

Inputs Situation & Outlook

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2015 Southern Region Agricultural Outlook Conference

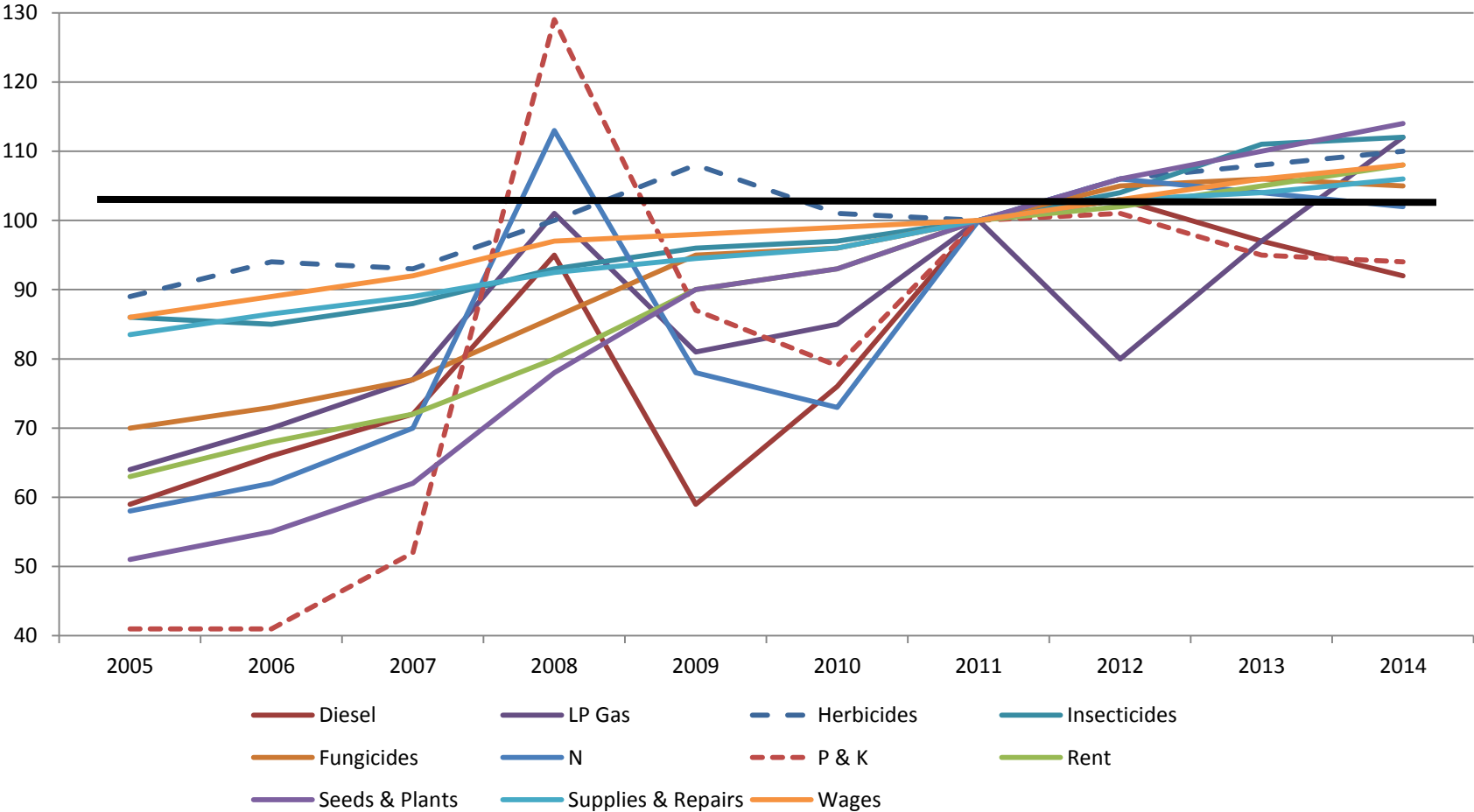
September 22, 2015

Atlanta, GA

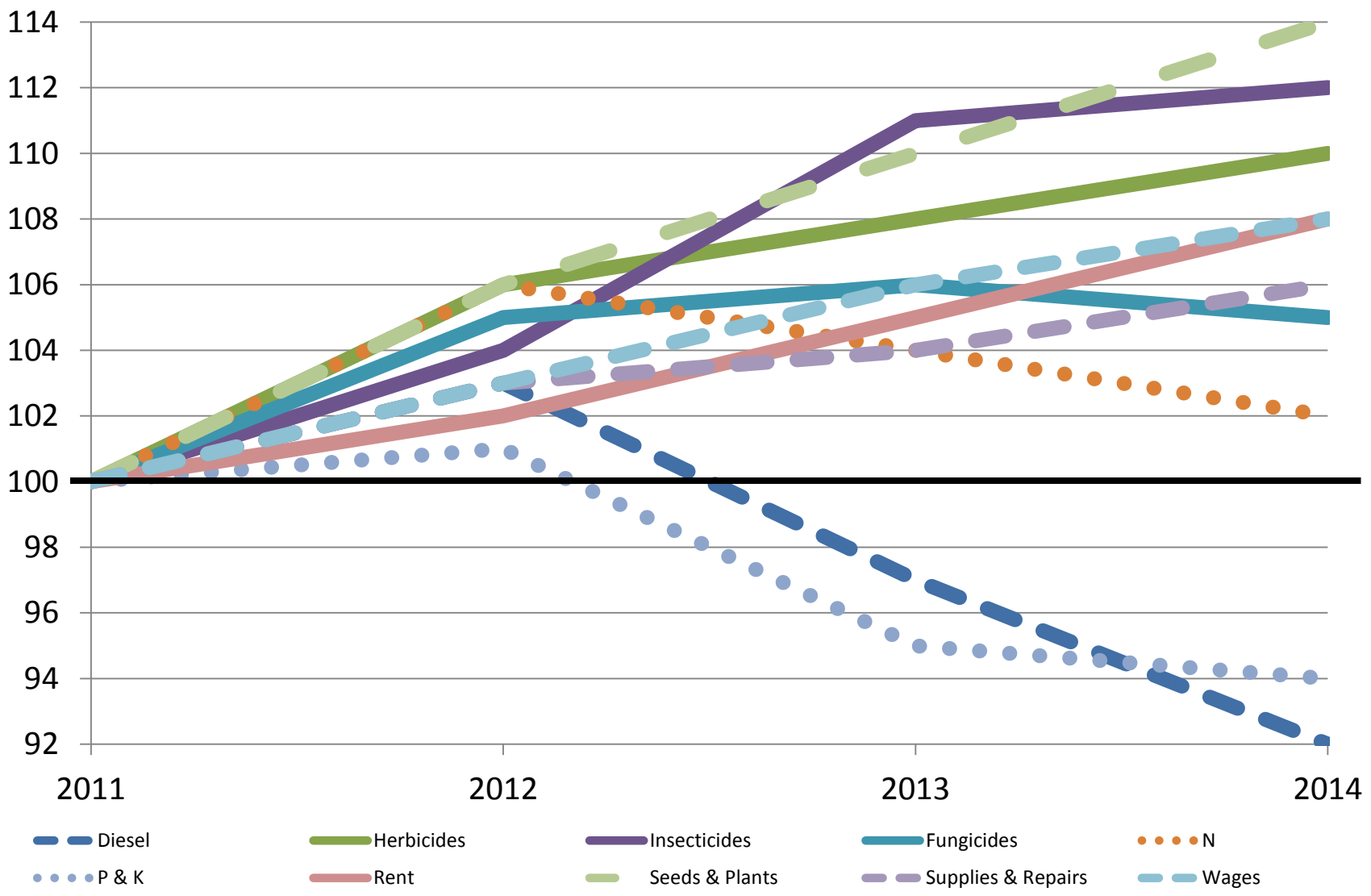


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Prices Paid Indices Past Ten Years, 2011=100



