IOWA STATE UNIVERSITY
Extension and Outreach

# Iowa Farm Outlook

Department of Economics
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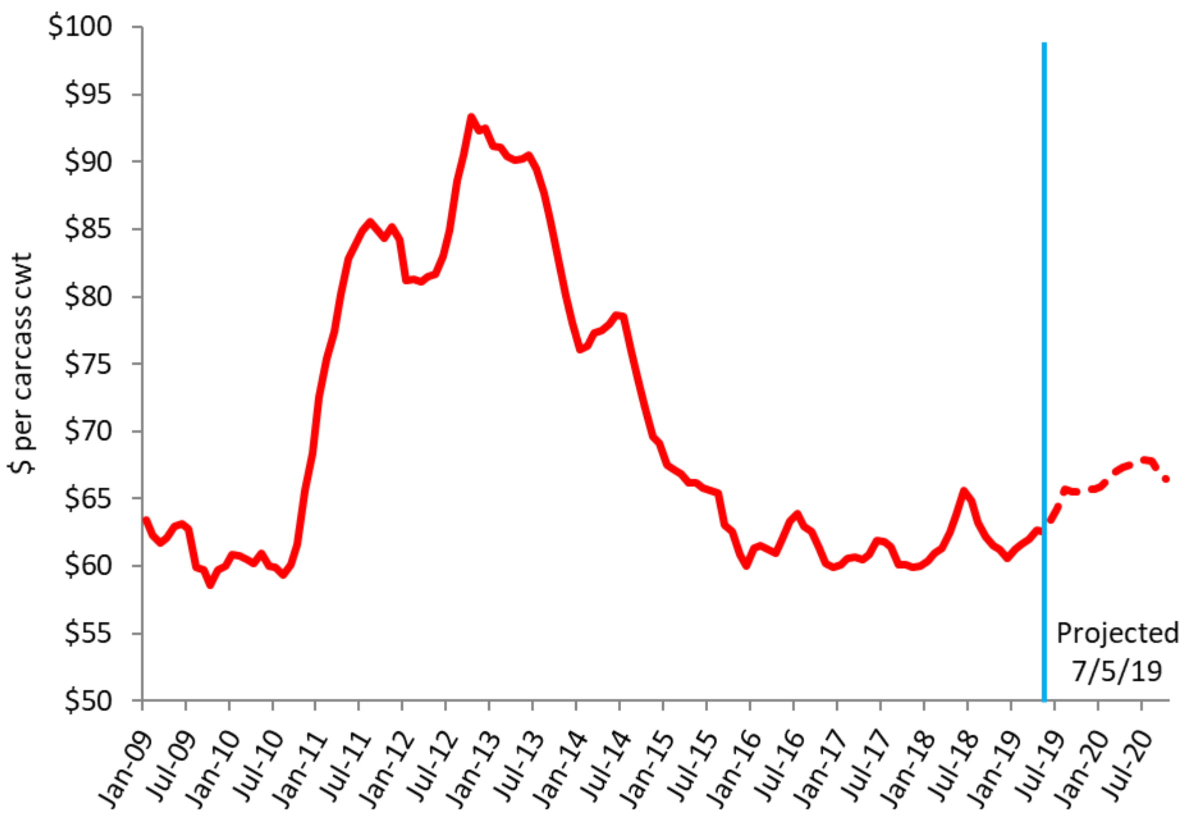
## Slaughter Surge Prompts USDA to Revise Hog Inventory Estimates

Even with rising corn prices, pork producers remain optimistic about future profits. What's the evidence? For USDA's June Hogs and Pigs Report producers reported farrowing intentions on par with year-earlier actual sows farrowing, which were the largest ever. If realized, any increases in litter rates will continue to set pig crop records.

As the saying goes, make hay while the sun shines. Hog futures contracts offer profits at today's costs and expected future costs. Iowa State University projections for farrow to finish breakevens are in the mid-$60 per carcass cwt range from now through most of 2020 (Figure 1). The latest hog and pig numbers suggest producers are taking advantage of this opportunity while it lasts.

