

Iowa Farm Outlook

Department of Economics
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Recent Developments in Hogs Markets

From producer surveys USDA tallied the March 1, 2016 all hogs and pigs inventory at 67.644 million, record large for the quarter and up 0.4% compared to last year. Larger than expected recent hog slaughter prompted USDA to revise 2015 hog numbers upward. More Canadian feeder pigs and market hogs continuing to cross the border also swell inventories and production.

USDA pegged the March 1 market hog inventory at 61.664 million, up 0.4% from a year earlier. The 5.980 million head breeding herd was down 0.03%. Table 1 provides a summary of the March 1, 2016 hogs and pigs estimates for the United States.

Table 1. USDA Quarterly Hogs and Pigs Report Summary for the United States

	2013	2014	2015	2016	2016 as % of '13	2016 as % of '14	2016 as % of '15
Mar 1 inventory *							
All hogs and pigs	65,072	61,494	67,399	67,644	104.0	110.0	100.4
Kept for breeding	5,836	5,851	5,982	5,980	102.5	102.2	99.97
Market	59,236	55,643	61,418	61,664	104.1	110.8	100.4
Under 50 lbs	18,852	17,336	19,454	19,382	102.8	111.8	99.6
50-119 lbs	16,251	15,487	17,129	17,263	106.2	111.5	100.8
120-179 lbs	13,169	12,538	13,580	13,744	104.4	109.6	101.2
180 lbs and over	10,965	10,281	11,255	11,274	102.8	109.7	100.2
Sows farrowing **							
Dec-Feb¹	2,788	2,763	2,895	2,873	103.0	104.0	99.2
Mar-May²	2,806	2,810	2,854	2,839	101.2	101.0	99.5
Jun-Aug²	2,809	2,991	3,017	2,912	103.7	97.4	96.5
Pigs saved per litter							
Dec-Feb¹	10.08	9.53	10.23	10.30	102.2	108.1	100.7
Pig crop *							
Dec-Feb¹	28,099	26,326	29,627	29,582	105.3	112.4	99.8

Full report: <http://usda.mannlib.cornell.edu/usda/current/HogsPigs/HogsPigs-03-25-2016.pdf>.

* 1,000 head, **1,000 litters, ¹ December preceding year; ² 2016 intentions.

Revisions complicate interpreting the report

USDA significantly revised previous inventory estimates to align them with final pig crop, official slaughter, death loss and updated import and export data. Several factors contribute to errors in estimates. One is fallout from Porcine Epidemic Diarrhea Virus. Another is a turning point transition to expansion in response to profits. A third is USDA attempting to reconcile earlier estimates as actual and confirming production data flows in.

December slaughter was up 5.2% year-over-year, January slaughter was down just 0.2% and February slaughter was up 3.9%. Collectively, December-February slaughter was up 2.9%.

In December, USDA estimated the June-August 2015 pig crop up only 0.6% from the previous year. The continuing large slaughter runs prompted USDA to revise the pig crop upward by 755,000 hogs (+2.5%). More

hogs than expected are coming from somewhere. Controversy exists over whether they're coming from more sows farrowing than get tallied or larger than currently estimated litter sizes.

Both sow farrowings and litter size will drive spring and summer pig crops. March-May 2016 sows farrowing intention, at 2.839 million sows, are down 0.5% compared to 2015. The June-August 2016 sows farrowing intention, at 2.912 million sows are down 3.5% compared to a year ago and down 2.6% compared to two years ago. The percentage dip in June-August farrowing intentions appears big. But remember, producers upped 2014 farrowings to offset expected PEDV losses and did again in 2015 to chase profits.

Even with a conservative growth factor, of say 1% in litter size, these farrowing intentions suggest pig crops in the next two quarters will remain rather large, suggesting fall-winter slaughter will also remain large.

Last year slaughter during one week in December peaked at 2.5 million head. The market will be keenly watching March-May and June-August farrowing rate and litter size to gauge what's in store this fall and winter.

