

Iowa Farm Outlook

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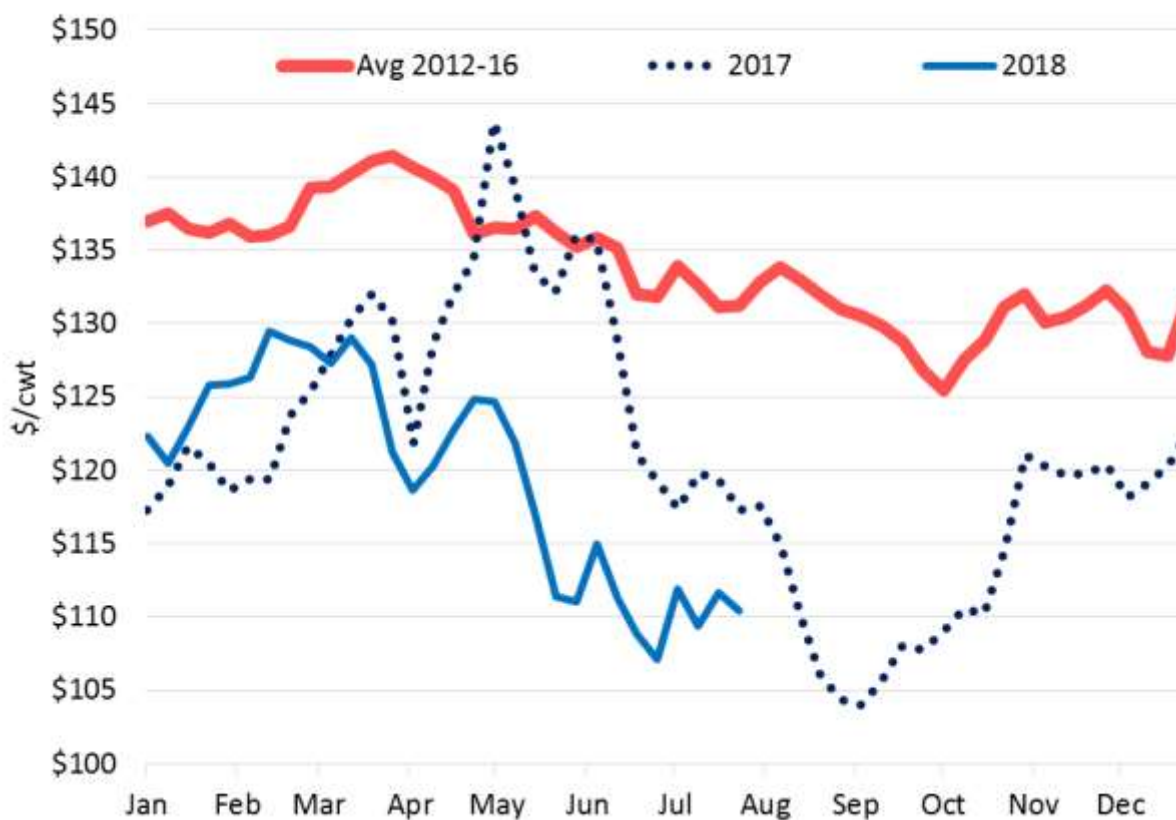
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Cattle Inventories Larger, Demand Remains Wildcard

Fed cattle prices started off the year strong and remained above year earlier levels through the first week of March, with Iowa-Minnesota prices averaging \$126/cwt and \$5/cwt higher than the same period in 2017 (Figure 1). Since then, fed steer prices have consistently fallen below levels observed a year earlier as prices averaged \$117/cwt during the April through June quarter, \$15/cwt lower than during 2017's second quarter. Fed cattle prices during July averaged \$111/cwt, \$8/cwt lower than in July 2017. March through mid-June 2017 fed cattle prices were very strong, so measuring from a higher base exaggerates some of the year over year decline.

Figure 1. Weekly Iowa-Minnesota Slaughter Steer Prices, Total All Grades



Data Source: USDA-AMS.