**Figure 1. Breakeven Costs—Farrow to Finish, Iowa**




Source: Iowa State University Estimated Livestock Returns – Farrow to Finish. Projections use basis adjusted futures prices.

Still, any additional rise in already large domestic supplies could skim the cream off expected future pork profits, even without trade disruptions. Grain prices and the export market are relatively unknowns at this point, which analysts and producers alike, may have a better idea on in the next few months.

USDA conducts the survey of hog producers early in the month that a quarterly report is to be released. Producers are asked for inventory levels as of the first of the month. They are also asked their farrowing levels for the previous quarter and farrowing intentions over the next two quarters. The farrowing intention numbers have variability associated with them because the sows have not yet given birth and production and market price risks may alter farrowing intentions.

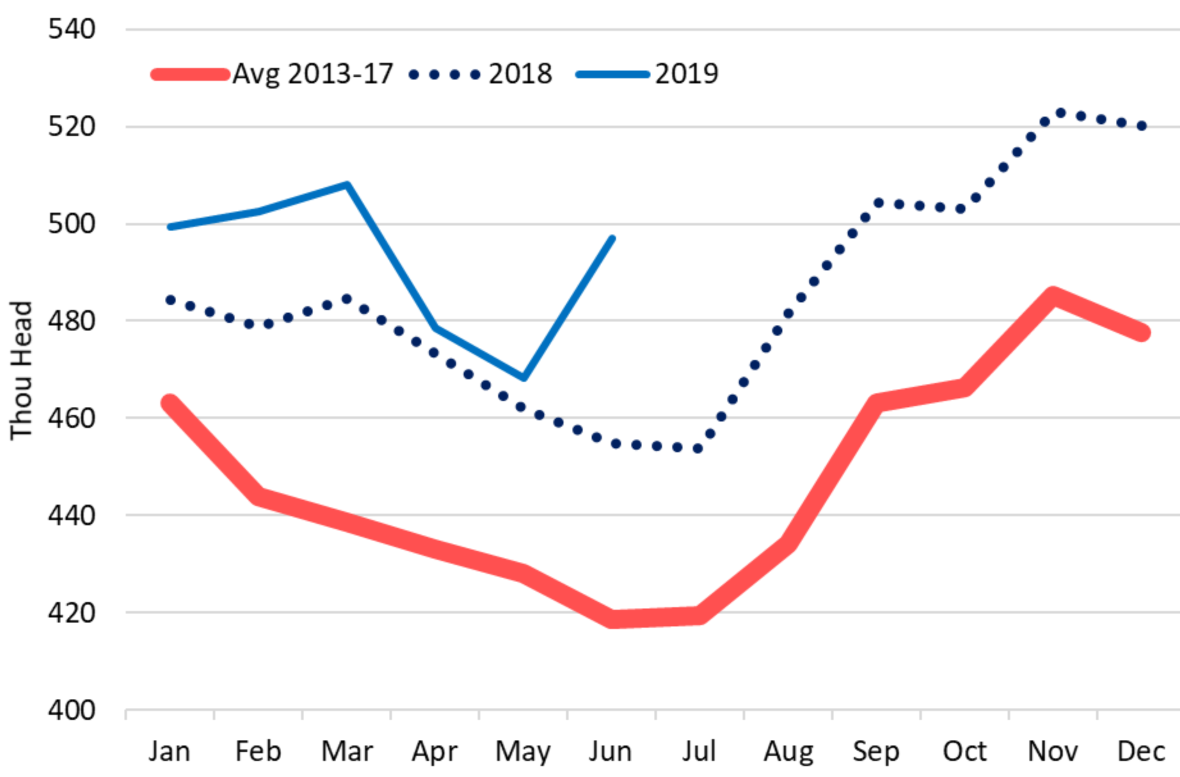
Given the sustained drop seen this summer in cash prices being down over $4 per cwt since the first week of June, as well as pressure on deferred futures month contracts, some cutbacks in sows farrowing could be in the offing. However, the sow herd was larger in the latest report, which means future farrowings could be larger.