The bottom line—continuing large pork supplies are favorable for U.S. consumers, but will likely begin to pressure profits for U.S. producers, especially in the latter part of 2016. Overall, 2016 still looks to be a profitable year, using a combination of cash sales and hedging opportunities, for hog production.

Rising feeder pig imports add complexity

Imported feeder pigs work hand in glove with U.S. herd numbers to impact production and prices.

USDA asks producers for all pigs that are on U.S. farms as of the survey date regardless of the origin of the pigs. That means imported feeder pigs have always been included in U.S. head counts for at least one, possibly two quarters. (A 10 to 12 pound pig should take 5 to 6 months and a 40-pound pig should take 4 to 5 months to reach slaughter weight.)

Imports of Canadian feeder pigs surged 10.2% or 394,863 head in 2015. Through mid-March imports were up 104,409 head or 11.9%. The market is striving to determine implications of "more than normal" feeder pig imports on hog inventories, slaughter levels and prices. An extra 400,000 hogs are about one day's slaughter, which is not a lot. But when supplies are large, it doesn't take a lot to pressure prices.

Several factors fuel the Canadian feeder pig import surge. One is demand. Low feed prices and profitable lean hog prices boost interest in finishing hogs in the U.S.

A second reason is the strong U.S. dollar relative to Canadian currency. Canadian producers want to sell pigs to U.S. producers because of the favorable exchange rate.

A third reason is the growing Canadian herd. The January 1, 2016 Canadian all hogs and pigs inventory was estimated at 13.260 million hogs (+0.7% compared to January 1, 2015), 12,022 million market hogs (+0.6%), and 1.238 million breeding hogs (+1.6%).

Supply and demand fundamentals appear to be in place to keep pulling more Canadian born feeder pigs into the U.S. for the next few years.

Commercial slaughter and price forecasts

Table 2 contains the Iowa State University price forecasts for the next four quarters and the quarterly average futures prices based on March 24, 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 September-November and December-February and farrowing intentions for March-May and June-August with commensurate pigs saved per litter to project supplies, expect hog slaughter in 2016.Q2 to be up 0.44%, 2016.Q3 slaughter to be up 0.99%, 2016.Q4 slaughter to be up 0.92%, and 2017.Q1 slaughter to be up 0.38% compared to previous year levels.

Table 2. 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 (3/24/16) Adjusted for Negotiated IA/So MN Basis (\$/cwt)
Apr-Jun 2016	0.44	72-76	73.96
Jul-Sep 2016	0.99	73-77	74.19
Oct-Dec 2016	0.92	62-66	63.40
Jan-Mar 2017	0.38	61-65	63.41