There are plenty of explanations for why fed cattle prices are now lower. On the supply side, more beef often means lower prices. Beef production follows closely trends in cattle slaughter, and slaughter has been above last year in five of the first six months of the year. Average daily cattle slaughter, which accounts for differences in days most slaughter plants are operational each month, averaged 1% larger during January through March. Slaughter pace, and beef production, picked up substantially during April and May as daily slaughter volume rose 7% and 6%, respectively, above a year earlier. Heavier weights pushed beef production up even more than slaughter volume as beef production rose 8% during April and 7% during May. June cattle slaughter and beef production was only up 0.7% and 0.9%, respectively, but July cattle slaughter was up about 6% with beef production likely to come in near that level once the data is released.

On the demand side, one possible explanation of lower cattle prices is that retail beef prices have not dropped enough to spur the added consumption that is required for the higher level of beef production. According to data provided by the Bureau of Labor Statistics and USDA, all fresh retail beef prices in the first half of 2018 were less than 1% lower than in the first half of 2017. Per capita consumption only increased 0.5% over this time period, likely not enough to offset the lower price that would be associated with a demand increase. Further reductions in retail prices will likely occur, and these lower prices can help support fed cattle prices. In the meantime, robust economic growth, rising incomes and wealth, and one of the lowest unemployment rates on record could help spur beef demand.

Exports have been a bright spot for beef demand this year. According to data released by USDA and compiled by the U.S. Meat Export Federation (USMEF) June 2018 beef muscle cut exports were up 15% by volume and 25% by value compared to June 2017. January through June beef muscle cut export volume was up 14% and value was up 23% compared to the first half of 2017. Beef variety meat exports make an important contribution to cattle carcass value as well. Those exports are down 4% by volume but still up 2% by value for the first half of the year. According to USMEF calculations, beef export value has averaged about \$318 per head of a slaughter steer.

One unknown hanging over the beef market is the impact of higher tariffs on beef muscle cut and offal exports which will be felt even more strongly in the second half of the year as tariffs on many products exported to China and Canada increased in early July. In 2017 11% of U.S. beef production was exported to all destinations. The largest U.S. beef customer in 2017 was Japan (29%) followed by South Korea (17%), Mexico (15%), Hong Kong (12%) and Canada (11%). Beef exports to South Korea are up a whopping 39% by volume and 55% by value year to date, surely buttressed by the successfully revised Korea-U.S. Free Trade Agreement (KORUS).

July is one of USDA's larger months for providing surveyed cattle numbers. The Cattle on Feed report and mid-year Cattle report provide updated information to use in projecting future cattle and beef supplies. The Cattle on Feed report tells about potential beef supplies in the next six months. Herd inventories revealed in the mid-year Cattle report have longer-term implications, say beef production in the next two years.

