IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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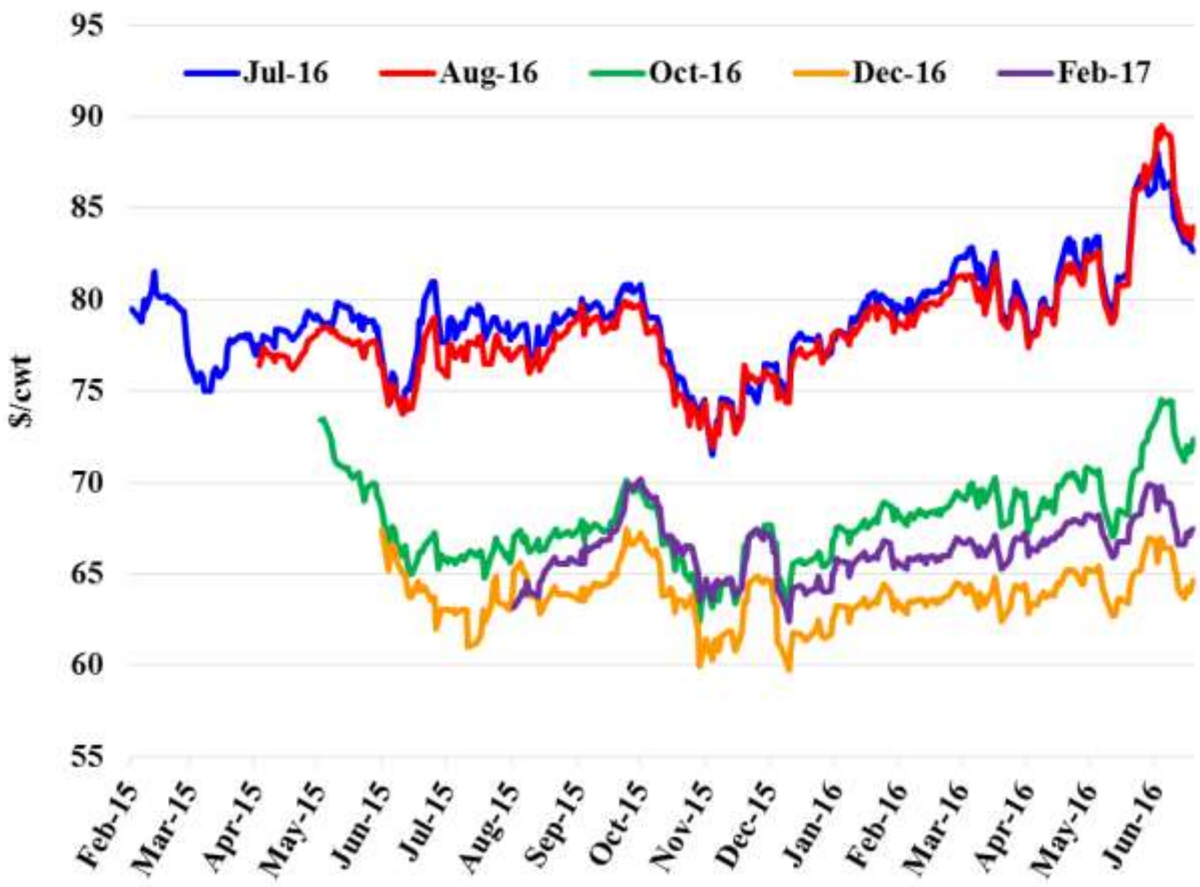
Be Prepared for Lower Hog Prices

Lean hog futures for much of the year have been trading on the thesis of steady pork supplies and robust export demand. But, recent price movements have opposed these leading arguments.

On June 14th Jul-16 lean hog futures closed at a new high of $88.075/cwt, $1.050/cwt higher than the previous high (figure 1). Two days later, on June 16th, Aug-16 and Oct-16 futures closed at new highs of $89.500/cwt and $74.500/cwt, respectively. On that same day Dec-16 ($66.950/cwt) and Feb-17 (69.750/cwt) futures closed only $0.50/cwt off their contract highs. However, since then these markets have reversed with $2-5 per cwt lower futures prices.