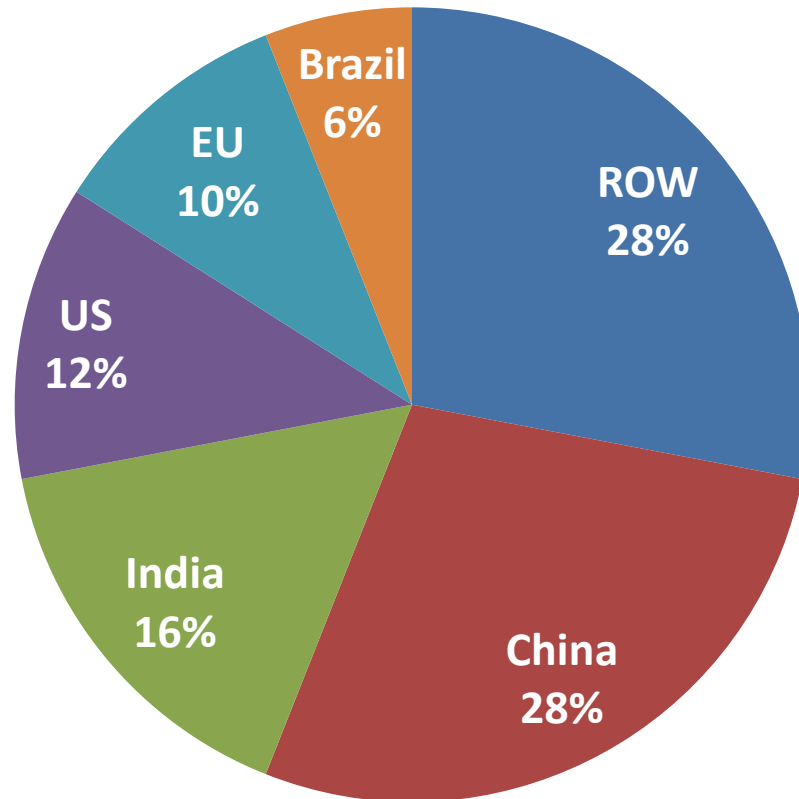
Prices Paid Indices, 2011=100



Source: USDA, NASS Quick Stats

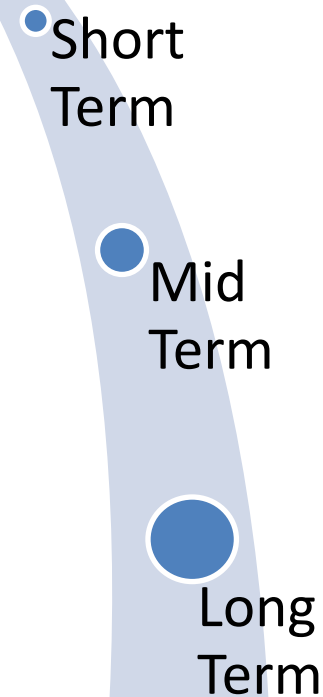
Fertilizer Demand

>70% fertilizer consumption is in China, India, US, EU and Brazil



Fertilizer Demand Drivers

- Crop prices
- Fertilizer prices
- Weather patterns
- Non-food crops
- Better nutrient balance
- Changing diets
- Rising populations