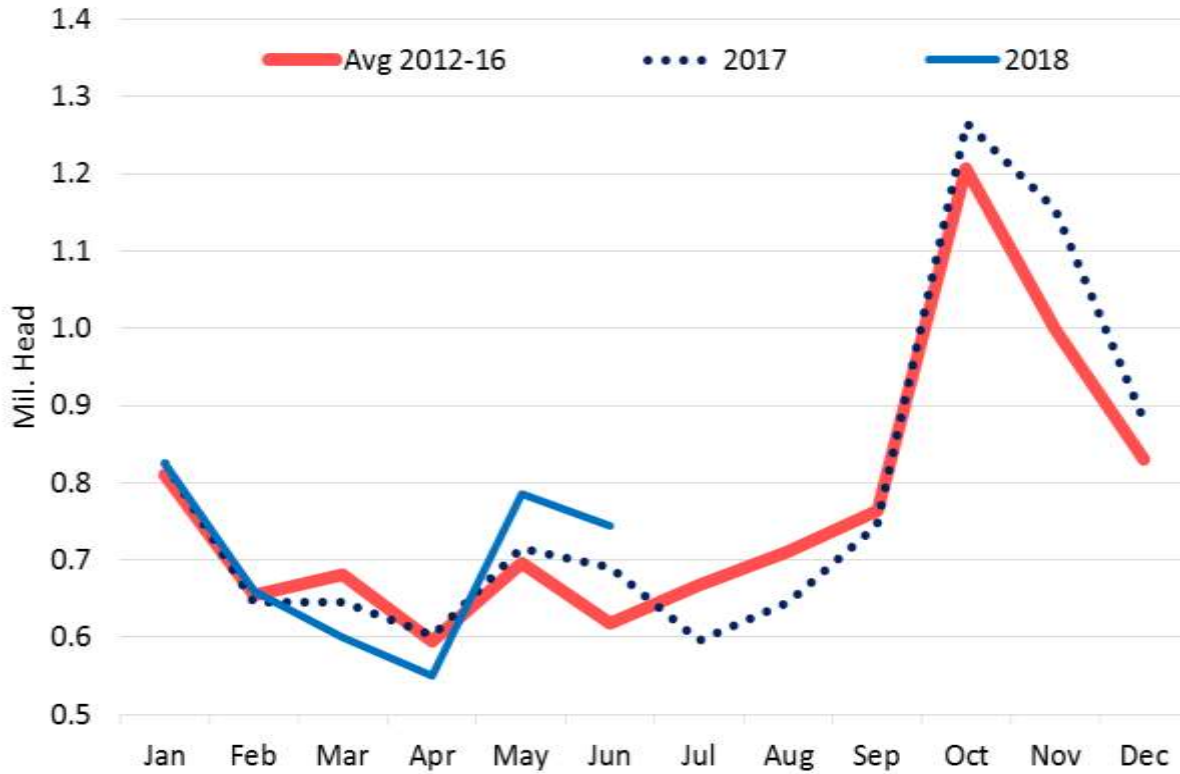
The Cattle on Feed report confirmed that the on-feed inventory continue to be larger than a year ago, as the inventory for feedlots with capacity of over 1,000 head was 4.3% larger on July 1, 2018 than a year ago. Marketings increased 0.9% in June versus a year earlier, while net placements (placements minus other disappearance) increased 1.2% compared to June 2017. Differences in regional supplies are readily apparent with feedlot inventories in Iowa, Nebraska, and South Dakota sustaining robust levels since the beginning of the year. Any currentness issues could be concentrated in this area. Marketings in July and August remain key and will be critical for cattle prices this fall.

Despite reported larger auction and direct trade volumes and more feeder cattle imports from Mexico and Canada, the modest increase in June feedlot placements reflects lower placements concentrated in the heavier weight categories partially offsetting larger placement volumes in lightweight categories. Placements of feeders under 600 pounds were up 6.7% year over year and placements at 600 to 699 pounds were up 9.5% (Figure 2). Placements of 700 to 799 pounds were down 10.5%. Placements over 800 pounds were up only 2.0% in June. Smaller heavy weight placements in March through June suggests tighter fed cattle supplies heading into late summer and fall, setting the stage for a possible price rebound from summer lows into the fall months. Live cattle futures are currently only pricing a \$2/cwt premium from the Aug to Oct contract. A \$5/cwt premium from the Aug to Dec contract.

Even more than fed cattle, prices for steer calves started the year off much stronger than in 2017, primarily because prices in 2017 were surprisingly weak. Prices for 500 to 600 pound steer calves in Iowa averaged \$185/cwt during the January through March quarter, \$27/cwt higher than a year earlier, before declining slightly during the second quarter to average \$177/cwt, only \$4/cwt lower than during April-June 2017 (Figure 3). Declines in corn prices have been supportive of prices for both calves and feeders this summer and are expected to remain supportive this fall. The futures markets are currently pricing in value for feeder cattle and calves,