Figure 1. Daily Lean Hog Futures Settlement Prices, as of July 1, 2016



Data source: CME Group, compiled by BarChart.com.

A number of factors appear to have contributed to the reassessment of the price potential.

There's an old adage, "higher corn prices make for higher hog prices." Lean hog futures rose sharply between mid-May and mid-June, driven in part by the rally in the corn market. Nearby corn futures prices gained $0.70 per bushel between May 9th and June 17th. Since then corn prices have deflated to pre-rally levels. With corn futures now below $4 per bushel, hog producers have a chance to hedge some of their feed needs at favorable prices.

Given that pork supplies are plentiful, even small increases in supply can have a significant price impact. Year-to-date hog slaughter has been 1.0% above year ago levels. This was expected as market hog inventories have been larger than one year ago. However, hog slaughter over the last 4 weeks has been 2.5% above year ago levels. Market participants have now recognized the effect of a big slaughter month on pork supplies and have cut back a bit on their summer bullish bets.

Another reason for the mid-May to mid-June gains in hog futures was quite possibly speculation that export volumes will continue to gain as China/Hong Kong have expanded their purchases of U.S. pork this year. Through April 2016 pork exports have been at par with 2015 levels (table 1). Year-to-date pork exports by volume have been down significantly to South Korea (down 34%), Taiwan (down 34%), Colombia (down 27%), and Mexico (down 8%) and down slightly to Japan (1%) and Canada (1%). However, significant year-to-date improvements have been made in exports to countries with the potential for explosive growth. Namely, exports have been up 178% to Mainland China and up 61% to Hong Kong.

Table 1. U.S. Pork Exports, Carcass Weight Equivalent, Monthly*

	Apr-16/ Mar-16	Apr-16/ Apr-15	Year-to-Date	
Country	**Percent**	**Percent**	**1,000 lbs**	**Percent**
Japan	-12%	-28%	-5,005	-1%
Mexico	3%	-6%	-40,558	-8%
Canada	-17%	5%	-893	-1%
South Korea	-22%	-46%	-80,748	-34%
China (Mainland)	10%	94%	108,474	178%
Hong Kong	4%	97%	20,335	61%
Australia	1%	-31%	3,318	6%
Philippines	-32%	-44%	1,770	10%
China (Taiwan)	-31%	-49%	-2,890	-34%
Honduras	18%	21%	4,981	26%
Colombia	19%	-24%	-10,890	-27%
Dominican Republic	3%	-8%	797	3%
Guatemala	-2%	8%	2,533	22%
Chile	-33%	8%	-172	-2%
New Zealand	-24%	-50%	1,378	28%
Others	8%	4%	1,841	4%
Total	-5%	-11%	4,271	0.3%

*Volume excluding by-products & variety meats
Data source: USDA-ERS calculations using data from U.S. Department of Commerce, Bureau of the Census.

In opposition, the latest weekly export numbers to China have been somewhat underwhelming to expectations, which likely played a role in market participants' view of the lower price potential for the second half of the year. It is important to keep in mind that U.S. pork supplies remain plentiful and futures prices could react quite negatively to any potential signs of faltering demand.

The challenge, as usual, is to recognize sort term seasonal fluctuations with shifts in supply and demand that could extend well into the next few quarters.

For shifts in supply it is prudent to examine any changes in inventory position. Table 2 provides a summary of the June 1, 2016 hogs and pigs estimates.

From producer surveys, USDA tallied the June 1 inventories of all hogs and pigs and market hogs both record large for the month of June. Not all that surprising given inventories have broken records the past several quarters. However, what was surprising was that pre-report expectations called for an even to 1% year-over-year increase while final estimates came in 1% to 2% above year ago levels.