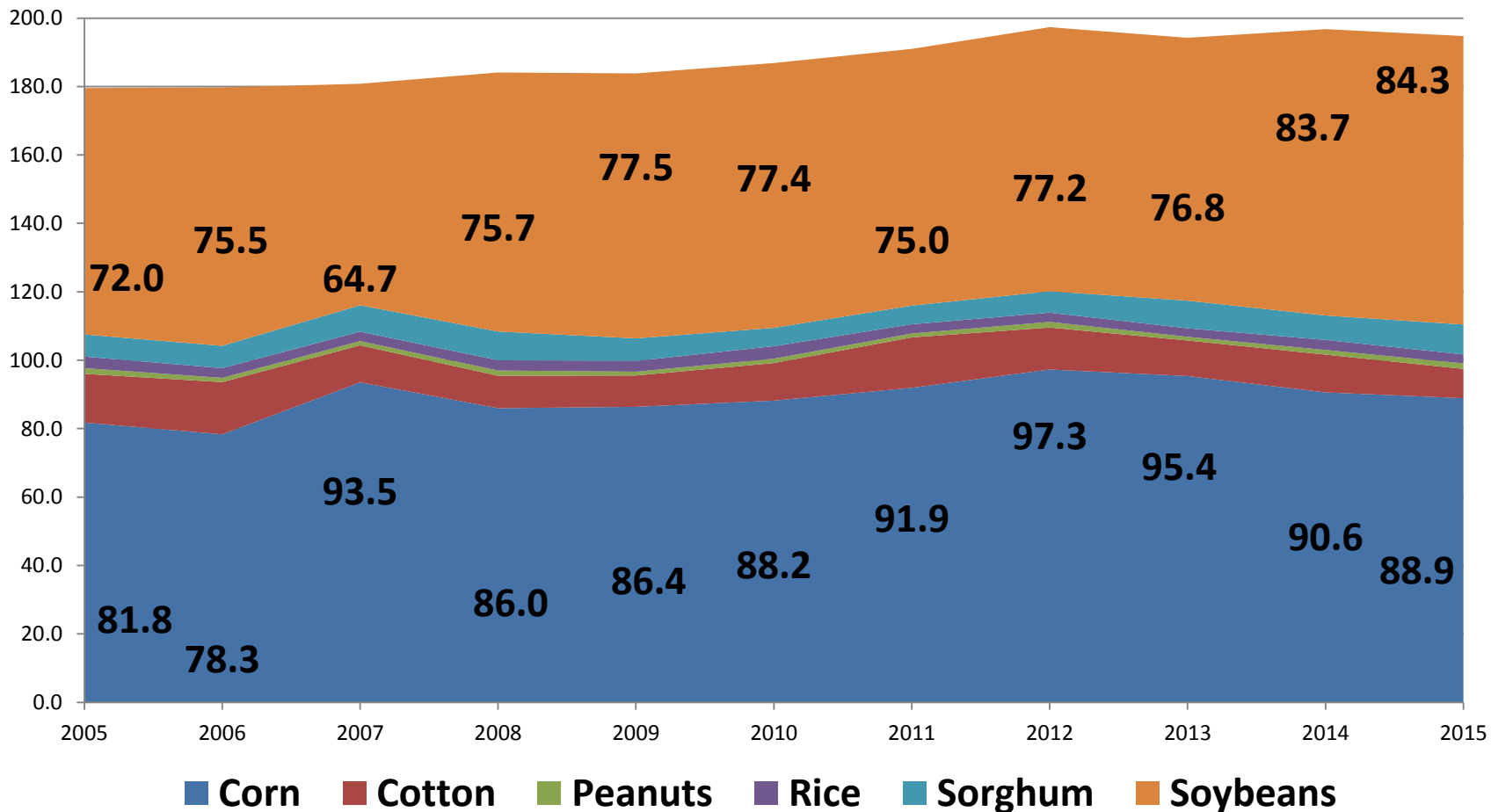


Monthly US Corn Price Received, \$/bu



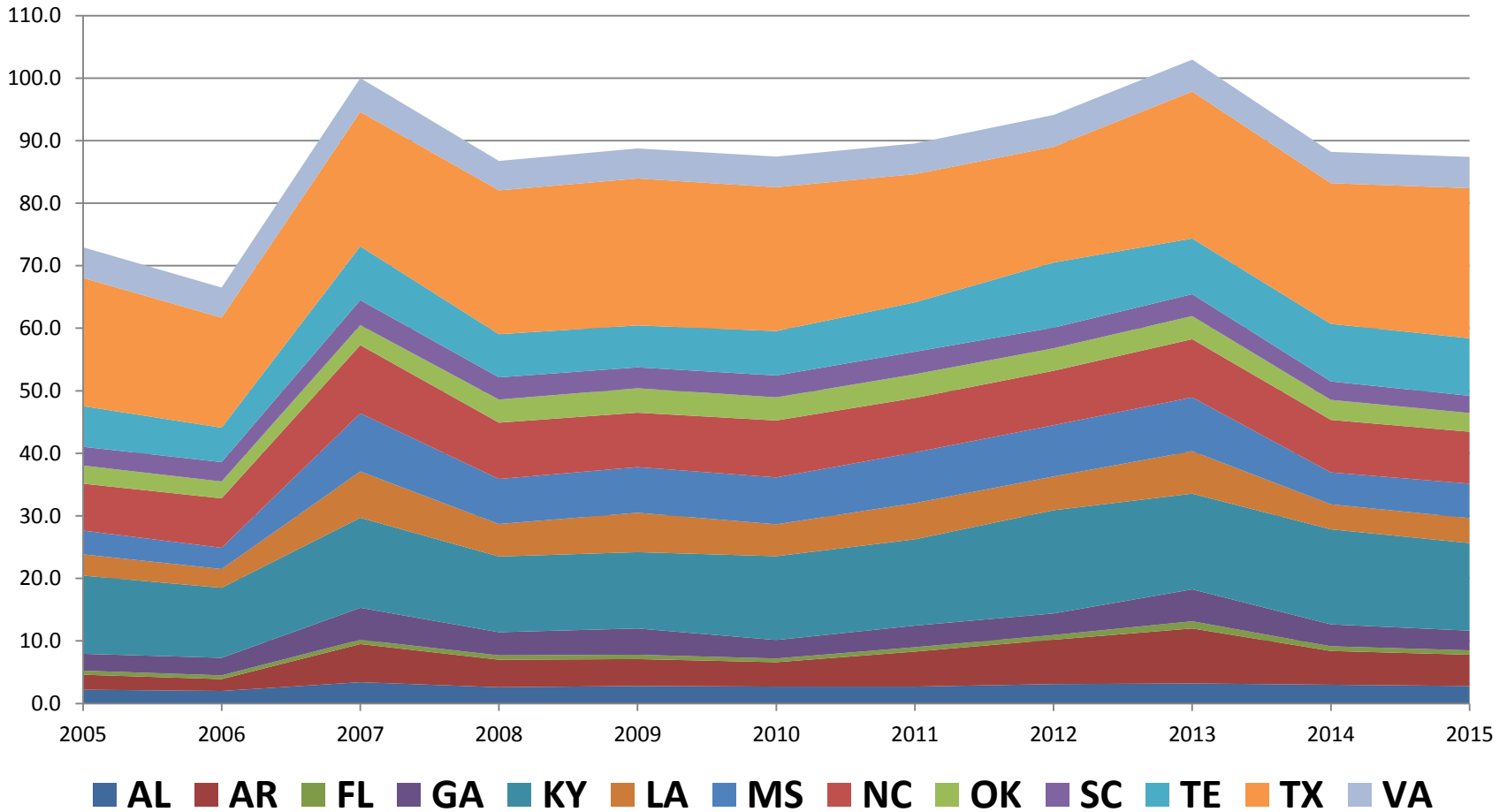
Source: USDA, NASS Quick Stats

Acres Planted to Select Crops, Numbers in the Millions



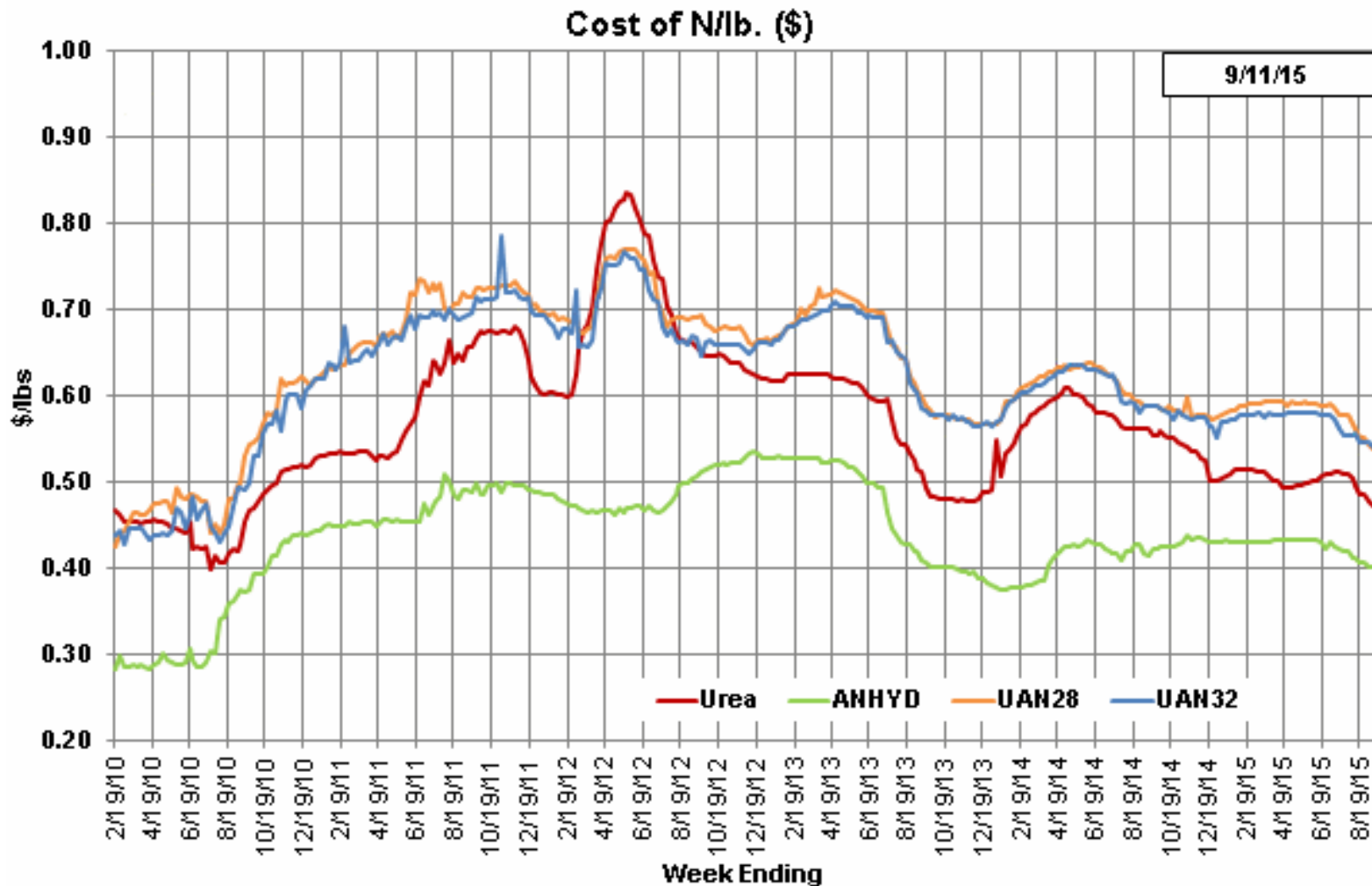
Source: USDA, NASS Quick Stats

Corn Planted Acreage, Southeast US, Numbers in the Thousands

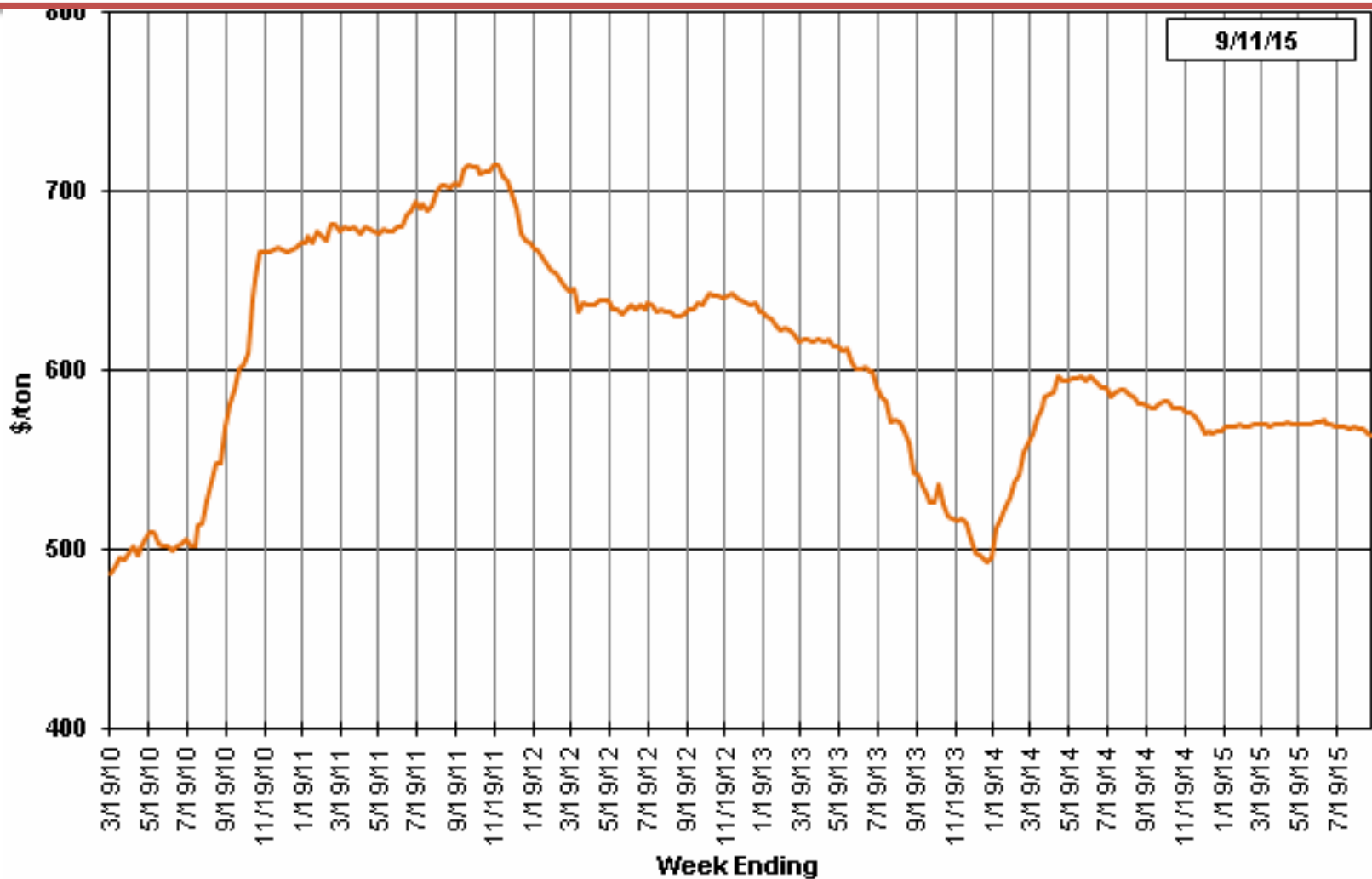


Source: USDA, NASS Quick Stats

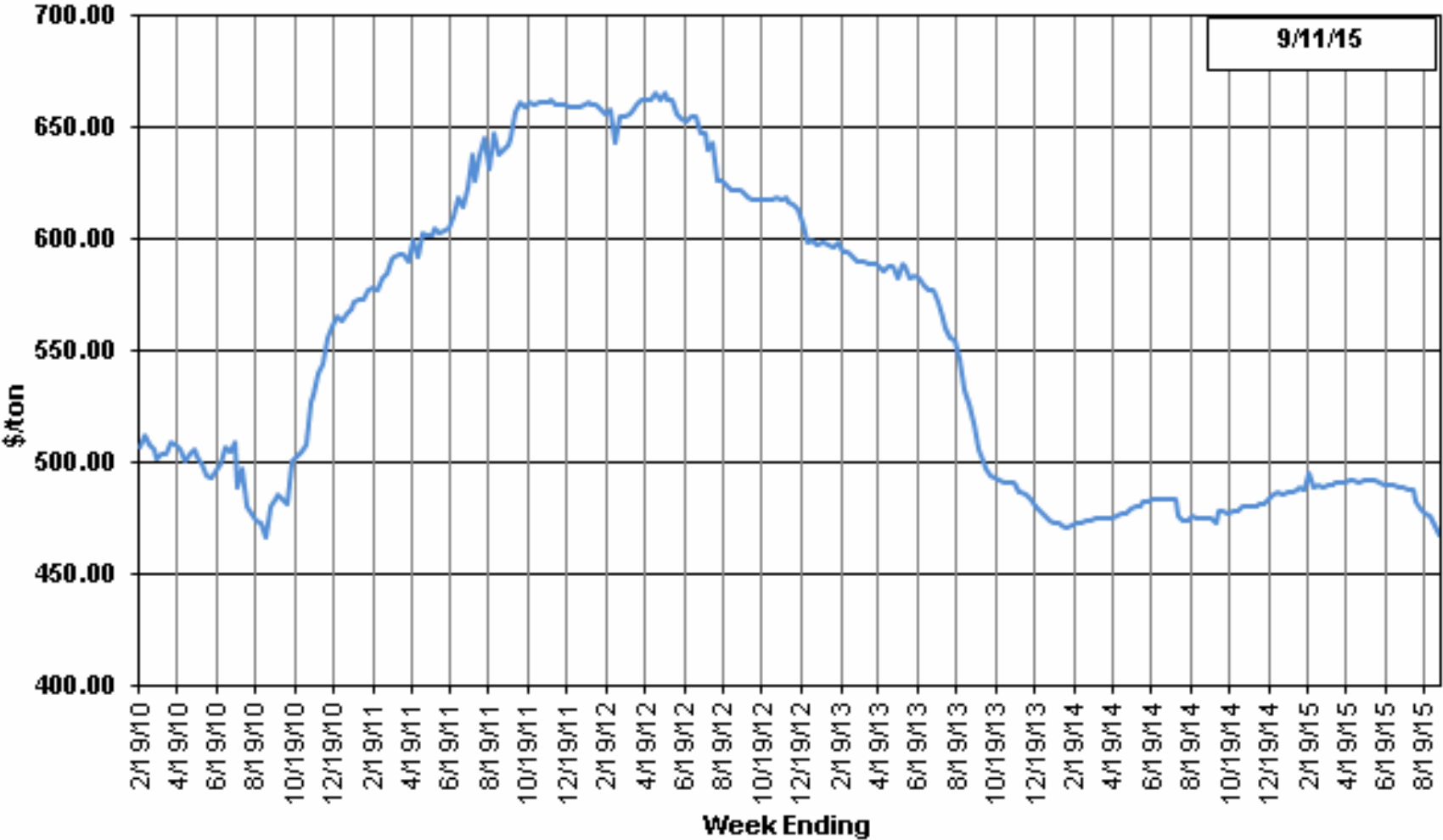
