DOANE

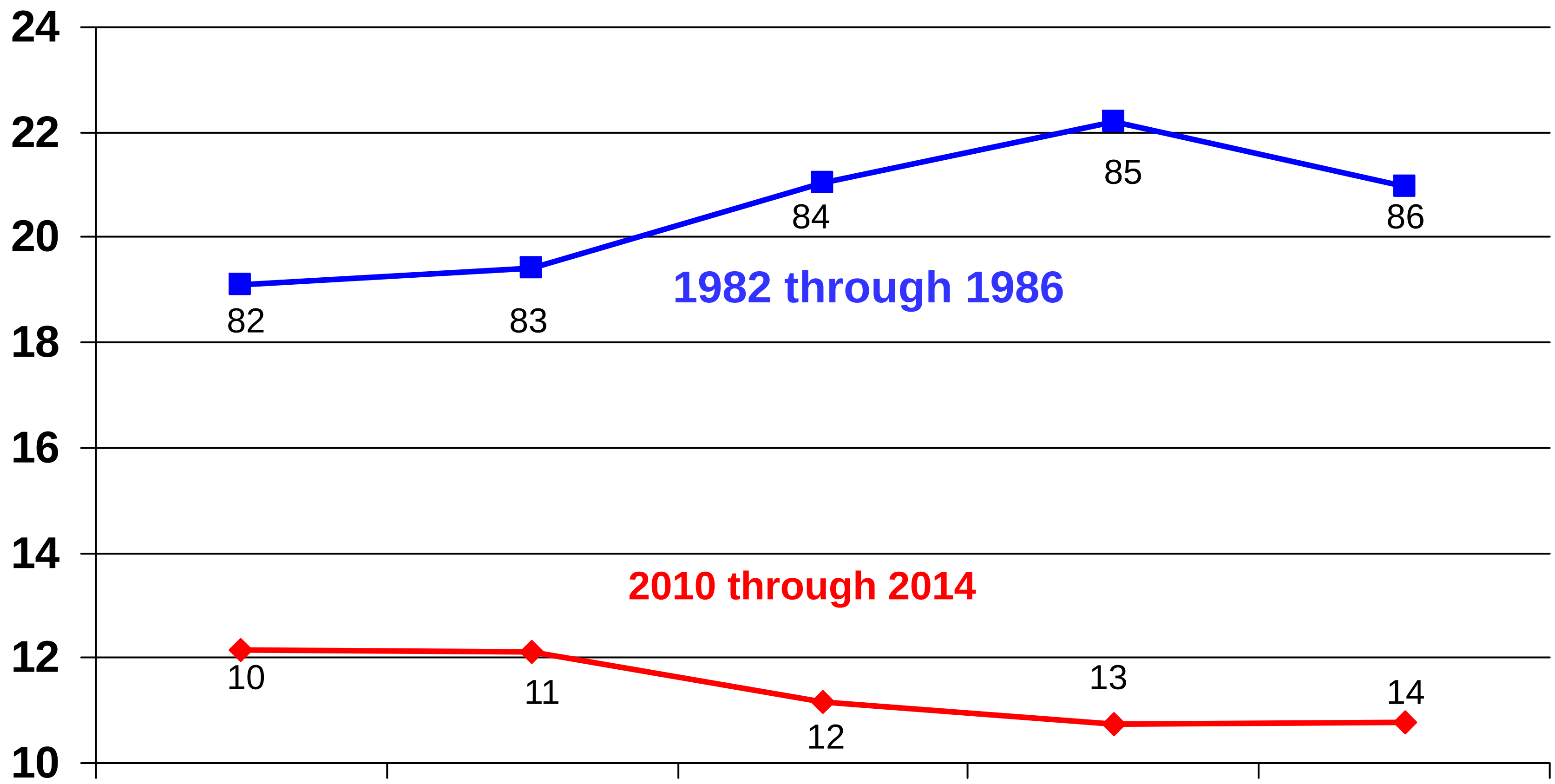
Profitability Ratios



Crop costs = fertilizer, seed, chemicals, machine hire & custom work

DOANE

Debt-to-Asset Ratio
percent



Closing Comments

- Supplies will increase if yields are near trend
  - We need strong exports for all crops
- Corn acreage will probably decline
- With tight margins – farmers may reduce application rates
- Livestock producers are seeing HUGE profits
- Net cash farm income will be down this year
  - But all of the pain is in the crop sector
- Government payments <u>may</u> kick in next year and east the pain

Questions??

Major Crop Area
million hectares

	2004/05	2009/10	2014/15	chg 04-14	Chg 09-14
Brazil	43.8	43.5	54.0	10.2	10.5
Sub-Saharan Africa	93.2	104.1	108.5	15.3	4.4
Russia	45.0	48.0	49.4	4.5	1.4
Ukraine	17.8	21.5	22.4	4.7	0.9
United States	93.3	93.3	98.0	4.7	4.7
China	106.4	114.4	117.8	11.4	3.4
Argentina	27.5	29.4	32.1	4.6	2.7
India	130.3	129.7	133.9	3.6	4.3
World Total	861.2	894.7	931.2	70.0	36.5