*Surprise June slaughter surge*

Federally inspected hog slaughter in May was 10.302 million head, 1.4% higher than a year ago. Daily hog slaughter averaged 468,286 head (note that Saturday and holiday slaughter was added to regular business day slaughter), also 1.4% higher than a year ago (Figure 2). This was the smallest average daily slaughter of the year so far. It was expected to decline seasonally in June.

However, June average daily hog slaughter, at 496,866 head, was up 9.2% from 2018 and well above average daily slaughter in May. That's based on actual daily slaughter through June 22 and estimated daily slaughter through the end of the month. This was the first time June average daily hog slaughter was above May since 2010 and before that 2005.

**Figure 2. Federally Inspected Hog Slaughter**
Daily Average, By Month




Data Source: USDA's National Agricultural Statistics Service.

A 4-week rolling average of pork production under federal inspection, covering the four slaughter weeks in June, was estimated at 517.4 million pounds. This was 53.4 million pounds or 11.5% higher than a year ago. This was by far the largest weekly supply of pork in the month of June. The increase resulted from larger slaughter and heavier carcass weights. June hog carcass weights were estimated at 213 pounds, 5 pounds or 2.2% higher than in June 2018. The rise in June hog carcass weights likely resulted from lower than expected slaughter during May as some packing plants were idled in early May for operational reasons, which may have backed up hog slaughter for many weeks. Cooler temperatures in May and early June in many of the major hog producing regions also likely helped hike weights through better than expected performance.

The encouragement of a premium in summer futures contracts may have impacted market timing too. When the May lean hog futures contract expired on May 14th at $83.550 per cwt, June lean hog futures were trading $5.575 higher than the May contract. That day the July contract was $6.500 over May. Futures signaling higher cash prices coming could have enticed producers to delay some marketings. Nearby corn futures prices didn't top $4 per bushel until May 24th, so feed costs remained relatively low for recent marketing turns. The expectation of more profit for more pounds was short-lived as hog prices quickly fell in June to average below $80 per cwt.

Several production related factors certainly helped drive June's slaughter surge. But, hog slaughter during June was also much higher than expected based on the March Hogs and Pigs report. So, USDA revising previous inventory estimates upward could not be ruled out. And USDA did.

In the June Hogs and Pigs report, released June 27, USDA estimated the June 1 market hog inventory up 3.9% from June 1, 2018 (Table 1). The bulk of the increase was in the heavier-weight categories. The 180 pounds and over category was pegged at 7.5% larger, 2.9 percentage points higher than the pre-report estimates. That difference would at once make one a bit suspicious of the report, but does compare favorably with actual June slaughter. It's important to remember that analysts use prior quarterly hogs and pigs reports, especially the most recent one, as a reference starting point when making pre-report estimates.

USDA correctly revised the data reported in March to account for the major underestimation of hogs targeted to be slaughtered during June. Relationships between pig crops and subsequent slaughter can be used as a guide to forecast slaughter numbers. Generally, pigs are slaughtered about six months or two quarters after being farrowed. The September-November 2018 pig crop was revised up 177,000 pigs or 0.5%. The revised larger pig crop suggests a larger April-June 2019 slaughter.

*More hogs likely to keep coming*

USDA's latest report indicates that June's unanticipated surge in slaughter could persist for the remainder of 2019. The number of market hogs weighing 120 to 179 pounds, which provide the animals harvested roughly mid-July through mid-August, was 3.1% above a year ago. Hogs weighing 50 to 119 pounds were 2.7% higher, which align with larger mid-August through September slaughter. December 2018-February 2019 pig crop was revised up a whopping 428,000 pigs or 1.3%. The larger pig crop would suggest a larger July-September 2019 slaughter than was previously expected.