DTN Average Retail N Prices



DTN Average Retail DAP Prices



DTN Average Retail Potash Prices



Short-term Forecast for World Fertilizer Demand, Mt Nutrients

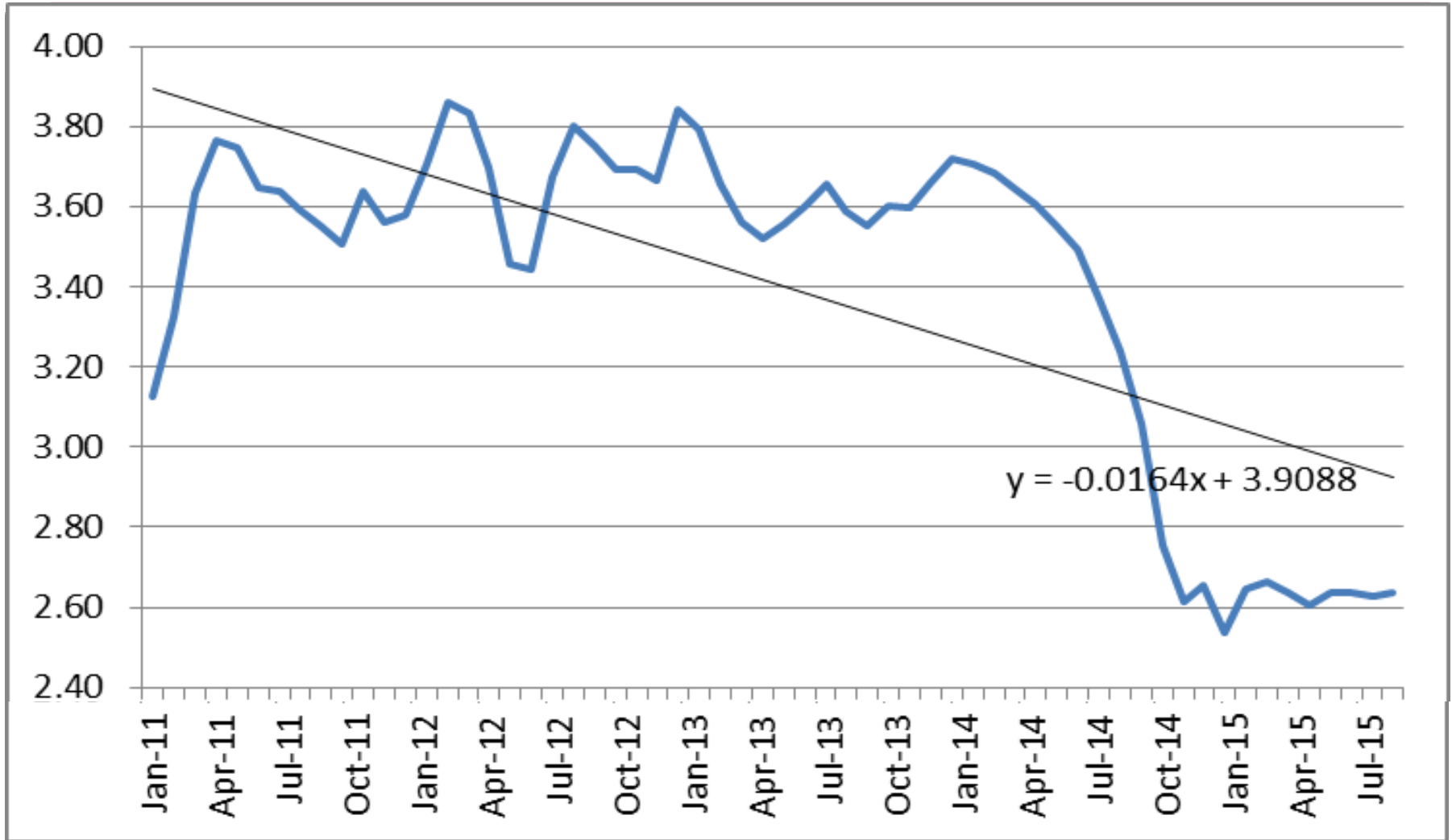
	N	P ₂ O ₅	K ₂ O	Total
12/13	108.1	41.6	29.1	178.8
13/14	110.4	40.3	30.2	180.9
14/15 (e)	111.8	41.3	31.5	184.6
<i>Change</i>	<i>+1.3%</i>	<i>+2.5%</i>	<i>+4.2%</i>	<i>+2.0%</i>
15/16 (f)	112.9	41.8	31.8	186.5
<i>Change</i>	<i>+1.0%</i>	<i>+1.1%</i>	<i>+0.8%</i>	<i>+1.0%</i>