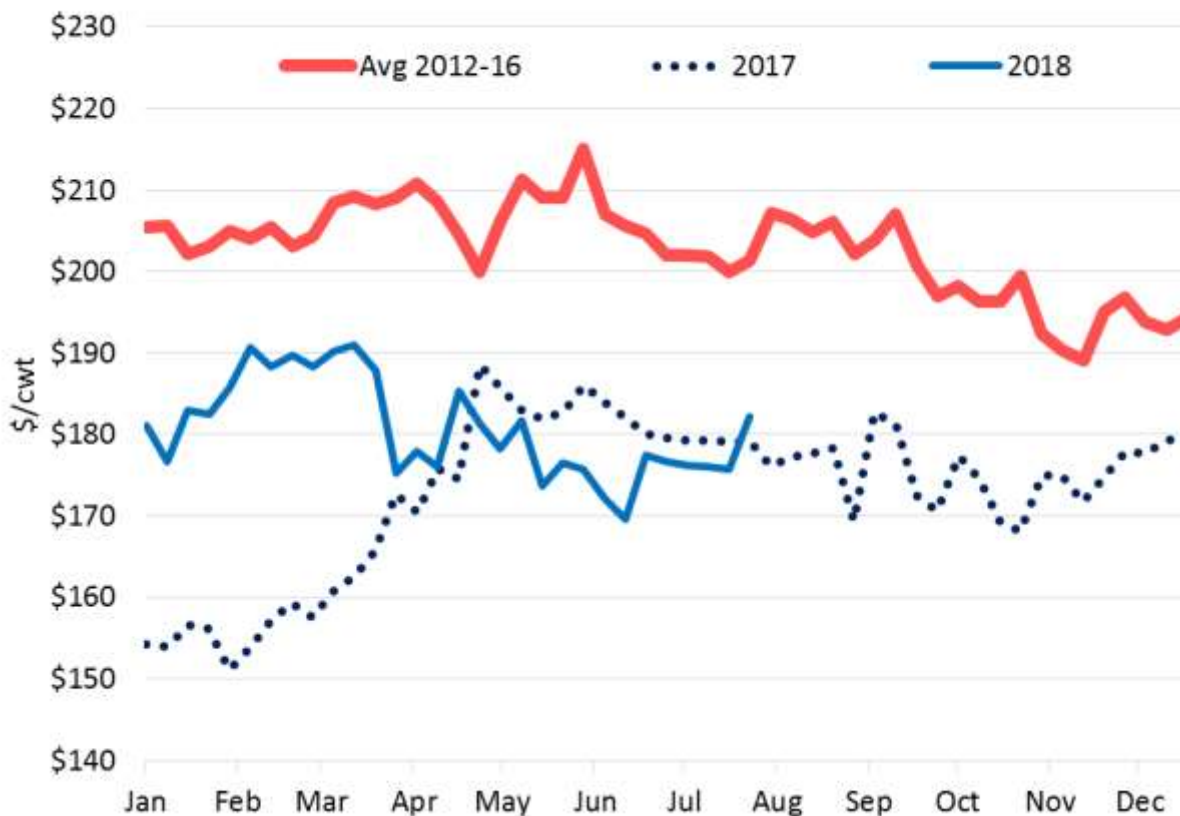
making it a good time to review options for offsetting risk and protecting value. Current calf and feeder cattle prices are well above breakeven prices suggested by cattle feeding margin projections.

Figure 2. Cattle Placed Weighing Less Than 700 Pounds
1,000+ Capacity Feedlots, U.S. Monthly



Data Source: USDA-NASS.

Figure 3. Weekly Iowa Med. & Lrg # Feeder Steer Prices, 500-600 lbs



Data Source: USDA-AMS.

One last important note regarding the Cattle on Feed report was the number of heifers on feed was as expected larger. The breakout of heifers and steers on feed is reported quarterly and goes back to 1996 in its current format. The number of heifers on feed on July 1 was up almost 8% over July 1, 2017. This was the second largest July number of heifers on feed behind only July 2001. Heifers not going into cow herds has boosted feeder cattle supply but doesn't appear to have had a noticeable impact on feeder markets.

The mid-year Cattle inventory report has been a casualty of budget pressures in recent years, is only a national sample, and analysts don't typically provide pre-report estimates so making comparisons is a little less insightful. Still, the report is important as it allows market participants to calibrate supply expectations for the next couple of years.

The report provides the first estimate of the nation's 2018 calf crop along with an update regarding how rapidly the U.S. cattle herd is increasing. Roughly three-quarters of the calf crop already hit the ground this spring, and the remainder will be born this fall. The July survey asks producers to report the calf crop for the entire year of 2018. The calf crop is expected to be 1.9% larger than in 2017 (Table 1). The increase in the calf crop implies that cattle slaughter should continue to increase for at least the next 18 to 24 months but the rate of increase will likely slow.