90 million acres

DOANE

China Is Key

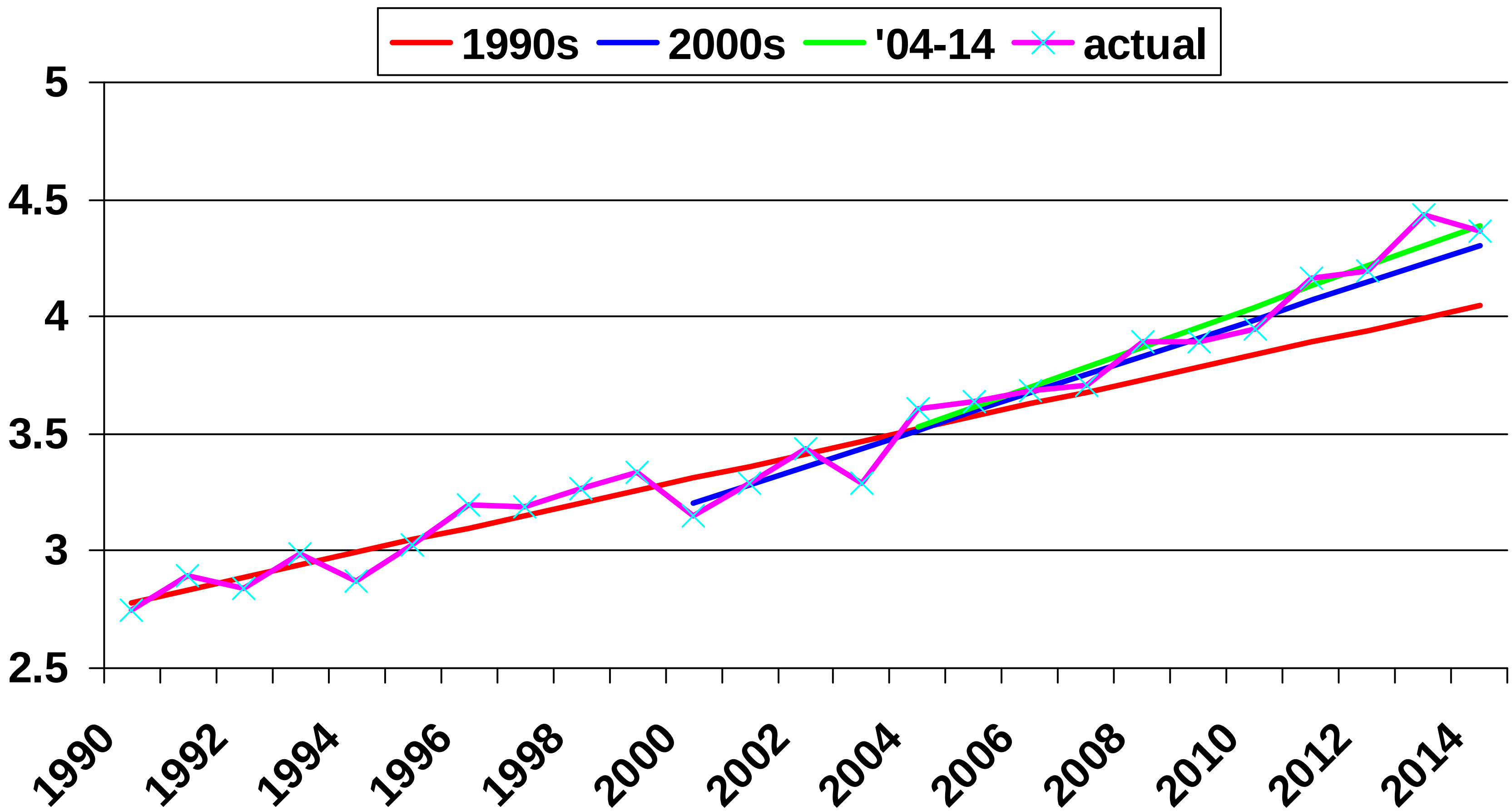
- Accounts for 30% of world soybean use
- 32% of world cotton use
- 27% of world corn market
- More than 50% of world pork consumption
  - And 75% of the growth in the market since 2004