(e): estimate; (f): forecast

Source: P. Heffer, IFA, June 2015

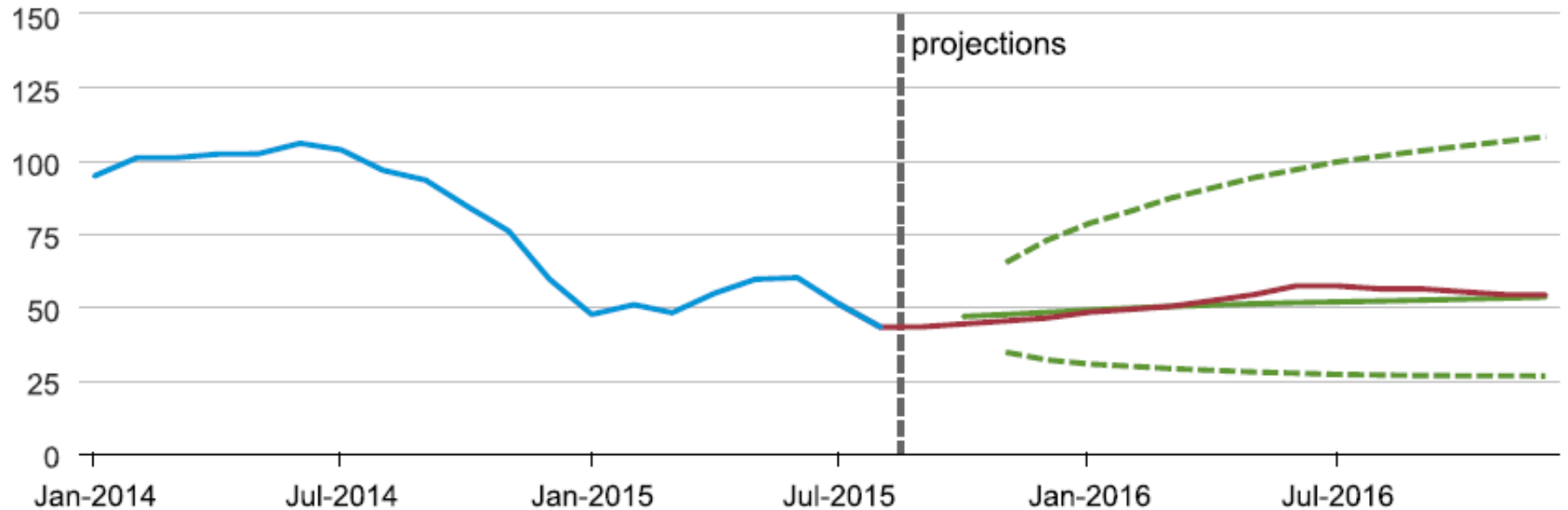
Supply should increase in the next few years as plans to expand capacity in the industry are in the works.

Retail Farm Diesel Prices



Predicted Crude Oil Prices (West TX Intermediate)

(dollars per barrel)



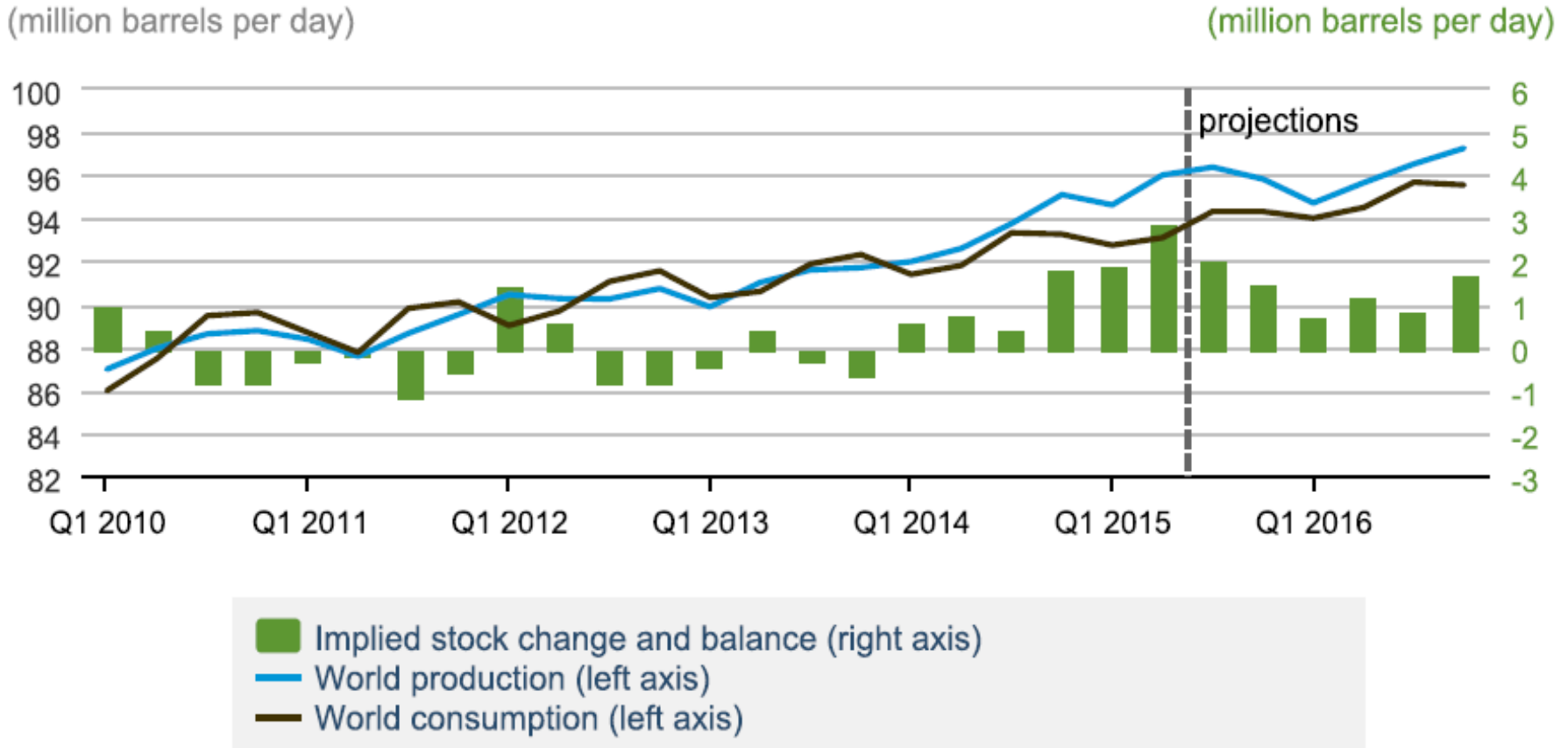
- Historical spot price
- STEO price forecast
- NYMEX futures price
- - - 95% NYMEX futures lower confidence interval
- - - 95% NYMEX futures upper confidence interval



Source: Short-Term Energy Outlook, September 2015

Note: Confidence interval derived from options market information for the 5 trading days ending Sep. 3 2015. Intervals not calculated for months with sparse trading in near-the-money options contracts.

World Liquid Fuels Production and Consumption Balance



Source: Short-Term Energy Outlook, September 2015

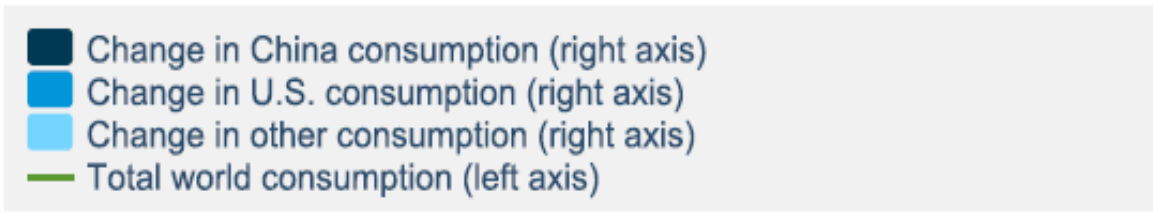
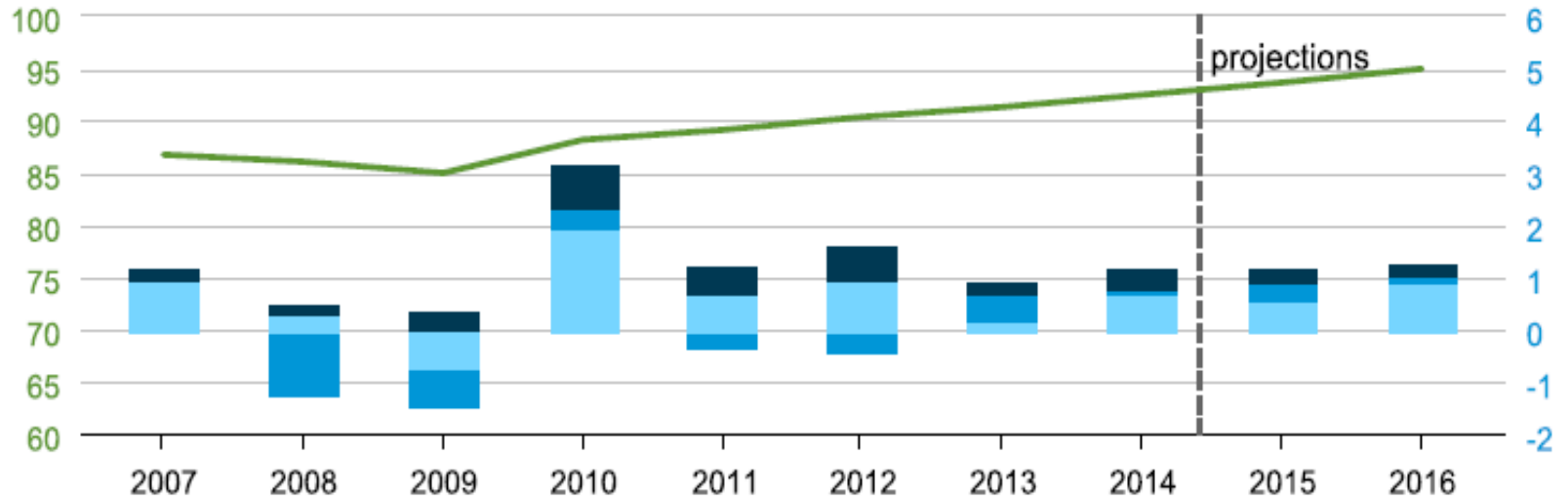