Table 2. USDA Quarterly Hogs and Pigs Report Summary

	United States				Iowa		
	2015	2016	2016 as % of '15		2015	2016	2016 as % of '15
Jun 1 inventory *							
All hogs and pigs	67,165	68,381	101.8		21,000	20,600	98.1
Kept for breeding	5,926	5,979	100.9		1,000	970	97.0
Market	61,240	62,402	101.9		20,000	19,630	98.2
Under 50 lbs	19,365	19,846	102.5		5,070	5,180	102.2
50-119 lbs	17,461	17,848	102.2		6,410	6,300	98.3
120-179 lbs	12,985	13,141	101.2		4,820	4,760	98.8
180 lbs and over	11,429	11,566	101.2		3,700	3,390	91.6
Sows farrowing **							
Dec - Feb [1]	2,895	2,873	99.2		510	490	96.1
Mar - May	2,854	2,896	101.5		495	485	98.0
Jun - Aug [2]	3,017	2,949	97.7		510	500	98.0
Sep - Nov [2]	2,929	2,896	98.9		530	495	93.4
Mar - May pigs per litter	10.37	10.48	101.1		10.60	10.90	102.8
Mar - May pig crop *	29,593	30,347	102.5		5,247	5,287	100.8

Full report: http://usda.mannlib.cornell.edu/usda/current/HogsPigs/HogsPigs-06-24-2016.pdf.
* 1,000 head, **1,000 litters, [1] December preceding year; [2] 2016 intentions.

The current inventory of pigs less than 50 pounds was up 2.5% and the inventory of pigs 50 to 119 pounds was up 2.2% compared to a year ago. Pig inventory weighing 120 to 179 pounds was up 1.2% while inventory weighing 180 pounds and over was down 1.2%.

The fact that slaughter is expected to be around 1% to 3% higher than one year ago is key considering that last year markets had trouble absorbing +2.4 million hogs/week. Especially for several weeks in a row. Figure 2 highlights the departure from the 5-yr average and 2014 levels that last year represented.

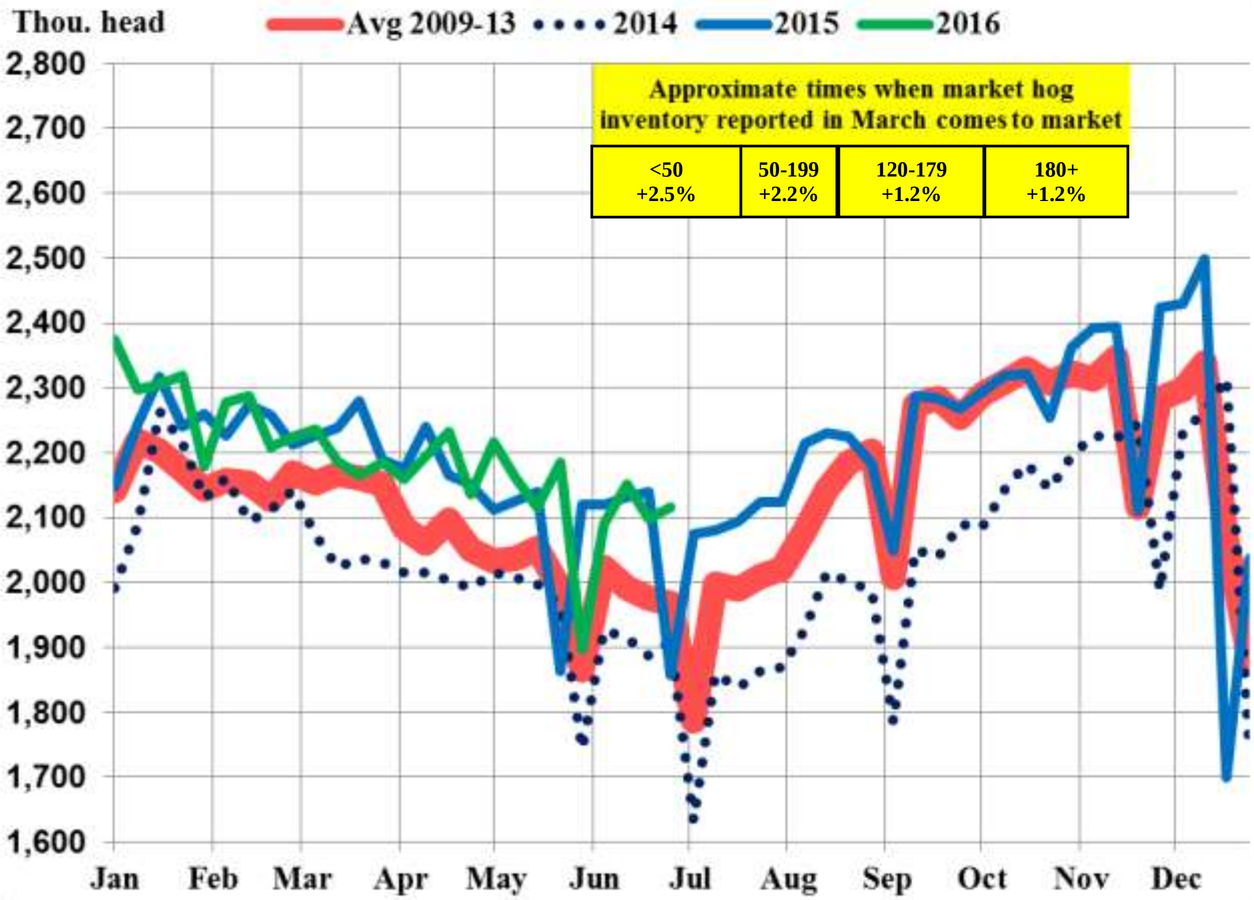
The challenge for pork producers the rest of this year will be in managing marketings. If space is available, producers may find it profitable to feed hogs to heavier weights given the favorable hog to feed price ratio. However, the concern over large slaughter runs and a fixed slaughter capacity going into October, November and December means the industry must remain current on slaughter inventory so that more market hogs do not get pushed into peak slaughter weeks.