The March-May pig crop, at 3.7% above a year ago, was one of the very big surprise numbers in the latest report and changes our view regarding fourth quarter supplies. The trade had expected about 380,000 fewer pigs this spring due to smaller expected growth for pigs saved per litter. March-May sows farrowing were only 0.3% larger than a year ago and 1.4 percentage points below pre-report expectations. But the March-May litter rate came in 3.5% higher than a year ago and 2.7 percentage points above trade expectations, indicating that renewed productivity growth is still occurring. Further, the pace of that growth is apparently increasing.

The 3.5% year over year growth in litter size is the largest since 2014, when litter rates were recovering from 2013's PEDV suppressed rates. Withstanding those annual growth rates, the 3.5% year over year hike is the third largest in the history of the data back to 1970. Average March-May litter size of 11.0 pigs per litter was a new record high for the U.S. South Dakota was highest at 11.95, followed by Minnesota at 11.85, Nebraska at 11.50, and Iowa at 11.45.

The monthly numbers suggest March saw a 0.26 pig annual increase, April a 0.49 pig increase, and May a 0.36 pig increase or 2.5%, 4.7%, and 3.3%, respectively. According to Dr. Bob Morrison's Swine Health Monitoring Project, with its nearly 3 million sow sample or 46% of the national herd, this year has been one of the lowest years, by a large margin, of PRRS incidence. The report dates back to July 1, 2009. April was a particularly low month for PRRS incidence and aligns with the large spike in pigs saved per litter reported by USDA.

**Table 1. USDA Quarterly Hogs and Pigs Report Summary**

| | U.S. | | | | Iowa | | |
|---|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2019 as % of '18 | | 2018 | 2019 | 2019 as % of '18 |
| June 1 inventory * | | | | | | | |
| All hogs and pigs | 72,866 | 75,520 | 103.6 | | 22,600 | 23,700 | 104.9 |
| Kept for breeding | 6,320 | 6,410 | 101.4 | | 1,040 | 1,000 | 96.2 |
| Market | 66,546 | 69,111 | 103.9 | | 21,560 | 22,700 | 105.3 |
| Under 50 lbs | 21,327 | 22,019 | 103.2 | | 5,560 | 5,850 | 105.2 |
| 50-119 lbs | 19,083 | 19,606 | 102.7 | | 7,080 | 7,450 | 105.2 |
| 120-179 lbs | 13,988 | 14,427 | 103.1 | | 5,200 | 5,400 | 103.8 |
| 180 lbs and over | 12,147 | 13,059 | 107.5 | | 3,720 | 4,000 | 107.5 |
| | | | | | | | |
| Sows farrowing ** | | | | | | | |
| Dec – Feb [1] | 3,034 | 3,123 | 102.9 | | 550 | 540 | 98.2 |
| Mar – May | 3,100 | 3,108 | 100.3 | | 560 | 520 | 92.9 |
| Jun – Aug [2] | 3,200 | 3,185 | 99.5 | | 580 | 525 | 90.5 |
| Sep – Nov [2] | 3,174 | 3,175 | 100.0 | | 560 | 550 | 98.2 |
| | | | | | | | |
| Mar – May pigs per litter | 10.63 | 11.00 | 103.5 | | 11.10 | 11.45 | 103.2 |
| | | | | | | | |
| Mar – Feb pig crop * | 32,942 | 34,177 | 103.7 | | 6,216 | 5,954 | 95.8 |

Full report: https://downloads.usda.library.cornell.edu/usda-esmis/files/rj430453j/3b591k937/5m60r2937/hgpg0619.pdf

* 1,000 head; **1,000 litters; [1] December preceding year; [2] intentions for 2019.

Every Friday USDA's Market News Service reports prices of 10-12 pound weaned pigs and 40 pound feeder pigs. The average open market delivered price for weaned pigs in March through May was $55.82 per pig, almost $18 higher than the same time last year. Likewise, the average delivered cash price of 40 pound pigs went from $69.76 per pig last spring to 83.63 per pig this spring, up almost $14. The sharp rise in both weaned and feeder pig prices certainly incentivizes advances in productivity.

*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 June 27, 2019 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.