- Developments in China have Global Implications

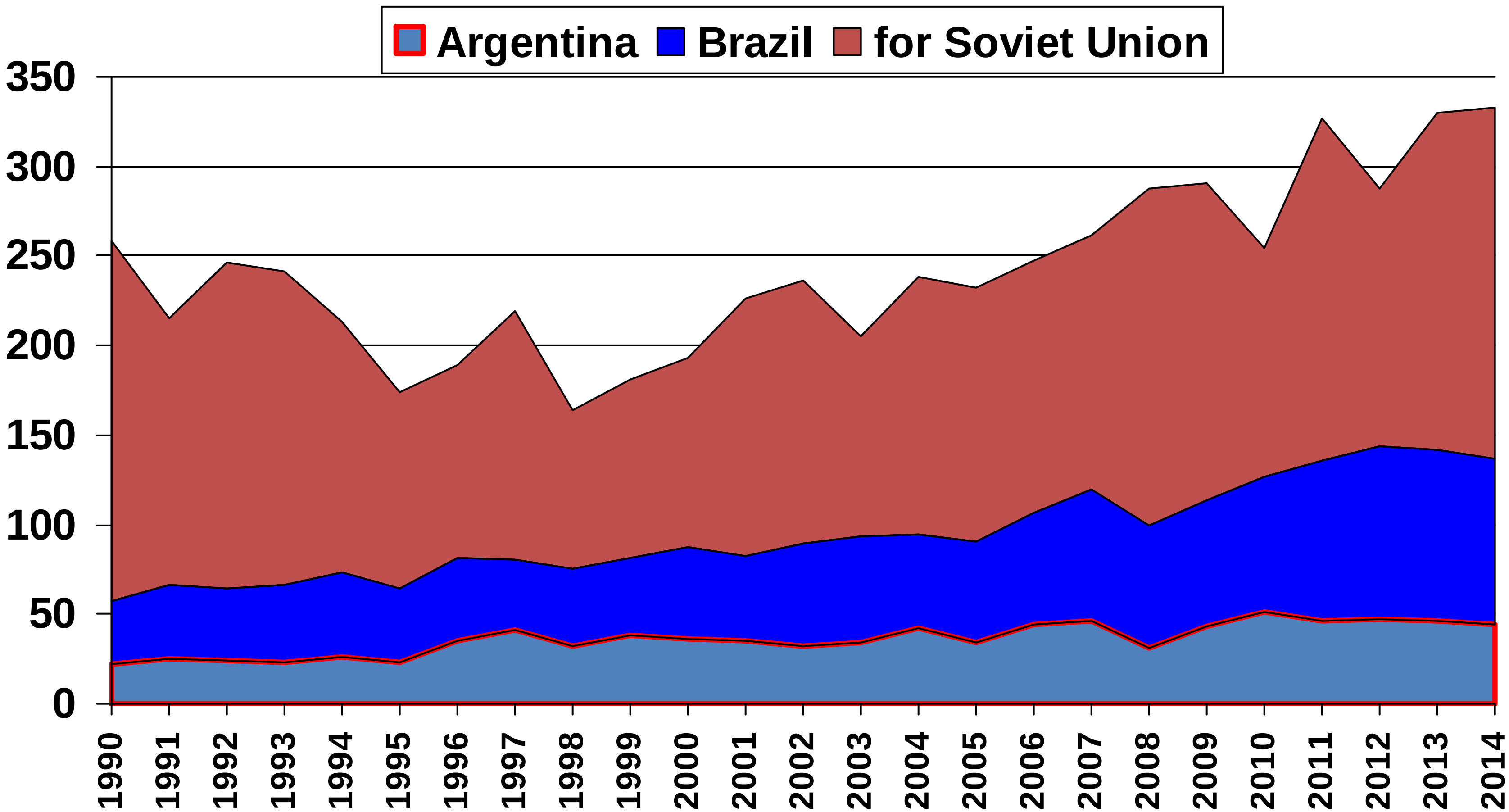
DOANE

Foreign Corn Yields

tonnes per hectare



Grain Production
million tonnes



Population
millions

	2005	2010	2014	% chg 04-14	2050	%chg 14-50
subSaharan Africa	794	904	1004	29.8	2206	117.2
Middle East	258	289	311	22.9	455	44.9
South Asia	372	401	425	16.3	591	37.5
North Africa	118	126	134	15.8	186	37.3
Other So. America	148	158	167	14.7	223	32.1
India	1127	1206	1267	14.1	1620	26.6
China	1326	1367	1402	6.4	1394	-1.1
East Asia	223	226	228	2.5	212	-7.3
World total	6514	6916	7244	12.6	9551	30.7

Source: United Nations

Crop Budgets for 2014

dollars per acre

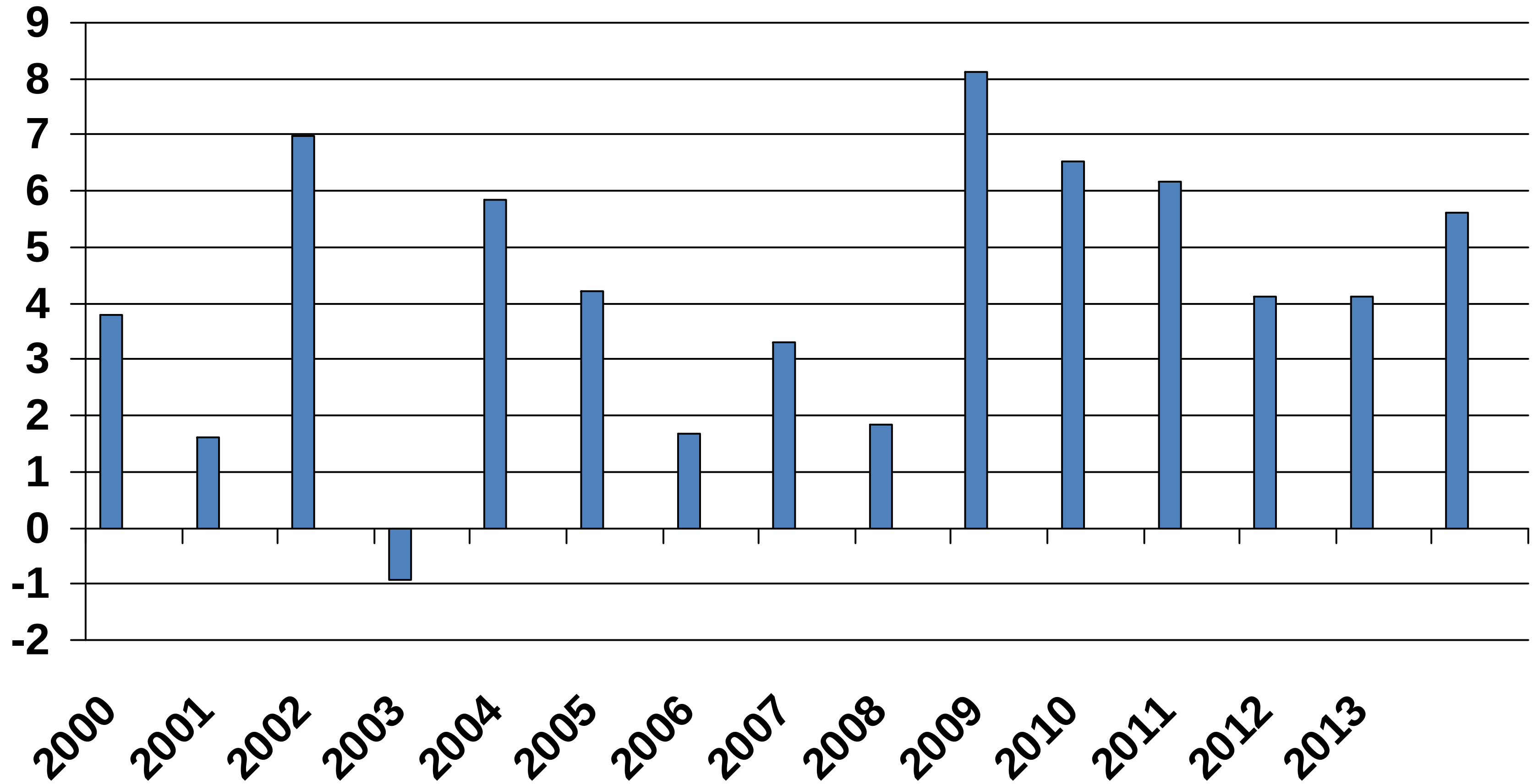
	Corn	Corn-on-corn	Soybeans
Revenue	$730	$679	$510
Operating Costs	$328	$344	$149
Net Returns	$403	$335	$360