In the event that there are weeks where there are more hogs out there than U.S. packers are able to harvest, prices will most certainly fall precipitously. Playing catch-up is not a position the market wants to be in.

With the possibility of significant price drops during certain weeks throughout the third and fourth quarters, taking price protection at current prices is advised.

Even though late-summer and fall and winter bets are now a bit more bearish, the market still remains guardedly optimistic regarding pork demand in the months ahead. Pork still remains competitively priced in the retail meat case. Plus, there is hope for strong export demand, especially after the recent boost in exports to China/Hong Kong. Demand is and will continue to be key to price potential. Strong demand will be needed as market hog inventories suggest summer-forward hog slaughter to be around 1% to 3% above year ago levels.

Figure 2. Hog Slaughter, Federally Inspected, Weekly



Data source: USDA-AMS.

Commercial slaughter and price forecasts

Table 3 contains the Iowa State University price forecasts for the next four quarters and the quarterly average futures prices based on July 1, 2016 settlement prices. The futures price forecasts are adjusted for a historic Iowa/Southern Minnesota basis. The table also contains the projected year over year changes in commercial hog slaughter. Taking the report as is, using pig crop numbers for December-February and March-May and farrowing intentions for June-August and September-November with commensurate pigs saved per litter to project supplies, expect hog slaughter in 2016.Q3 to be up 1.98%, 2016.Q4 slaughter to be up 1.63%, 2017.Q1 slaughter to be up 0.15%, and 2017.Q2 slaughter to be up 0.79% compared to previous year levels.

Table 3. Commercial Hog Slaughter Projections and Lean Hog Price Forecasts, 2016-17

	Year-over-Year Change In Commercial Hog Slaughter (percent)	ISU Model Price Forecast ($/cwt)	CME Futures (7/1/16) Adjusted for Negotiated IA/So MN Basis ($/cwt)
Jul-Sep 2016	1.98	75-79	77.91
Oct-Dec 2016	1.63	62-66	65.09
Jan-Mar 2017	0.15	63-67	65.57
Apr-Jun 2017	0.79	70-74	73.13