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World Liquid Fuels Consumption

(million barrels per day)

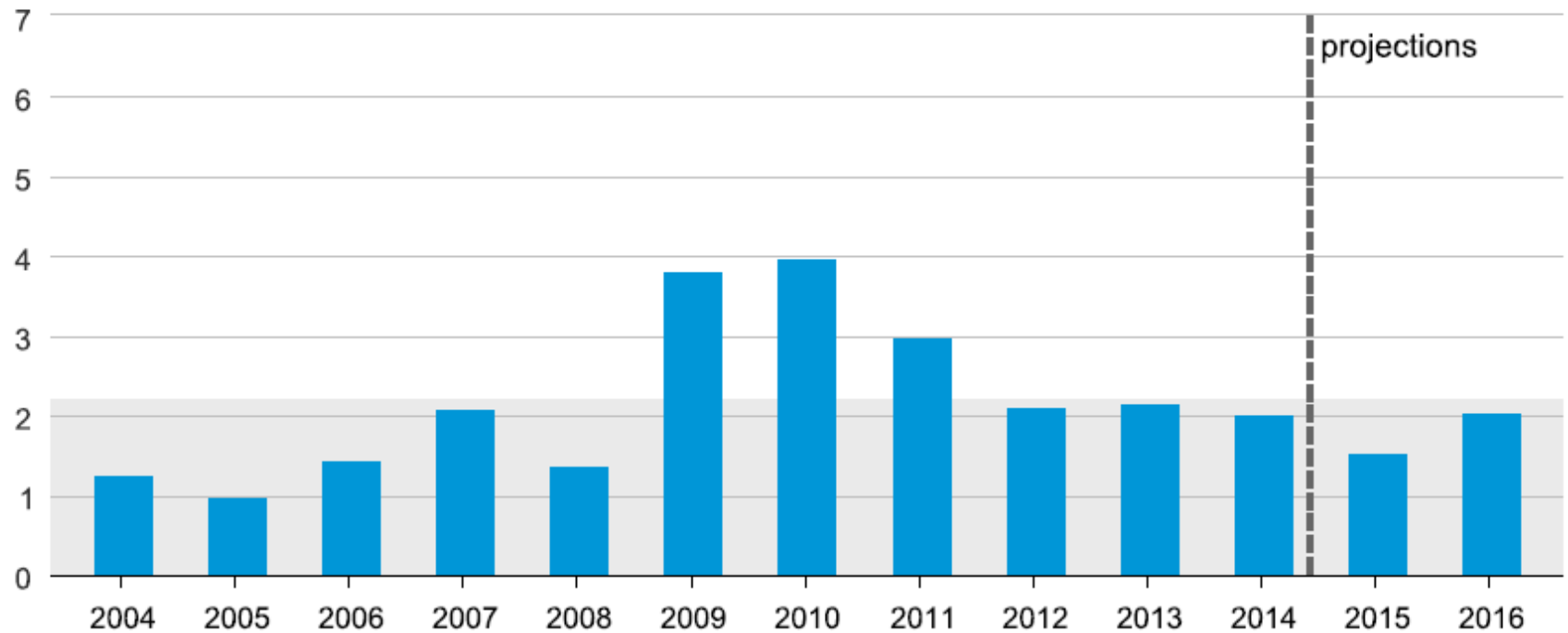
(year over year change, million barrels per day)



Source: Short-Term Energy Outlook, September 2015

OPEC Surplus Crude Oil Production Capacity

(million barrels per day)