Estimates based on $4.50 corn price and soybean prices of $11.77 per bushel
Corn yield is 162 bushels/acre – corn-on-corn yield is 151 bushels/acre

In the Corn Belt net returns for soybeans are higher than those for corn
$437 versus $418 and $348

DOANE

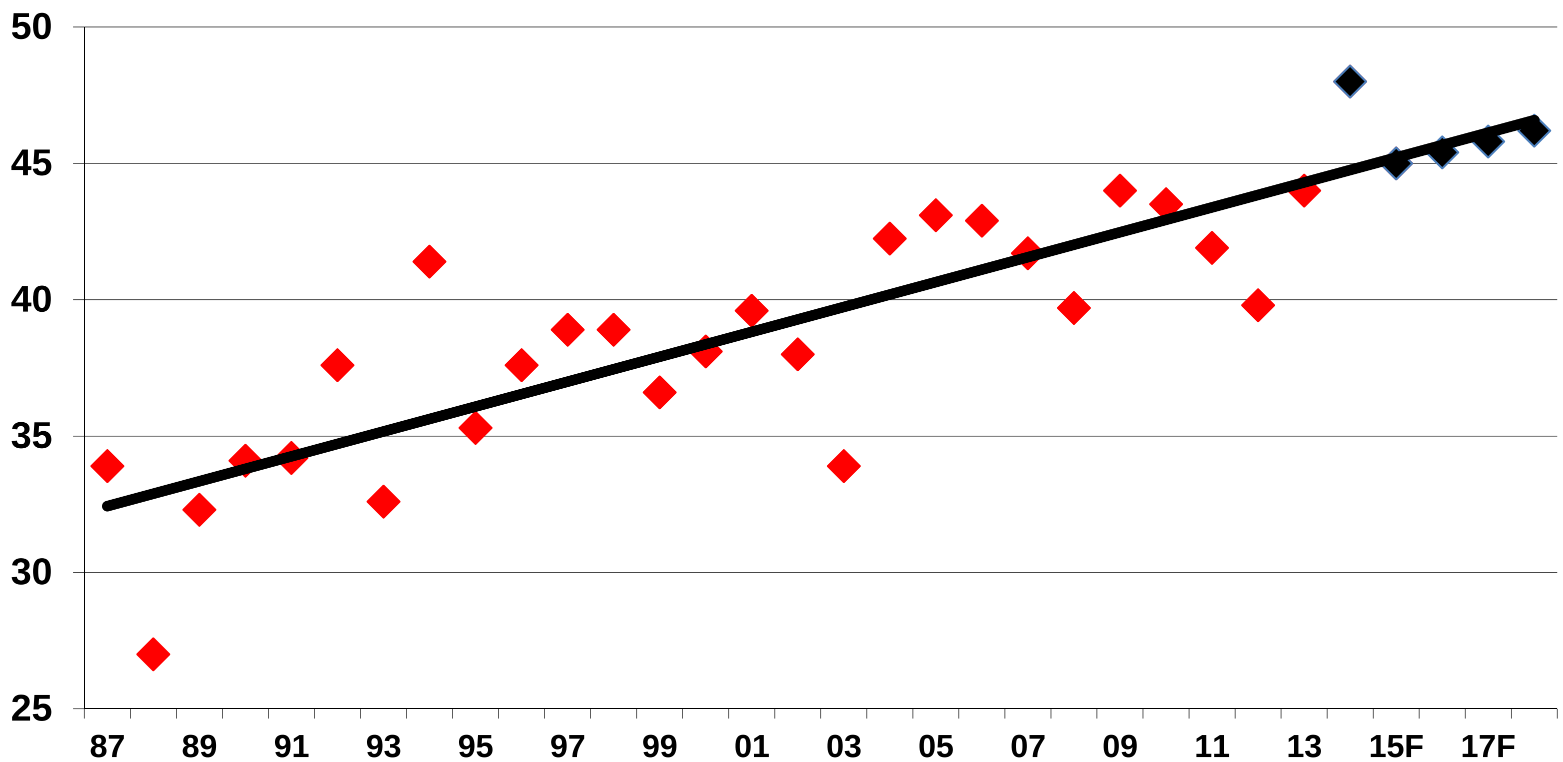
China's Soybean Demand Growth million tonnes