**Table 2. Commercial Hog Slaughter Projections and Lean Hog Price Forecasts, 2019-20**

| | Year-over-Year Change In Commercial Hog Slaughter (percent) | ISU Model Price Forecast, Negotiated IA/So MN ($/cwt) | CME Futures (6/27/19) Adjusted for All Producer Sold Purchase Arrangements IA/So MN Basis ($/cwt) |
|---|---|---|---|
| Jul-Sep 2019 | 4.90 | 74-78 | 75.01 |
| Oct-Dec 2019 | 3.70 | 70-74 | 72.44 |
| Jan-Mar 2020 | 0.42 | 75-79 | 75.93 |
| Apr-Jun 2020 | 0.41 | 80-84 | 81.34 |

*Lee Schulz*

# A Reversal of Acreage

The Grain Stocks and Acreage reports released at the end of June are always highly anticipated by agricultural traders, perhaps no more so than this year. With the various trade issues still casting a shadow over exports, stock levels were expected to be larger than last year. However, the loss of some grain bins from flooding was also going to show up in this report. The flooding and generally wet conditions across the majority of the Corn Belt were also projected to be the major drivers for planted area, with the trade looking for significant reductions in plantings, most likely in corn. But much like a spring thunderstorm that pops up out of seemingly nowhere, the June reports surprised the markets and sent traders scrambling. The soybean market received a decent boost, while the corn market gave back some of its recent gains.

The Grain Stocks report turned out to be the milder of the two reports. Stock levels for both corn and soybeans were slightly below trade expectations. Corn stocks, as of June 1, came in at 5.2 billion bushels, down 2 percent from last year. A majority of the corn is being held on-farm, with on-farm stocks up 7 percent from last year. Meanwhile, off-farm corn stocks are down 12 percent. Corn disappearance during the March-May time period was slower than last year's pace, with 3.41 billion bushels being removed from storage. Last year, 3.59 billion bushels disappeared during the same months. Iowa and Minnesota saw the largest declines in corn stocks, while Illinois and Indiana experienced slight increases.

As with the last several stock reports, soybeans were expected to be in plentiful supply. National soybean stocks, as of June 1, stood at 1.79 billion bushels. That is 47 percent above last year and well above the amount the U.S. used to average for soybean stocks in December (2008-2016). Farmers nearly doubled the soybeans being held on-farm, with 730 million bushels still in farm bins. Off-farm soybean stocks are also up, by 26 percent. However, traders were expecting the rise in stock levels. It also helped that soybean disappearance was happening a bit faster this year. For the March-May time period, 937 million bushels of soybeans moved out of storage, up 5 percent from last year.

So while the Grain Stocks report provided a little bullish news, the Acreage report contained the larger surprises. The largest surprise was for corn, with planted area estimated to be 91.7 million acres, up 3 percent from 2018. Given the planting delays across the country and the June WASDE acreage estimate, traders were expecting corn area to be roughly 5 million acres lower. The March Prospective Plantings report had corn area at 92.8 million acres. The June WASDE report moved that down to 89.8 million. And now, we're at 91.7 million. Corn acreage is bouncing more than a basketball. A key piece in the Acreage report was the percentage of crops still to be planted after the survey (which was conducted May 30 to June 17). Normally, less than two percent of the corn crop is still to be planted. This year, the percentage is 16.7 percent. That implies that 15.3 million acres of corn was to be planted in mid-to-late June. Given this large percentage, USDA will be resurveying farmers in several states to update corn area in August.

Figure 1 shows the estimated corn area for this year and the comparison to last year. But I want to concentrate on the acreage shifts from March to June. In March, farmers indicated they would try to plant 92.8 million acres to corn. That dropped to 91.7 million acres in June. Given the wet conditions and flooding along the Mississippi and Missouri Rivers, we would expect those declines to be concentrated and they were. South Dakota farmers reported the largest change, with 1.2 million acres disappearing from corn. So the South Dakota shift was larger than the national shift. Illinois, Missouri, North Dakota, Ohio, and Wisconsin also reported corn acreage declines of, at least, 100,000 acres. Despite the flooding, Iowa corn area estimates held steady between March and June. The larger gains in corn area showed up in Kansas, Kentucky, Nebraska, and Tennessee.