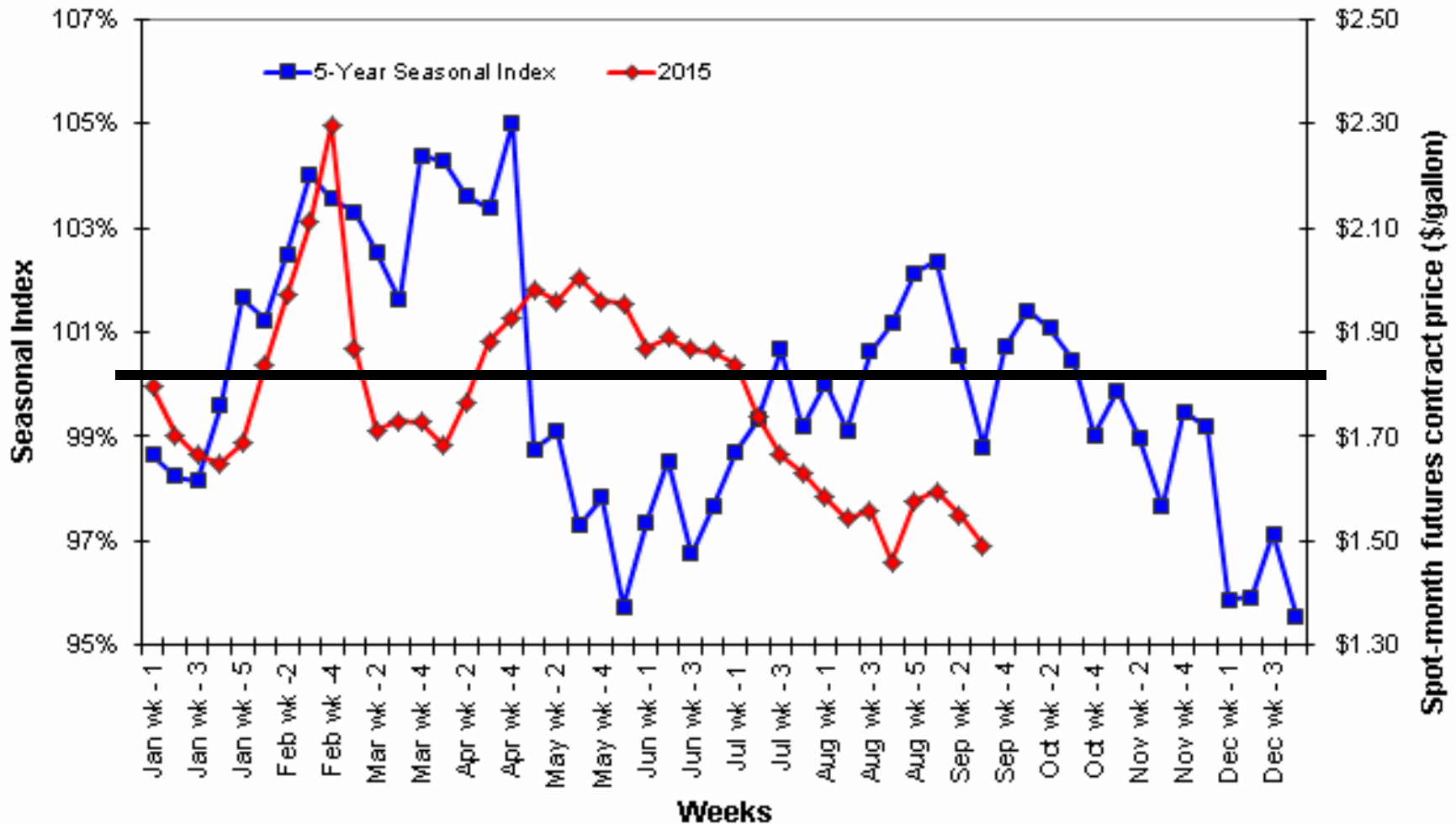
■ OPEC surplus capacity



Source: Short-Term Energy Outlook, September 2015

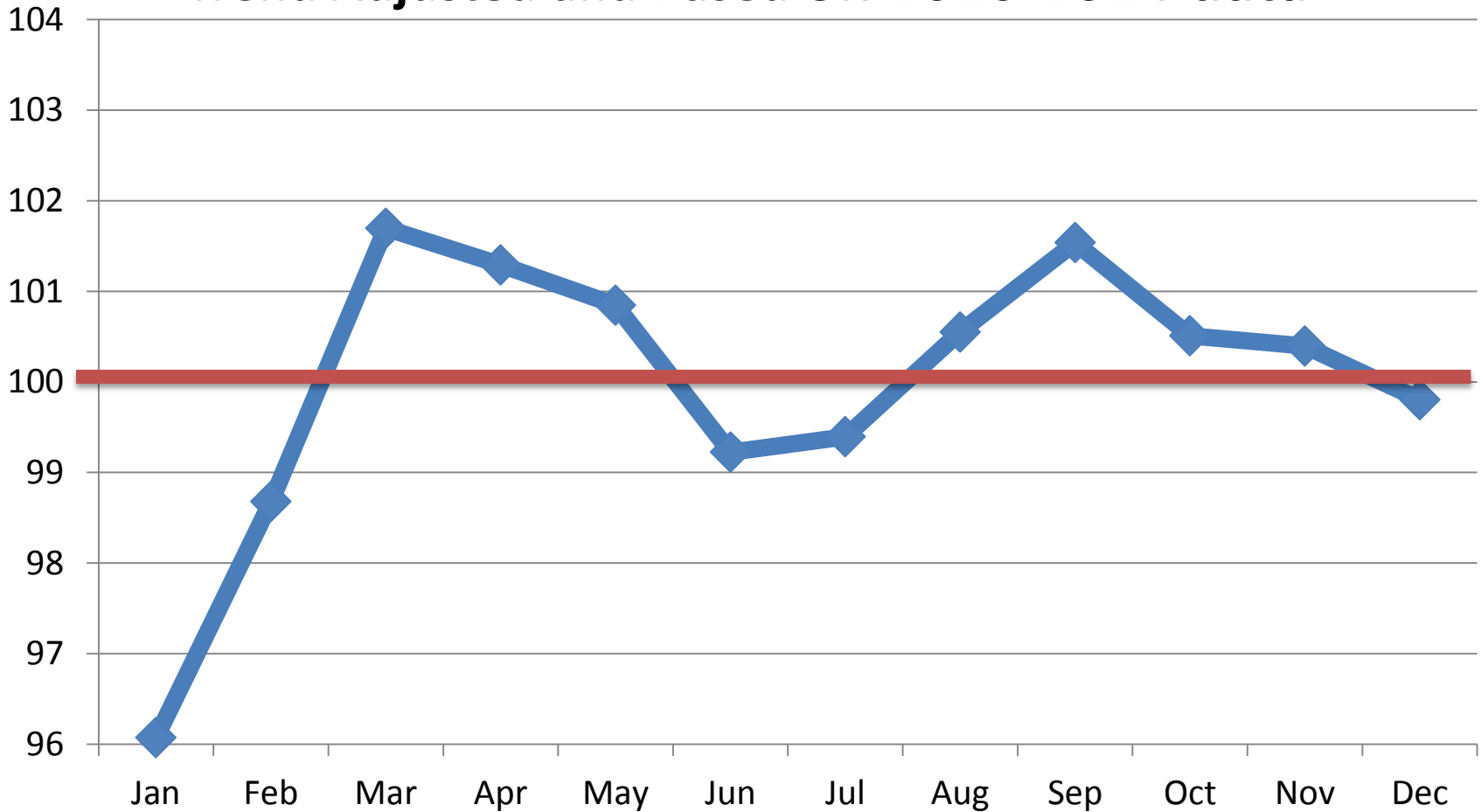
Note: Shaded area represents 2004-2014 average (2.2 million barrels per day)