Lee Schulz

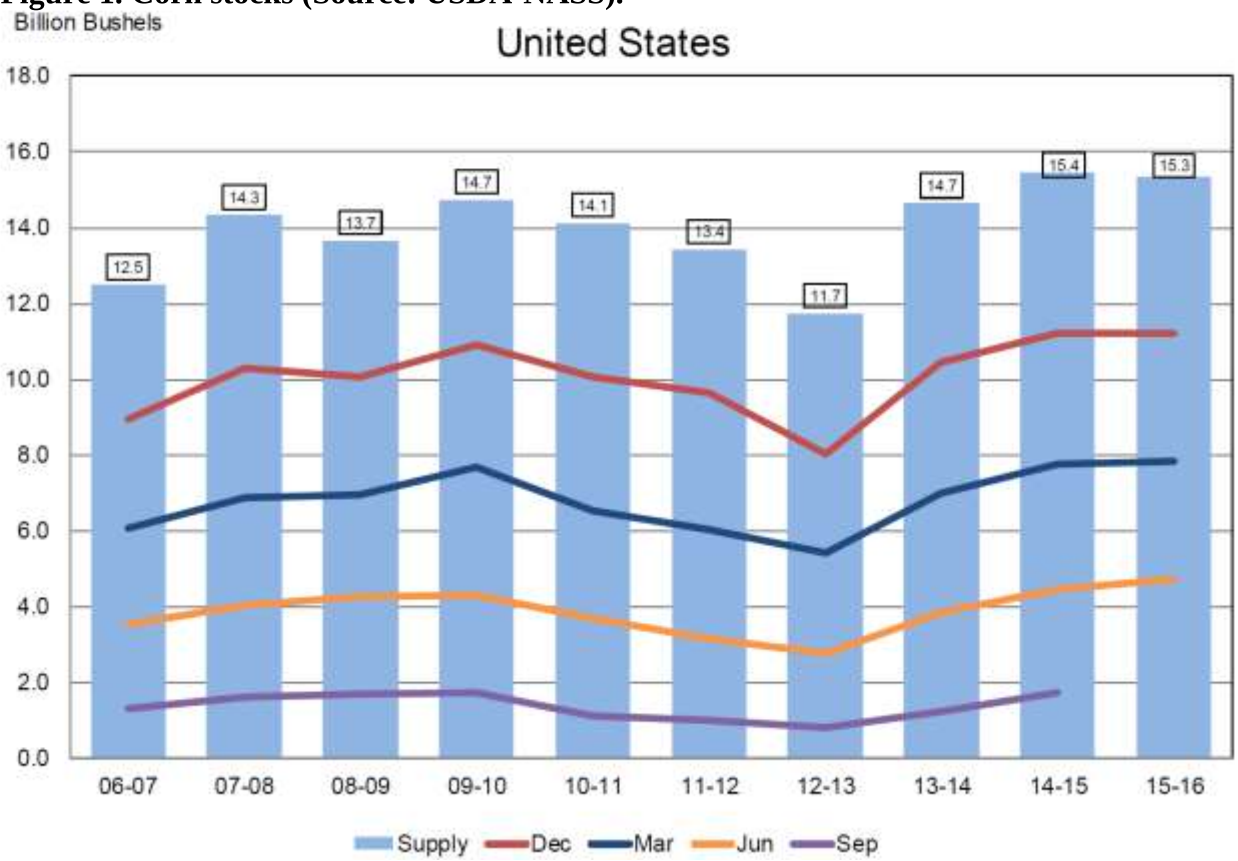
Plenty of Acres Planted

June ended with the release of USDA's acreage and stocks reports. And the supply numbers continue to head higher. Crop stocks were higher than they were a year ago. And crop acreage exceeded last year's levels as well. This news slammed the brakes on the corn rally, but soybean prices have held up fairly well. Given the acreage, U.S. production is still on course for the largest corn crop and 3rd largest soybean crop ever. But weather conditions have been just fickle enough, with too much rain in some areas and too little rain in others, raise concern about production prospects. Based on the crop condition reports, both crops still have a good chance at trendline or better yields.

Looking at the crops in the bins, USDA found significantly more crop being stored again, in a similar pattern to last year. Over 4.7 billion bushels of corn were still in storage June 1st. For soybeans, there were 870 million bushels on hand. That's a 39 percent increase for soybeans. For both crops, the storage increase is for both on- and off-farm storage. So the stocks report again confirms sizable inventories on the farm. Farmers are holding more crop at this time of year than usual, although hopefully a good chunk of it moved with the June price run. On-farm corn stocks are up 9% from last year. On-farm soybean stocks are up 14% from last year.