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

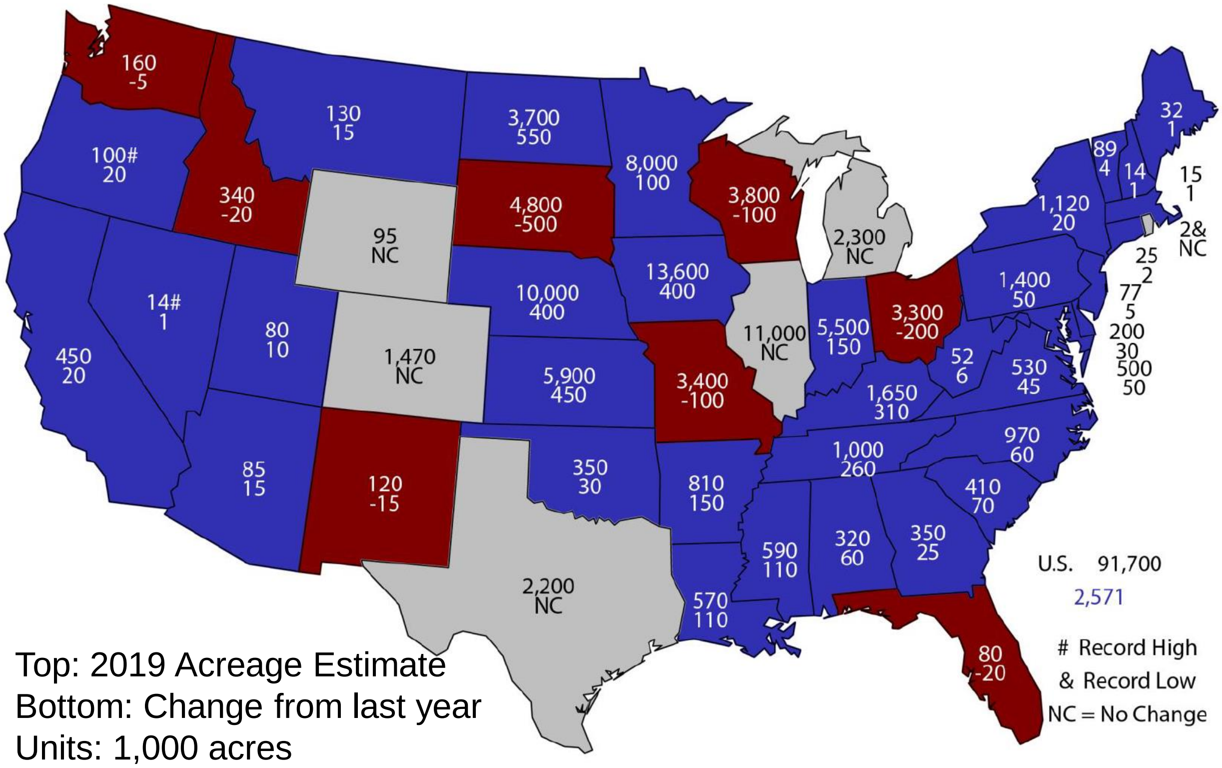
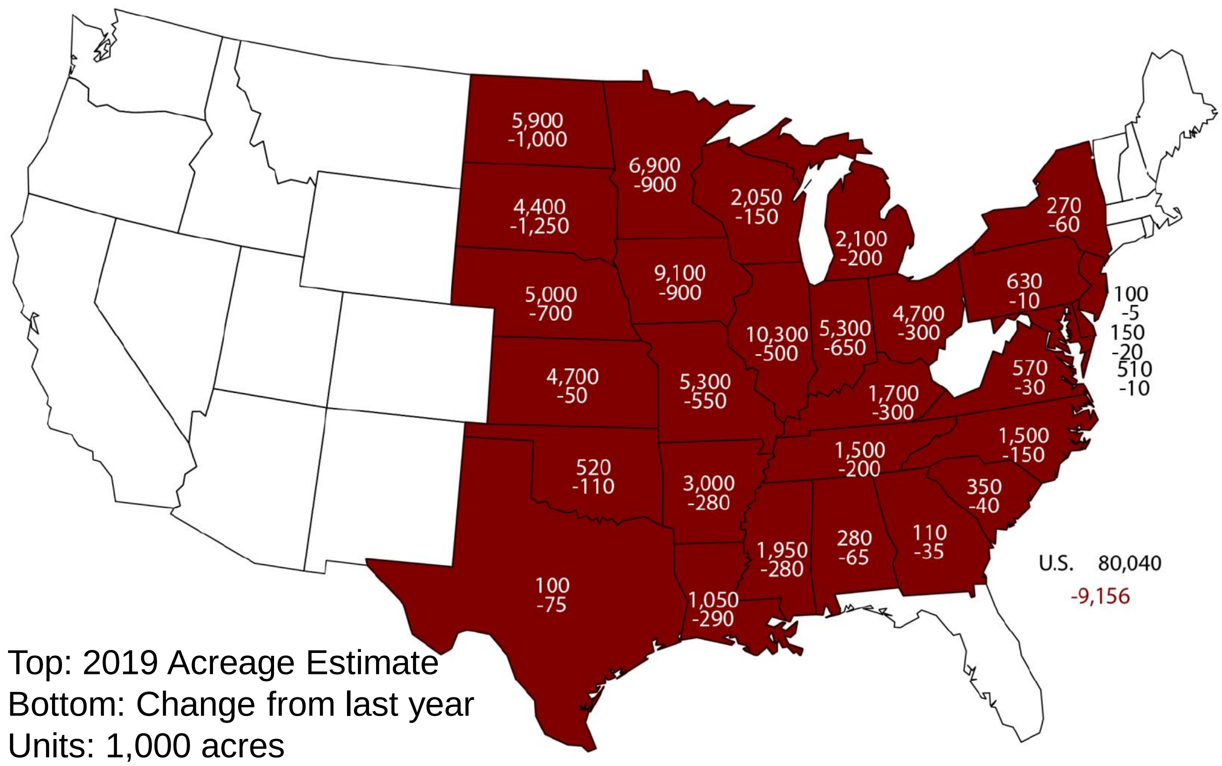