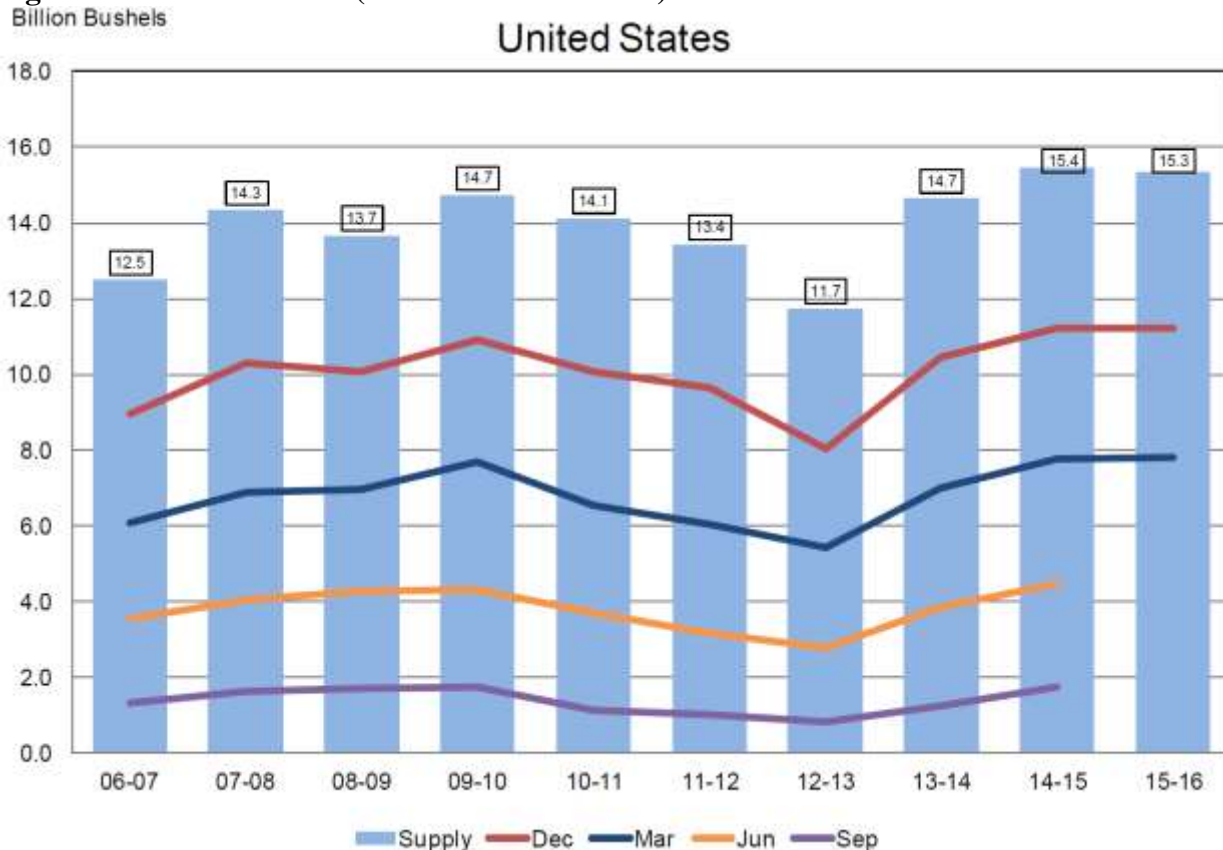
Lee Schulz

Plans for a Whole Lot of Corn

The end of March is an active time for the crop markets and USDA. It's when we get our first look at the 2016 crop year from the producers' perspective with the release of USDA's Prospective Plantings report. We also receive an update on demand via USDA's Grain Stocks report. And as we typically see, these reports contained a few surprises to mull over as planting approaches, mainly for new crop prospects.