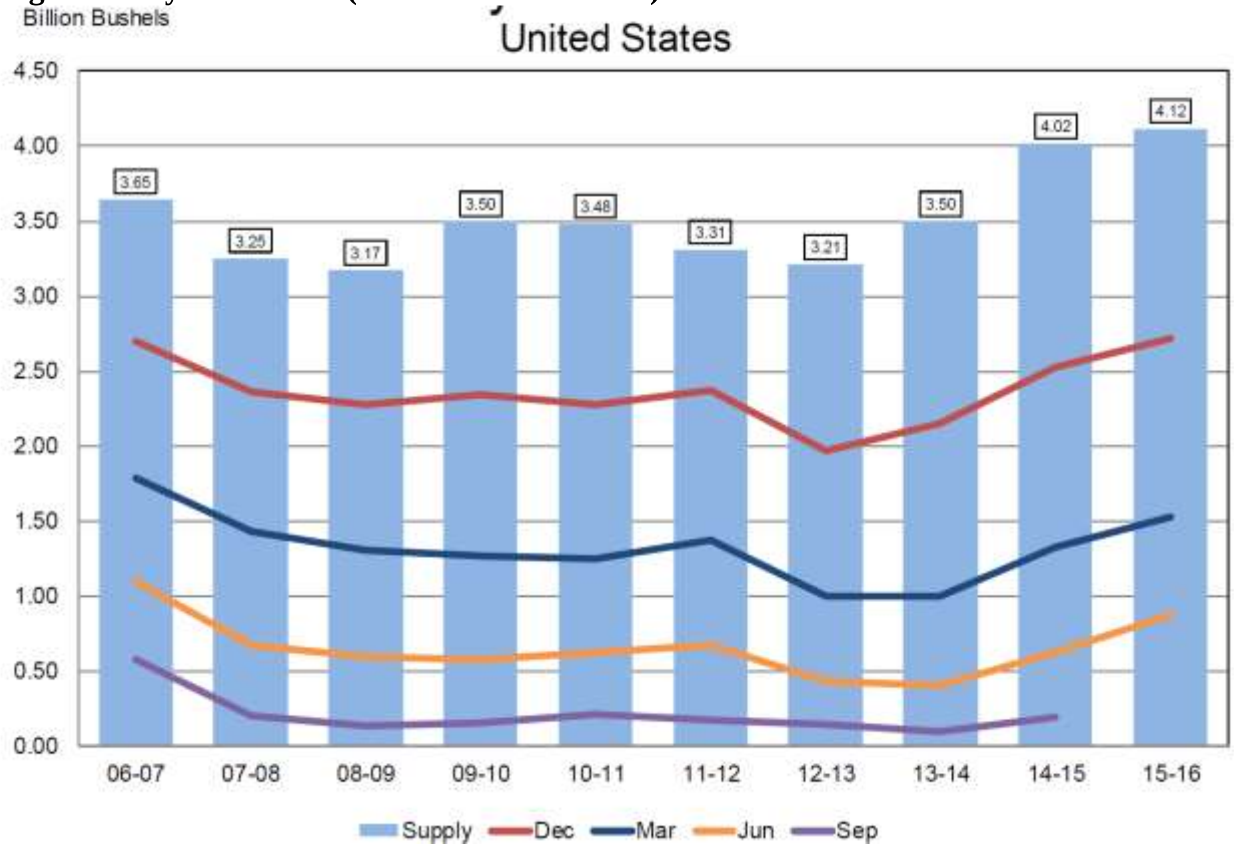
Looking at the demand side of the stocks report, disappearance was down for both crops. Corn disappearance during the March-May period was 3.1 billion bushels. Year-over-year, corn disappearance is down 6%. Soybean disappearance during the March-May period was 661 million bushels. That is 5% below last year. So the 3rd quarter of the marketing year was not very strong from an overall demand perspective.

Figure 1. Corn stocks (Source: USDA-NASS).



The state level stock data reflects the stronger production in the northern and western Corn Belt. Corn stock levels fell in Illinois and the states east of there. Iowa still had over 1 billion bushels of corn in storage. And there are many more bushels of corn remaining in the Great Plains. Soybean stocks are up across the board. The only state with fewer beans in storage is Kansas. Illinois, Iowa, and Minnesota each have over 100,000 bushels of soybeans still in the bin as of June 1.

Figure 2. Soybean stocks (Source: USDA-NASS).