**Figure 2. U.S. soybean acreage (Source: USDA-NASS).**

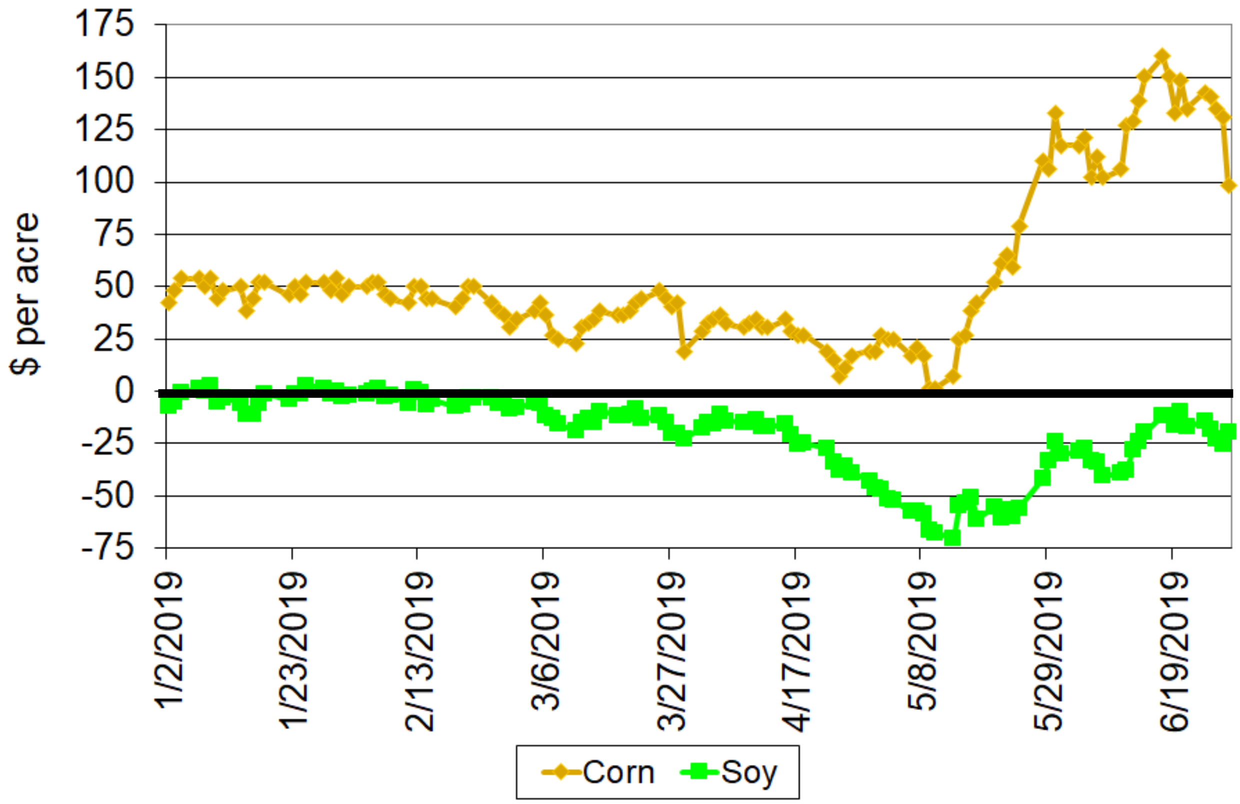



For soybeans, the acreage adjustments have continued to be in the same direction, down. Last year, U.S. farmers planted 89.2 million acres to soybeans. In March, they intended to plant 84.6 million acres to soybeans. And in June, they indicated that 80.0 million acres would be going into soybean production. As Figure 2 shows, that's a 9.2 million acre decline year-over-year. It's also a 4.6 million acre decline from March and it indicates that much of the prevented planting acres are coming out of soybeans. Traders had expected a number much closer to the March intentions. As with corn, a sizable portion, 41.2 percent, of this acreage had not been planted by survey time. That translates to roughly 33 million acres of soybeans to be planted in June and July. Given this, USDA will also resurvey several states for soybean plantings and report any changes in August.

Compared to the March intentions, only two states showed increases in soybean plantings, New Jersey and South Carolina. Four states held steady. The rest showed declines, with the largest shifts in the Dakotas, down 800,000 acres in South Dakota and 600,000 acres in North Dakota. Iowa was estimated to lose 300,000 soybean acres from the March intentions.

Once the reports were released, the market reaction was swift and decisive. Soybean prices rallied 10 cents per bushel, while corn prices fell 20 cents. As Figure 3 displays, the corn market had been on quite a run since early May. Corn prices had added a dollar per bushel over the course of a month. Meanwhile, soybean prices had staged a much smaller run. But even with the significant price adjustment after the reports, corn still maintains a sizable margin advantage.

**Figure 3. Projected crop margins for the 2019/20 crops.**




Based on the futures prices at the end of June, projected 2019/20 season-average prices stand at $4.24 per bushel for corn and $9.13 per bushel for soybeans. So the futures markets are offering sizable premiums when compared to USDA's current price projections of $3.80 for corn and $8.25 for soybeans. With the large drop in soybean area, I would expect USDA to increase their soybean price estimate in July, along with some large cuts to both the supply and demand sectors. The interesting question will be how the World Ag Outlook Board (the committee that puts together the WASDE report) approaches corn. The Board has already shown a willingness to deviate from NASS's estimates, on the basis of the delayed plantings. Will they do that again, given the large percentages of crops remained to be planted after NASS's June survey?

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