DOANE

U.S. Soybean Yields

(Bu/a)



Sources: USDA, Doane

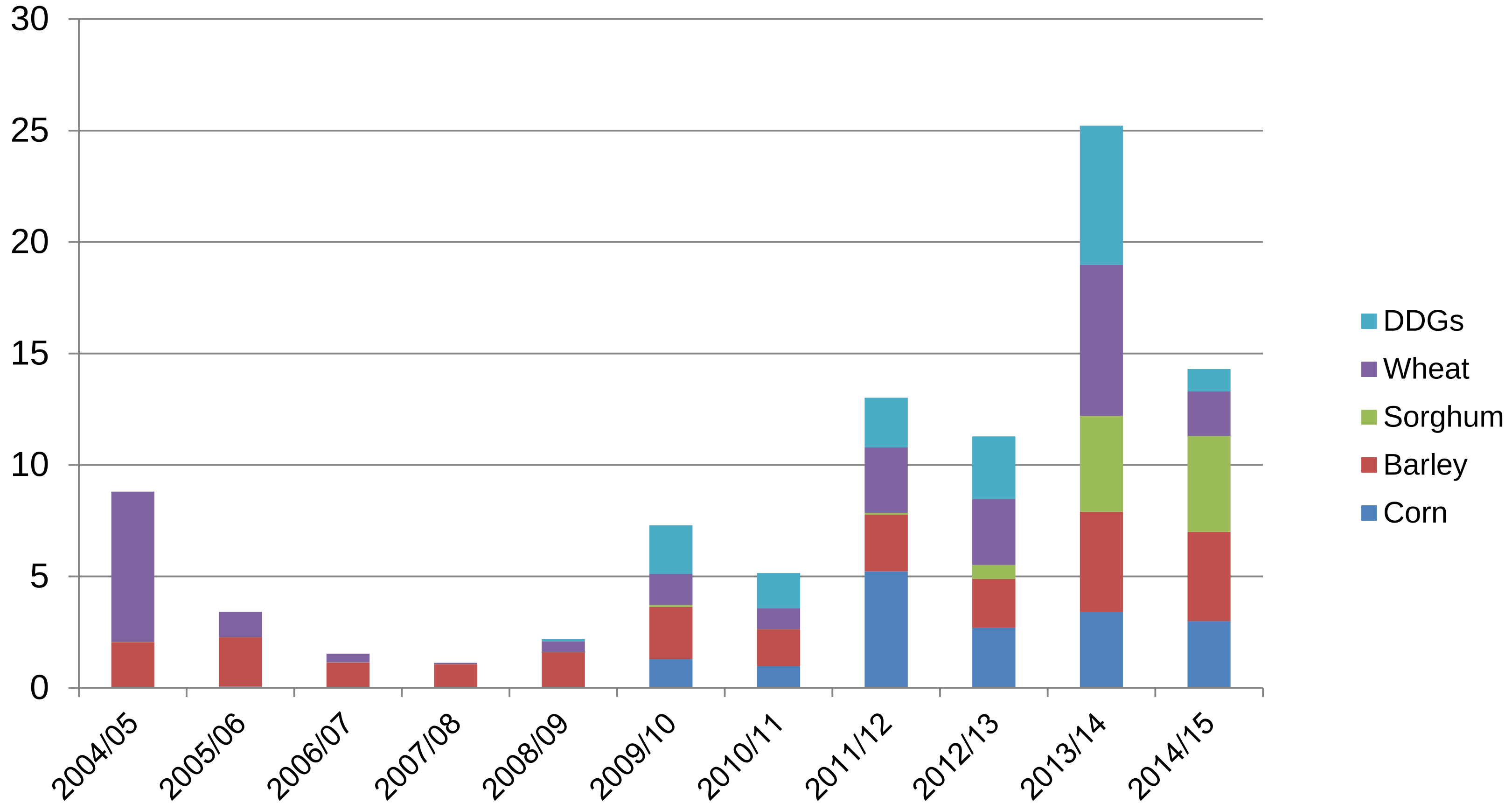
DOANE

Corn Situation and Outlook

- **Two record crops and corn endings stocks projected at 2.0+ billion bushels**
- **Prices fell to 5 year low in October**
- **Harvest low in place?**
- **Ethanol production flat to lower unless exports surprise.**
- **US exports down from last season**
- **Market structure encouraging storage (hedge)**