The acreage report showed there was plenty of land to go around this spring. Corn plantings increased by 6.15 million acres and as figure 3 shows, the increase is from almost everywhere. The largest shifts are in the Plains, as North Dakota added 750,000 acres and Kansas added 650,000 acres. 17 states increased corn area by at least 100,000 acres. Only New Hampshire and Connecticut reduced corn plantings. Iowa farmers planted 500,000 more acres to corn to reach 14 million acres across the state. The 94.1 million acres is the 3rd highest since World War II, only trailing the totals from 2012 and 2013. Given USDA's trendline yield of 168 bushels per acre, the acreage leads to a projected production of 14.5 billion bushels. That would top the previous production record of 14.2 billion bushels set in 2014.

Soybean area increased by one million acres. The Southeast shifted some of last year's soybean area to corn and cotton, while the Corn Belt and Plains brought more land into soybean production. Missouri basically represented the national increase as producers there added one million acres, filling in the acre gap from last year's prevented planting. Michigan, Minnesota, New York, North Dakota, Ohio, Pennsylvania, and Wisconsin all set soybean planting records. So soybean area growth continues to march to the north. Iowa producers reduced soybean acres by 150,000. While the soybean acreage is a record, projected production is only the 3rd largest. Given the trendline yield of 46.7 bushels per acre, production would be 3.87 billion bushels, trailing production from the last two years.

Before the release of these reports, USDA had set price projections for the 2016 crops of $3.50 per bushel for corn and $9.50 per bushel for soybean. And for most of June, the markets had marched significantly higher. But the week before the reports, both crops suffered pricing setbacks. After the reports, corn continued downward, while soybeans bounced back. Based on futures at the close of July 1, the markets pointed to a season-average prices for 2016/17 corn of $3.46 per bushel, just below USDA's projection. Corn in the 2017/18 marketing year is pricing in $3.70 range. The markets project a 2016/17 season-average price of $10.66 per bushel. That's a buck above USDA's projection. But soybean prices take a step back for the 2017/18 marketing year with prices in the $9.35 range.

Figure 3. Corn acreage (Source: USDA-NASS).