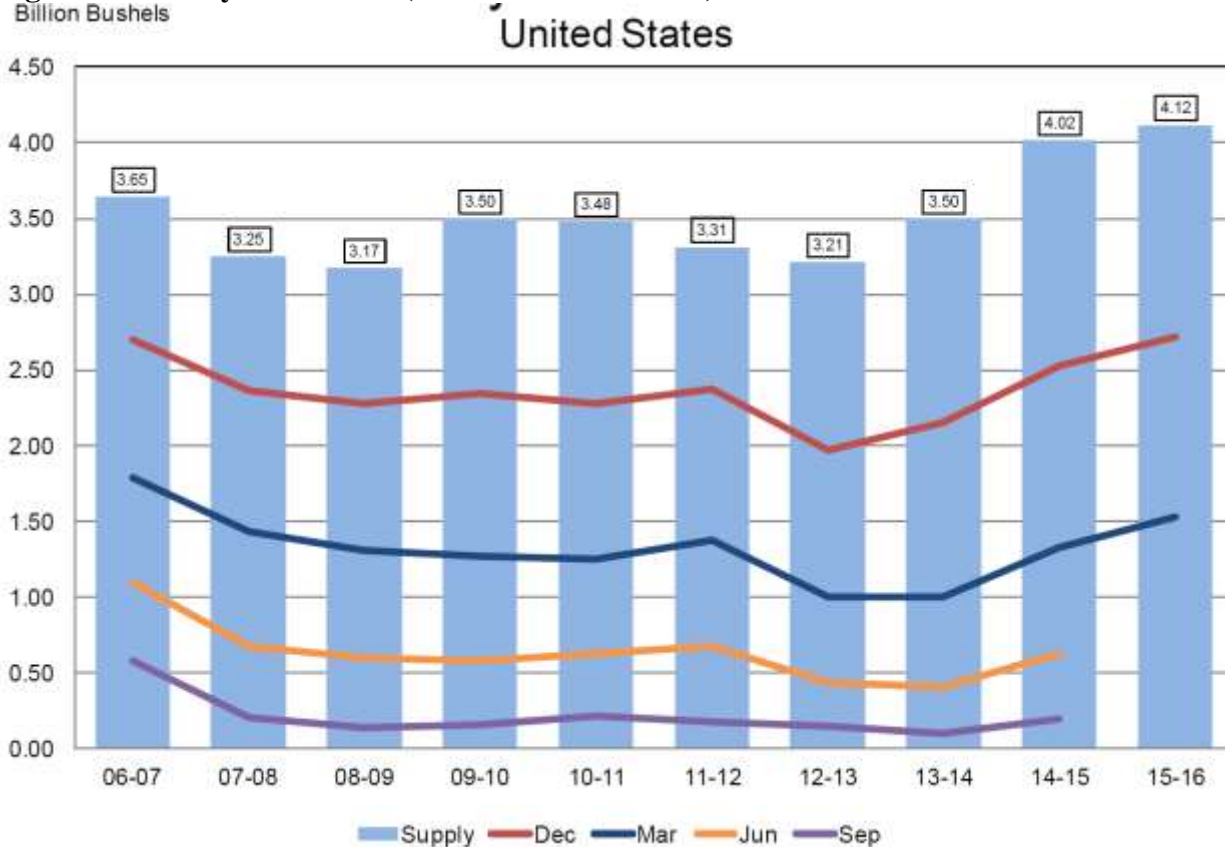
Starting with the stocks/demand picture, the trade estimates going into the stocks report were fairly close to the USDA numbers. As of March 1, 7.81 billion bushels of corn were being held in storage. That's 1% higher than last year at this time. Quarterly corn disappearance for the December-February time frame was 3.43 billion bushels, slightly lower than last year. Overall corn demand and usage has been relatively stable. Corn usage for ethanol has continued at near record levels. Meanwhile, corn exports over the quarter matched last year's pace. The state-level stocks pattern follows the yield pattern from last fall. The states that had record high yields in the fall experienced the largest jumps in corn still held in storage.

Figure 1. U.S. corn stocks (Source: USDA-NASS).



Soybean stocks came in at 1.5 billion bushels, up 15% from last year. That is the highest soybean stock number for March since the 2006/07 crop. And those increased soy stocks are well distributed across the country. Quarterly soybean disappearance for the December-February time frame was 1.18 billion bushels, 1% lower than last year. As with corn, export demand over the winter quarter kept pace with last year. So the build-up of soybean stocks has more to do with supply than demand. In total, old crop usage turned up to be in line with expectations.

Figure 2. U.S. soybean stocks (Source: USDA-NASS).



That's not the case with plantings and the potential for new crop production. The biggest discrepancies between trade expectations and the planting report were for corn and wheat. Projected corn plantings came in at 93.6 million acres. The trade expectation was roughly 90 million. So prospective corn plantings are 3.6 million above expectations and 5.6 million above last year. Meanwhile, projected wheat area dropped to 49.6 million acres, roughly 2 million below expectations and 5 million below last year. So there was plenty of land available for the corn expansion. Over the past 4 years, corn has given up nearly 10 million acres, dropping from 97.3 million acres in 2013 to 88 million last year. The survey results from the Prospective Plantings report show that U.S. producers are headed, weather permitting, back to corn. And weather permitting may be the key. Over the past 20 years, the corn planted acres estimate from the report has exceeded the actual plantings 13 times. Farmers tend to overestimate how many acres they will plant to corn and weather conditions tend to push producers to plant other crops.