China’s Grain and DDG Imports

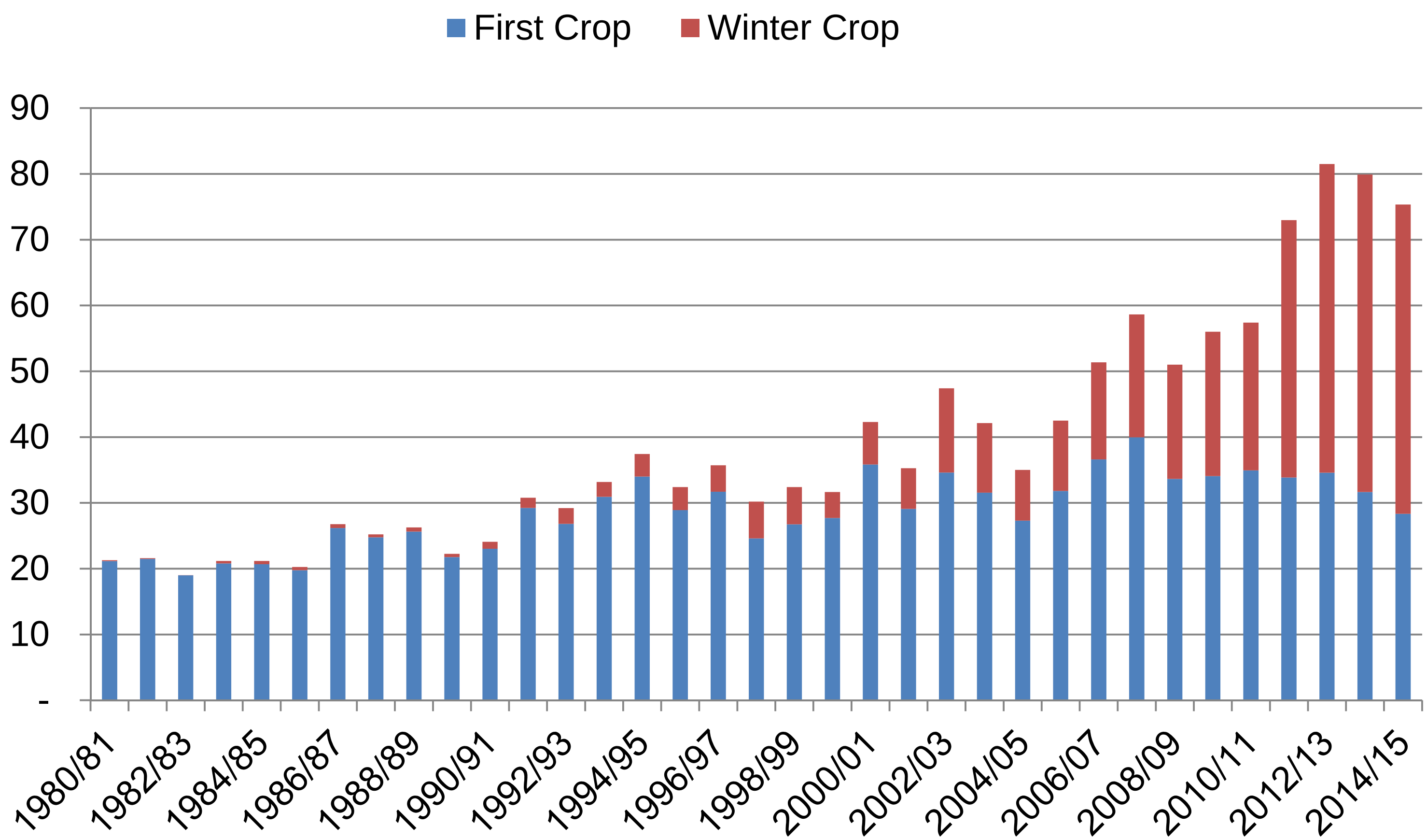
(million tonnes)