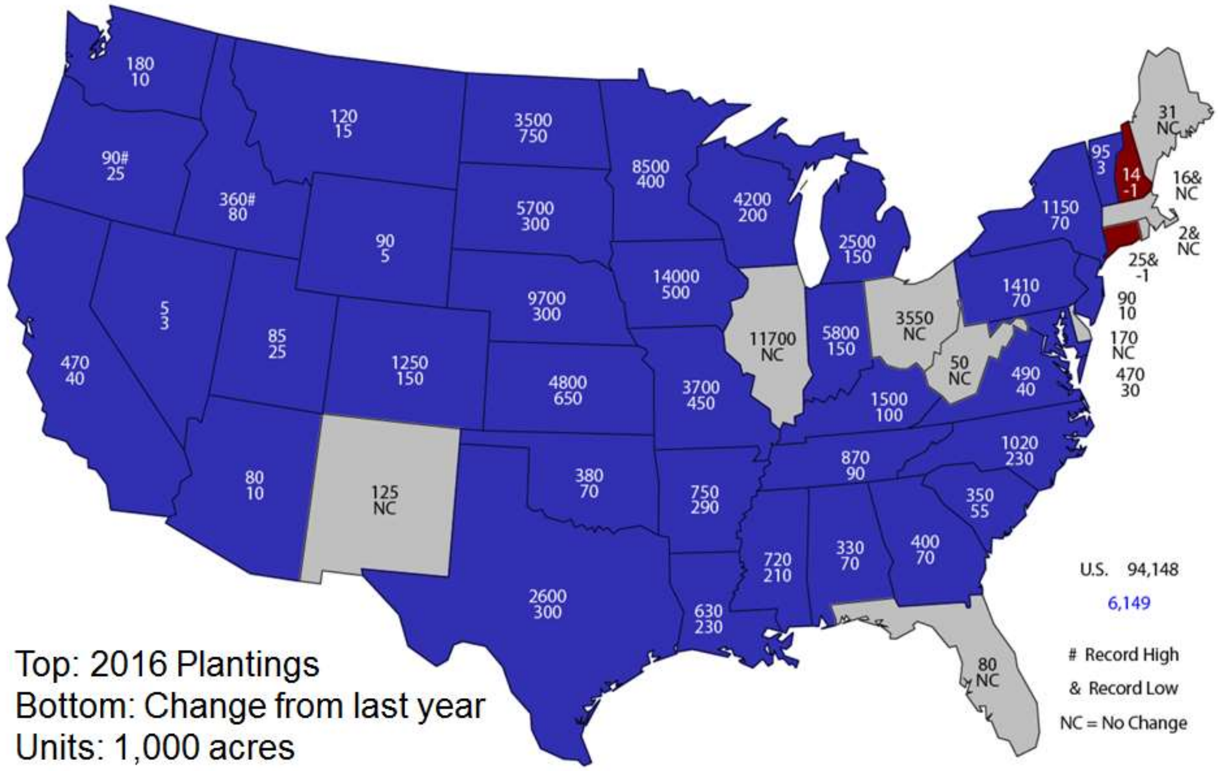
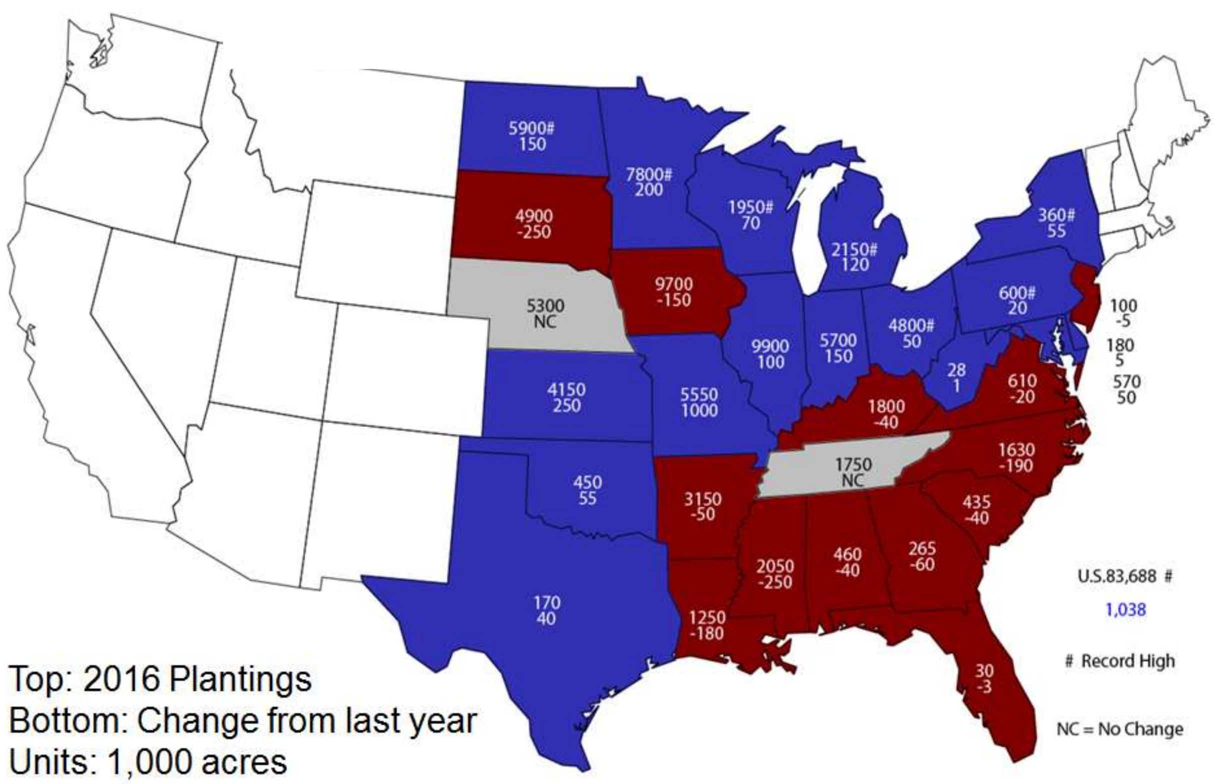


Figure 4. Soybean acreage (Source: USDA-NASS).



Soybean margins have improved to near breakeven for the 2016/17 marketing year. But corn margins shrank from near breakeven to over $100 below costs. So 2016 remains a challenging year. Further price improvement will likely depend on worsening crop conditions.

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