Looking at specific state projections, the boost in corn area is coming mostly from the Great Plains and Corn Belt. The largest moves are in Kansas and North Dakota, adding 650,000 acres each, as traditional wheat area heads to corn production. Illinois and Iowa are adding 400,000 corn acres each this year. Out of the 48 states listed in the corn table, only 7 are projected to have fewer corn acres than last year, with the largest reduction being 20,000 acres.

Soybean planted area was down to 82.2 million acres, which was 800,000 less than expectations and 450,000 below last year. And over the past 20 years, the soybean planting estimate misses as often below as above. However, the average difference between the March estimate and the final planting number is 1.29 million acres (for comparison, the average difference for corn is 1.04 million acres). So there can still be significant

movement in soybean acres. The soybean planting story hinges mainly on Missouri. Missouri farmers indicated they would plant nearly one million more acres of soybeans this year, following the planting issues they had last year. Illinois and North Dakota are projected to gain significant soybean area as well. However, many states (including Iowa) are projected to lower soybean plantings. Iowa and 9 other states are set to reduce soybean plantings by at least 100,000 acres each. Hence, despite the strong surge in area from Missouri, the national soybean planting area is projected to decline.

Figure 3. U.S. projected corn acreage (Source: USDA-NASS).

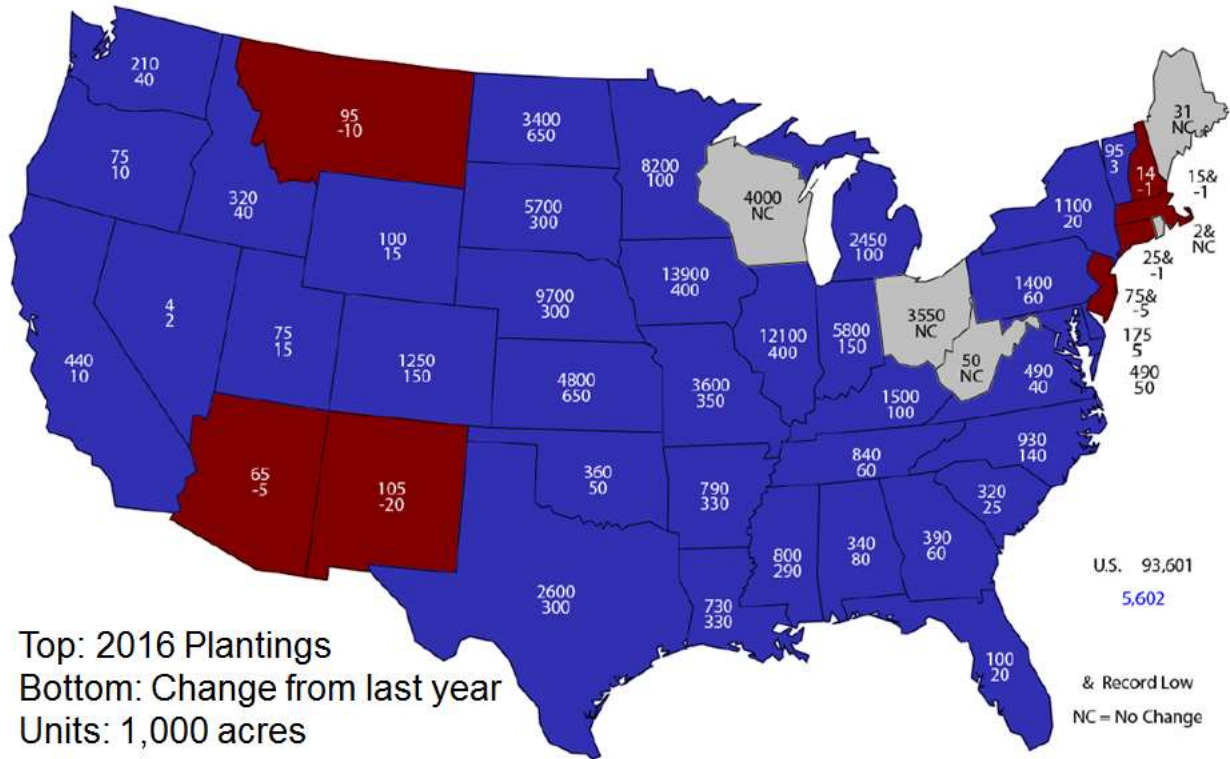
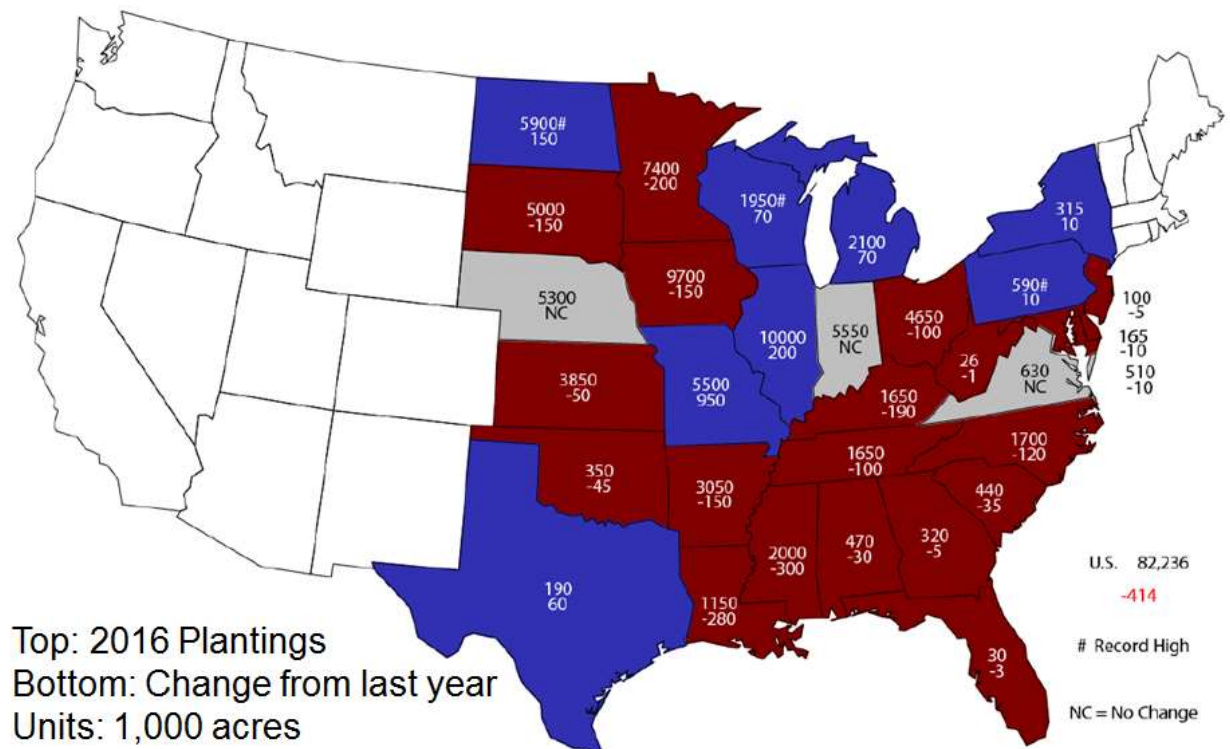
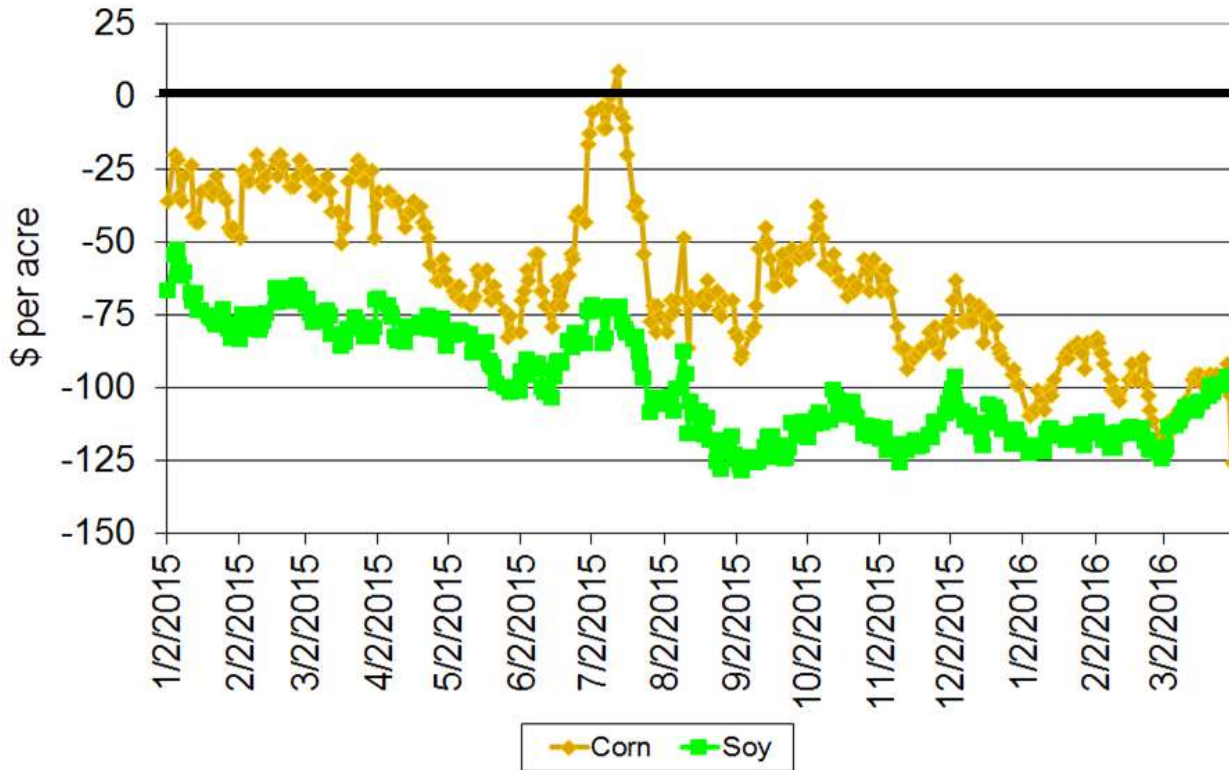


Figure 4. U.S. projected soybean acreage (Source: USDA-NASS).



Given trend yields of 168 bushels per acre for corn and 46.7 bushels per acre for soybeans, the projected acreage points to another round of massive crops. Corn production would reach 14.38 billion bushels, which would be another record corn crop. Soybean production would approach 3.8 billion bushels, which would be the 3rd largest soybean crop in history. And for markets already dealing with large supplies, these prospective plantings do not help. So the markets will be looking for Mother Nature to slow the supply train down.

Figure 5. 2015 projected crop margins.



The markets reacted swiftly to the reports. Corn prices moved down sizably, while soybean prices held firm. As the margin graph shows, the price movements eliminated corn's margin advantage and put soybeans in a relatively more favorable pricing position. Based on the futures prices at the close of trade on March 31, estimates for the season-average prices stood at \$3.48 per bushel for corn and \$8.79 per bushel for soybeans. Compared to last year at this time, corn is down roughly 40 cents, while soybeans are off 60 cents.

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