Sources: USDA

Brazil Corn Production: First Crop and Winter Crop

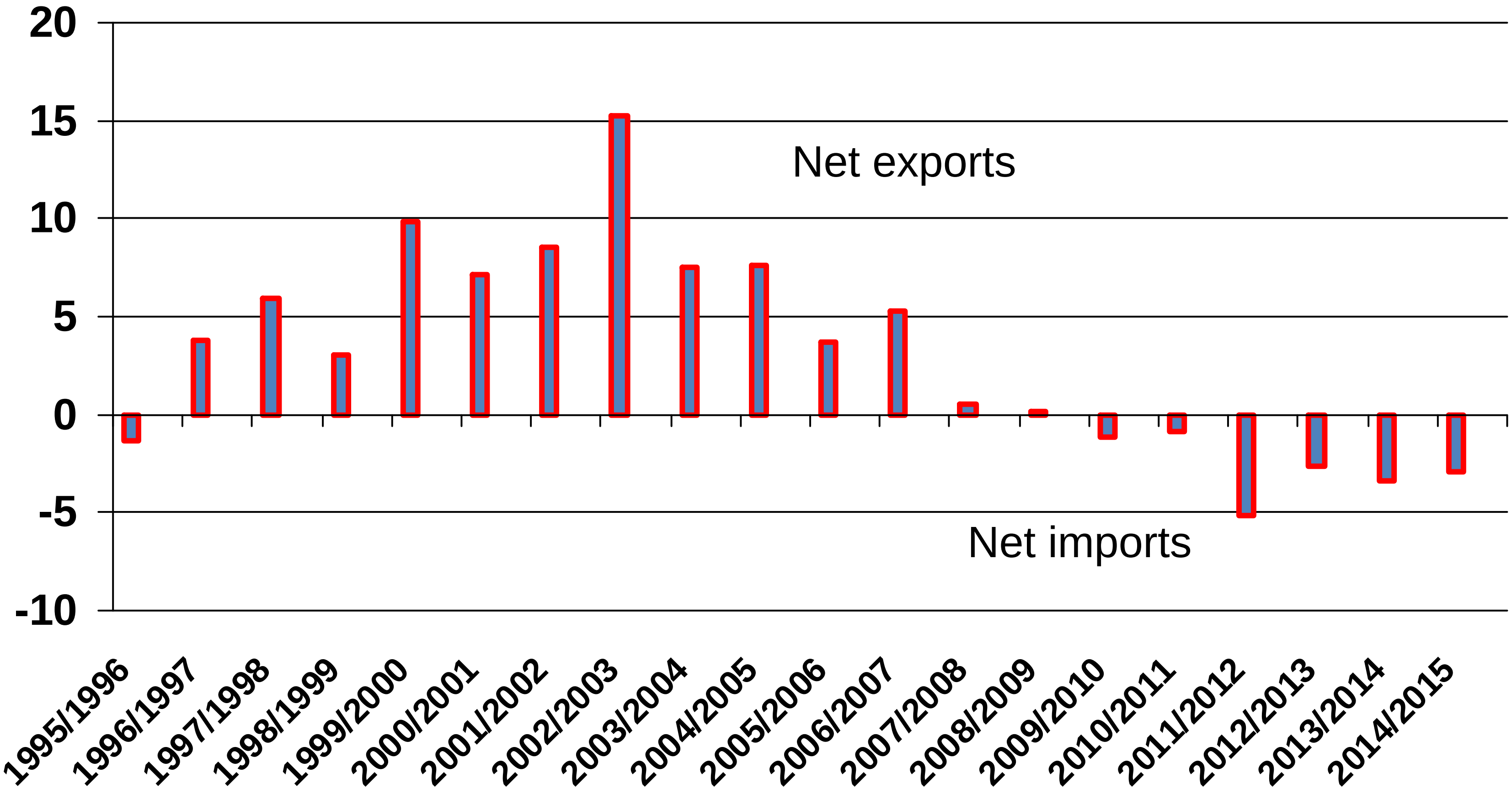
(million tonnes)