Table 1. Cattle Inventory by Class and Calf Crop

July 1 inventory *	2017	2018	2018 as % of 2017
Cattle and calves	102,200.0	103,200.0	101.0
Cows and heifers that calved	41,600.0	41,900.0	100.7
Beef cows	32,200.0	32,500.0	100.9
Milk cows	9,400.0	9,400.0	100.0
Heifers 500 pounds and over	16,200.0	16,300.0	100.6
For beef cow replacement	4,700.0	4,600.0	97.9
For milk cow replacement	4,200.0	4,200.0	100.0
Other heifers	7,300.0	7,500.0	102.7
Steers 500 pounds and over	14,500.0	14,500.0	100.0
Bulls 500 pounds and over	2,000.0	2,100.0	105.0
Calves under 500 pounds	27,900.0	28,400.0	101.8
Feeder cattle outside feedlots	36,900.0	37,100.0	100.5
Cattle on feed	12,800.0	13,300.0	103.9
Calf crop **	35,808.2	36,500.0	101.9

* 1,000 head, ** First half of 2018 estimate plus second half of 2018 expectations. Data Source: USDA-NASS. Full report: <http://usda.mannlib.cornell.edu/usda/current/Catt/Catt-07-20-2018.pdf>

It is unlikely any notable decisions regarding retention for breeding have been made for heifer calves that were born this year, but more heifers from last year's calf crop end up in the other heifer category, i.e., heifers not

intended for replacement and making their way through feedlots and slaughter channels, a trend which is likely to continue next year. Other heifers climbed 2.7% and congruently heifers for beef cow replacement fell 2.1%.

The July 1 inventory of steers and heifers outside of feedlots, those not included in the monthly Cattle on Feed report or in smaller feedlots, is estimated to have grown by 0.5% from the previous year. This is the largest number since 2010 but could have been larger. The relatively meager year over year increase underscores the lighter weight placements that have already been seen in the Cattle on Feed reports as of late. Many of these animals are already in the feedlot supply chain as of July 1.

The U.S. is slowly making its way out of this expansionary phase, although January 1, 2019 may still show an annual increase in all cattle and calves. The January 1, 2018 inventory was 94.4, about the same number as in 2009. The resulting beef production in 2009 was 25.9 billion pounds. In 2018, with about the same number of cattle, beef production forecasts are around 27.3 billion pounds. Cattle inventory cycles are seemingly getting shorter and flatter because we are getting more beef from about the same number of cattle.

Lee Schulz

Despite Weather Concerns, Still Looking at Large Crops

This year's seasonal price bump was cut short by a couple of factors. The trade disputes with China, Mexico, Canada, and the European Union have dimmed the prospects for export growth. And the run of strong productivity in Iowa's main crops seems to chugging right along. Despite flooding in the north and drought in the south, USDA's Crop Progress reports have shown crop ratings that are above average, leading to thoughts of another set of bumper crops. Last year's bumper crops led to this year's large supplies of unpriced corn and soybeans still in the bins (even after the 4th of July, eerily reminiscent of last year). With a lot of old crop still sitting in the countryside, crop supplies may be at record levels this fall. Large supplies and few trading partners is a recipe for another year of below breakeven pricing. The recently announced aid package, due to the trade disputes, will help fill in part of the margin gap, but 2018 is setting up to be another rough year in the crop markets.

Crop usage has been fairly strong, but cracks are showing in demand. The trade dispute has hit the pork industry hard, and the growth in the livestock sector is slowing because of it. A pullback in livestock means a pullback in feed usage. Corn exports for the 2017 crop should finish out at the 2nd highest level ever, but the projections for 2018 and beyond took several hits with the ongoing rounds of tariffs. USDA is still projecting substantial corn exports. However, the 2018 figure is set 175 million bushels below the 2017 total. Corn usage for ethanol is expected to grow for the 2018 crop, but that may also hinge on trade. For the past few years, ethanol exports have grown, pushing corn usage for biofuel to new heights. However, ethanol is also facing some pressure from the trade disputes. For soybeans, domestic crush is projected to increase slightly. Feed usage will hold the key to that projection. And the soybean export story is the same as for corn. The number I will watch most closely over the next couple of months is the soybean export estimate. USDA did reduce its projection, but I'm wondering if there is another reduction in the offing as the tariffs between the U.S. and China are fully brought into effect.