DTN Diesel Fuel 5-yr Seasonal Index

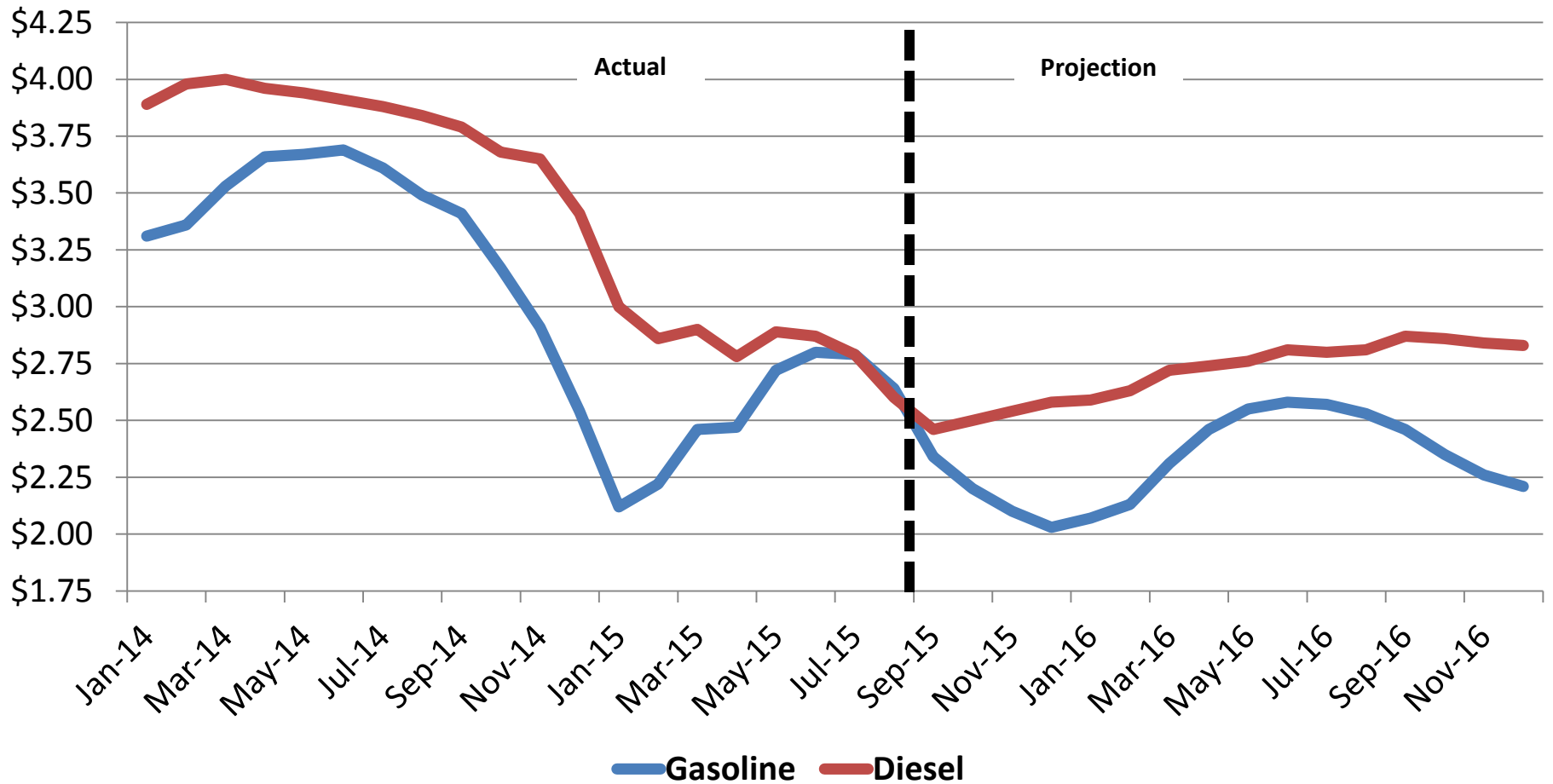


Southern Atlantic States Diesel Fuel Seasonal Price Index

Trend Adjusted and Based on 2010-2014 data

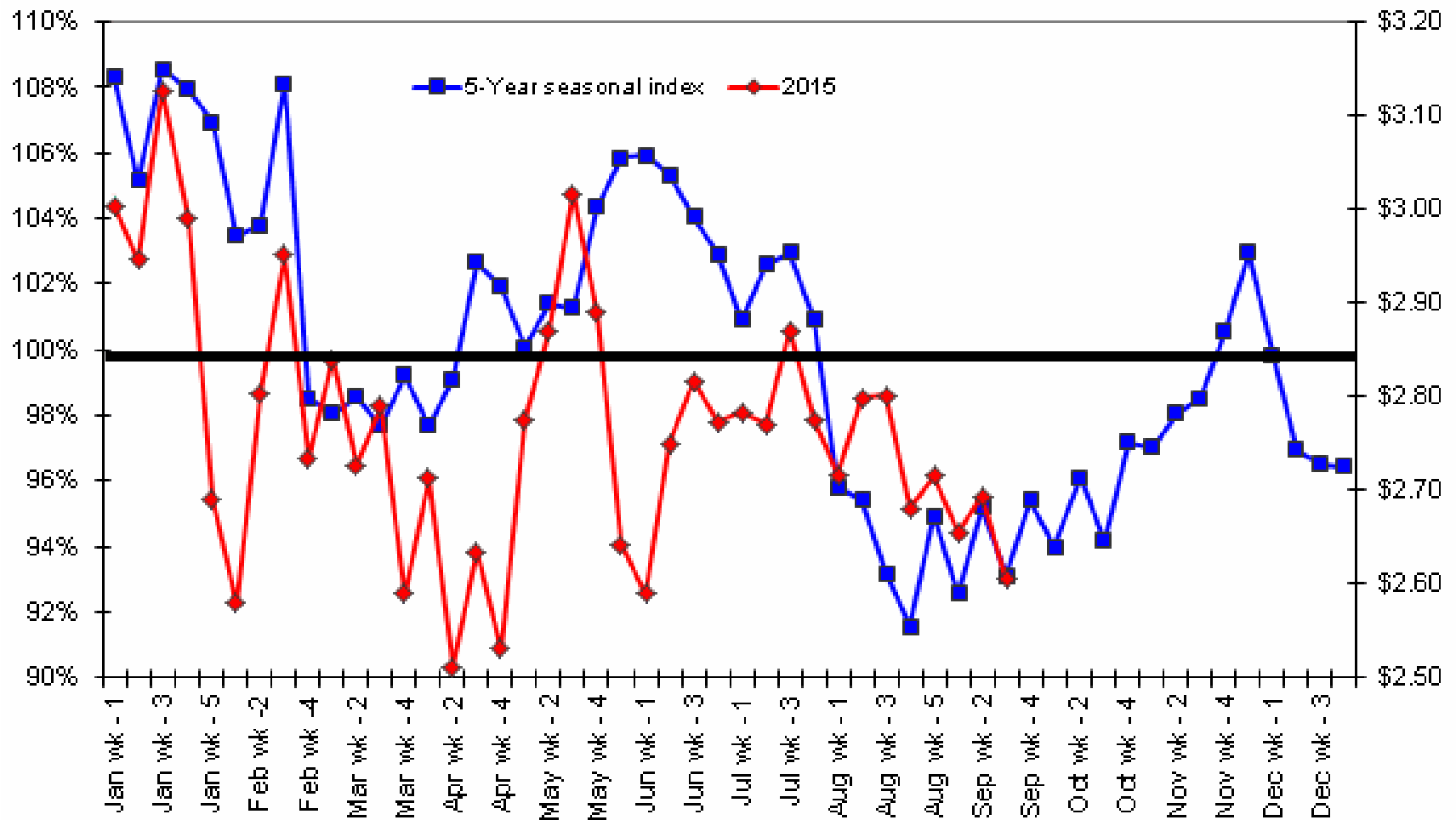


Retail Gas & Diesel Prices



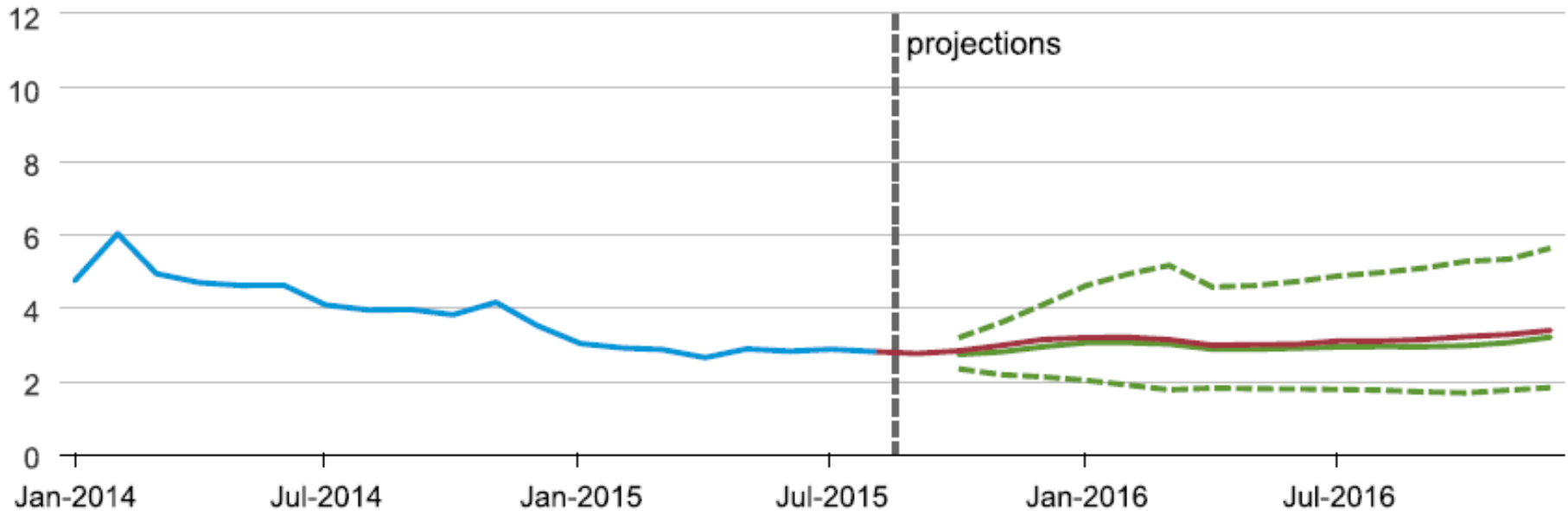
Source: EIA, Short-term Energy Outlook, 9/2015

DTN Natural Gas 5-yr Seasonal Index



Henry Hub Natural Gas Prices

(dollars per million Btu)



- Historical spot price
- STEO forecast price
- NYMEX futures price
- - - 95% NYMEX futures upper confidence interval
- - - 95% NYMEX futures lower confidence interval



Source: Short-Term Energy Outlook, September 2015

Note: Confidence interval derived from options market information for the 5 trading days ending Sep. 3 2015. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Price Trends of Select Pesticides

Chemical	2012	2013	2014	2015
2-4, D (Herbicide)	\$ 16.08	\$ 20.32	\$ 23.52	\$ 19.52
Glyphosate (Herbicide)	\$ 14.00	\$ 14.32	\$ 16.16	\$ 18.00
Headline (Fungicide)	\$ 340.48	\$ 359.68	\$ 359.68	\$ 463.36
Bravo (Fungicide)	\$ 29.76	\$ 35.36	\$ 34.08	\$ 35.44
Cypermethrin (Insecticide)	\$ 60.16	\$ 64.00	\$ 66.56	\$ 70.40
Karate Z (Insecticide)	\$ 349.44	\$ 403.20	\$ 349.44	\$ 364.80

Projected Annual Percent Changes in Selected Cost Components (FAPRI)

2011 = 100

Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024
Production items	109%	109%	111%	113%	116%	119%	121%	122%	124%
Feed	102%	103%	103%	105%	105%	105%	104%	103%	101%
Livestock & poultry	141%	126%	117%	115%	116%	120%	123%	126%	130%
Seeds	114%	115%	118%	121%	125%	128%	131%	134%	136%
Fertilizer	89%	89%	90%	93%	96%	97%	96%	96%	95%
Mixed fertilizer	84%	84%	85%	87%	90%	91%	90%	89%	88%
Nitrogen fertilizer	92%	91%	93%	97%	100%	101%	100%	99%	98%
Potash and phosph.	98%	98%	99%	101%	104%	105%	105%	106%	106%
Herbicides	111%	114%	118%	123%	129%	133%	136%	140%	143%
Insecticides	114%	116%	119%	123%	128%	131%	133%	136%	138%
Fungicides/other	104%	106%	109%	113%	118%	121%	123%	126%	128%
Fuels	81%	87%	94%	101%	110%	118%	123%	129%	135%
Supplies & repairs	109%	111%	113%	115%	118%	120%	122%	123%	125%
Farm machinery	112%	113%	117%	121%	125%	128%	131%	134%	136%
Interest*	107%	114%	117%	119%	122%	125%	127%	130%	133%
Taxes**	107%	109%	112%	115%	120%	123%	127%	131%	135%
Wage rates	113%	117%	121%	125%	129%	134%	138%	143%	147%

Source: FAPRI-MU Report#01-15, 2015 US Baseline Briefing Book

Outlook for 2016

- Fertilizers – down from 2015, but slight
 - Could go up if weather does not allow good fall application
- Fuels – diesel up from 2015, but slight
 - Natural gas, stable
- Chemicals – up and down from 2015, some new brands on board and new generics



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