Source: CONAB, Doane Forecast

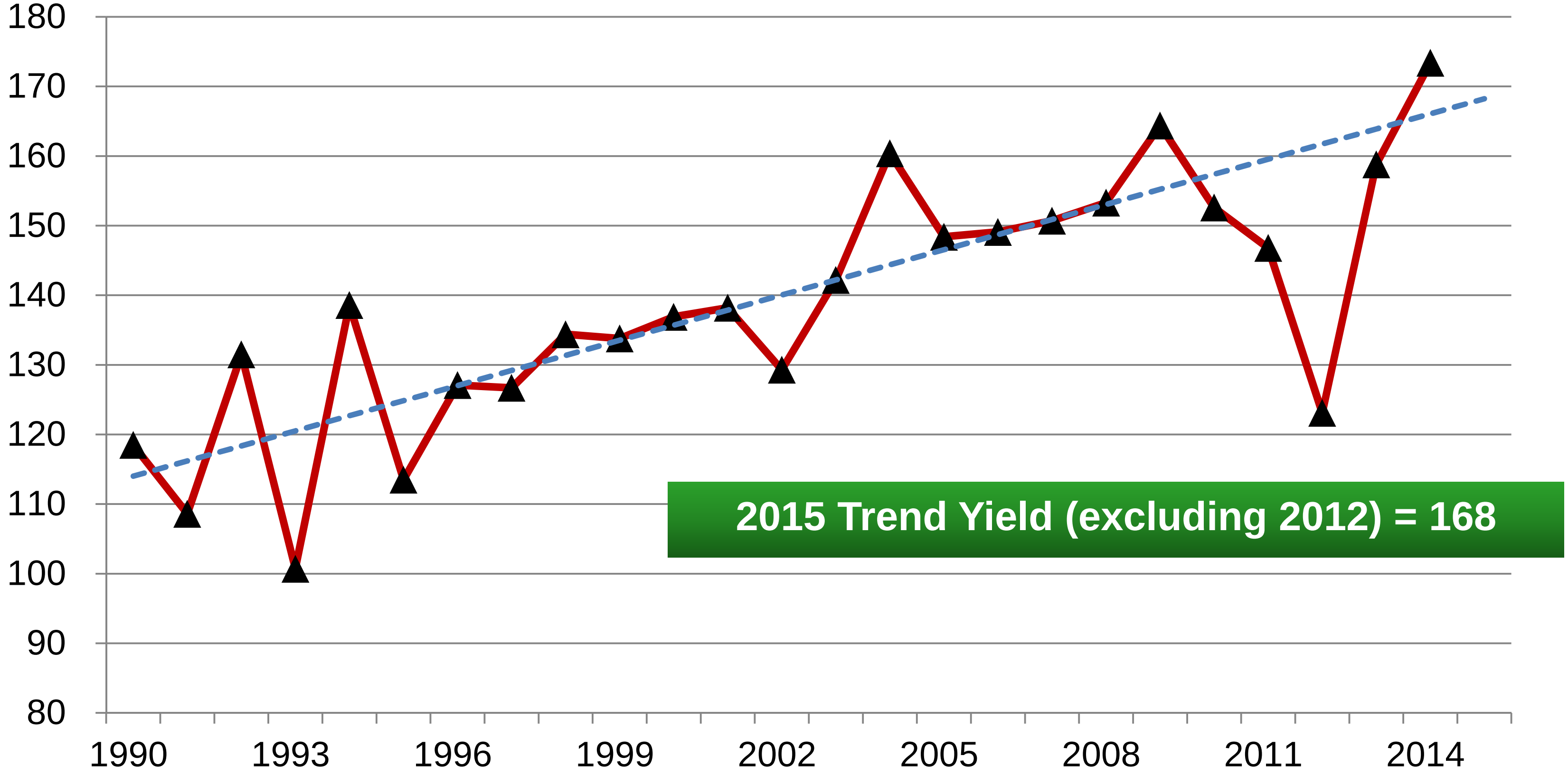
DOANE

China's Corn Trade
million tonnes



U.S. National Average Corn Yield

(bu/ac)

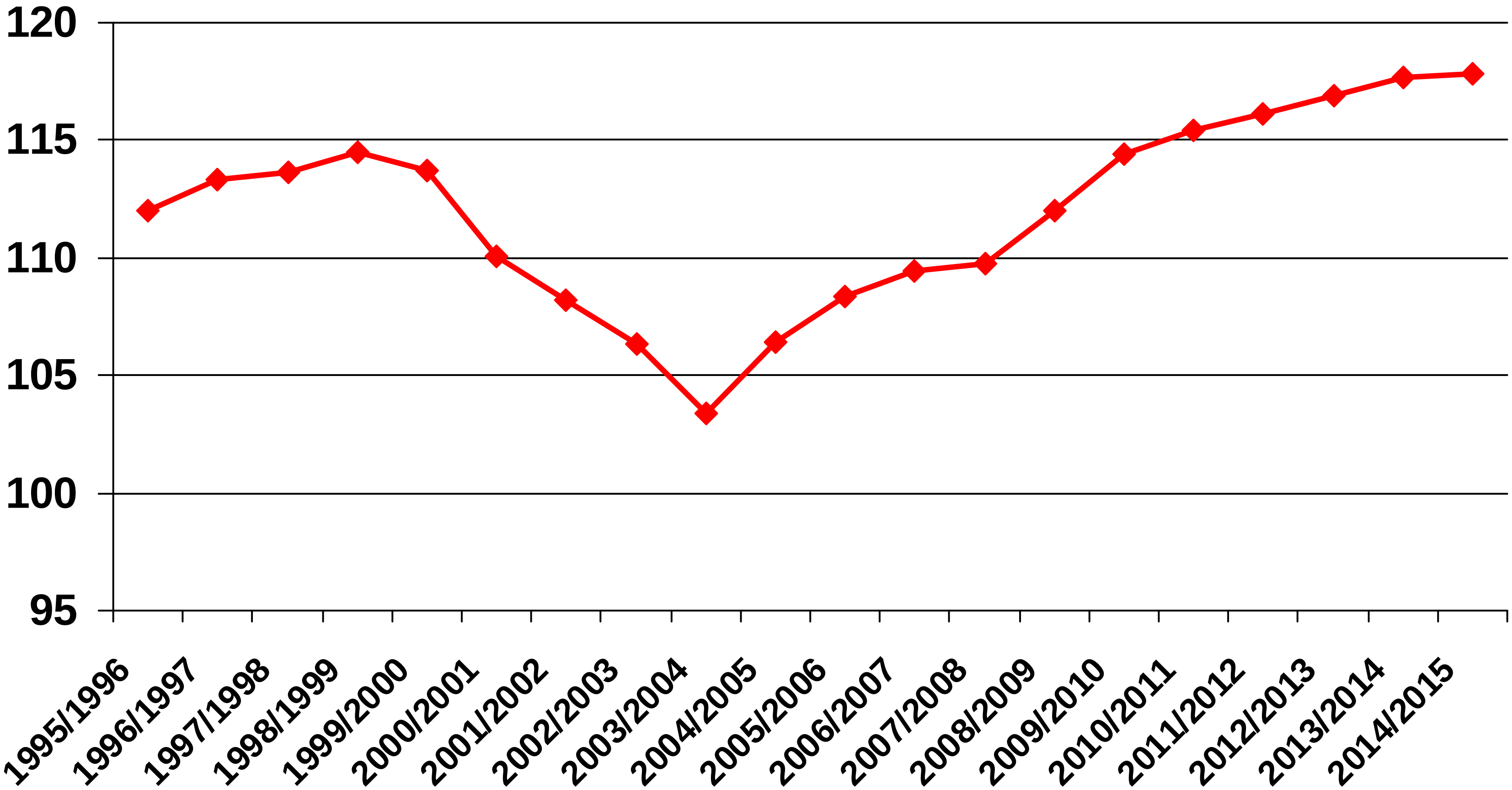


Sources: USDA, Doane forecast

DOANE

China's Major Crop Area

million hectares



13 crops – grains, oilseeds and cotton