But crop usage is not the only thing driving crop prices generally lower this summer. As of Aug. 5th, 71% of the nation's corn crop and 67% of the nation's soybean crop was rated "Good" to "Excellent" in the USDA Crop Progress report. Those ratings are higher at this point in the year than we saw for last year's large crop. In comparison to the 5-year average, both crops have been more highly rated than the average pattern. Over the past few summers, I have used the late July crop conditions reports to project the size of the upcoming crops. And the projections this year show crops that are hovering just above the trendline. Figures 1 and 2 show the results of those projections for the upcoming harvest. In the figures, the smooth green line represents the 30-year trend for yields, the blue line with diamonds provides the actual yields since 1986, and the red line with squares shows the projected yields based on the crop conditions.

Figure 1. Corn yield projection, based on crop conditions.

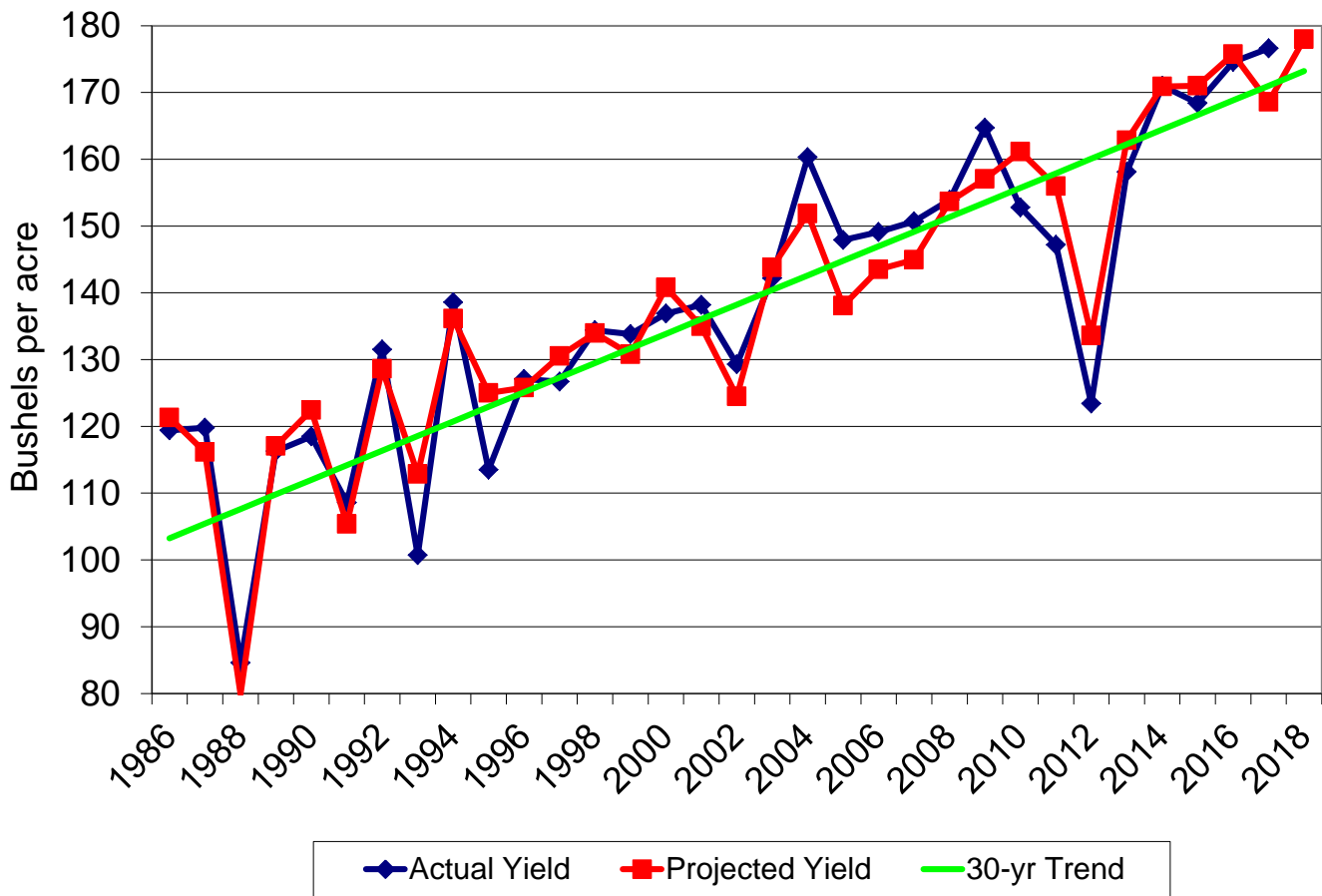
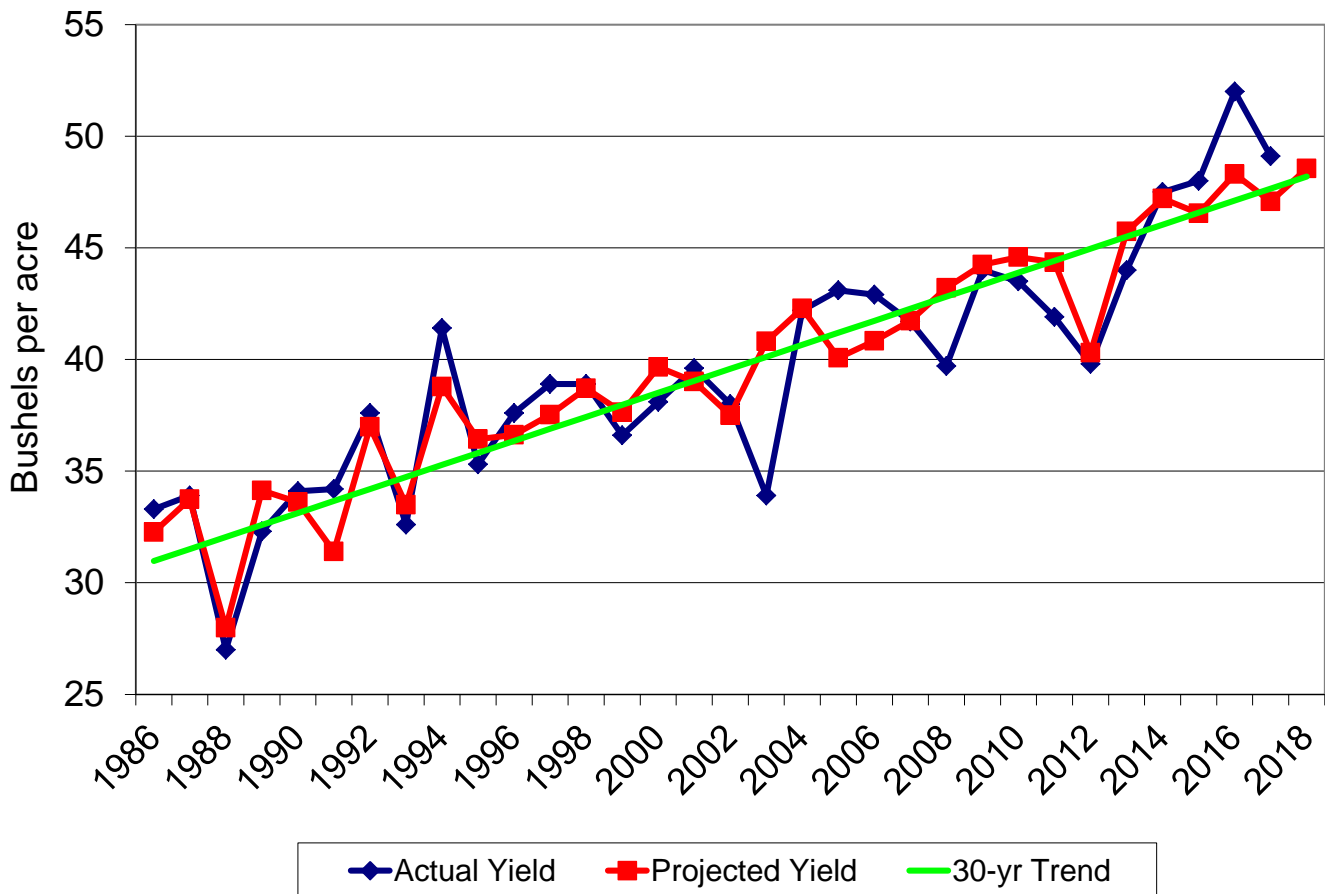


Figure 2. Soybean yield projection, based on crop conditions.

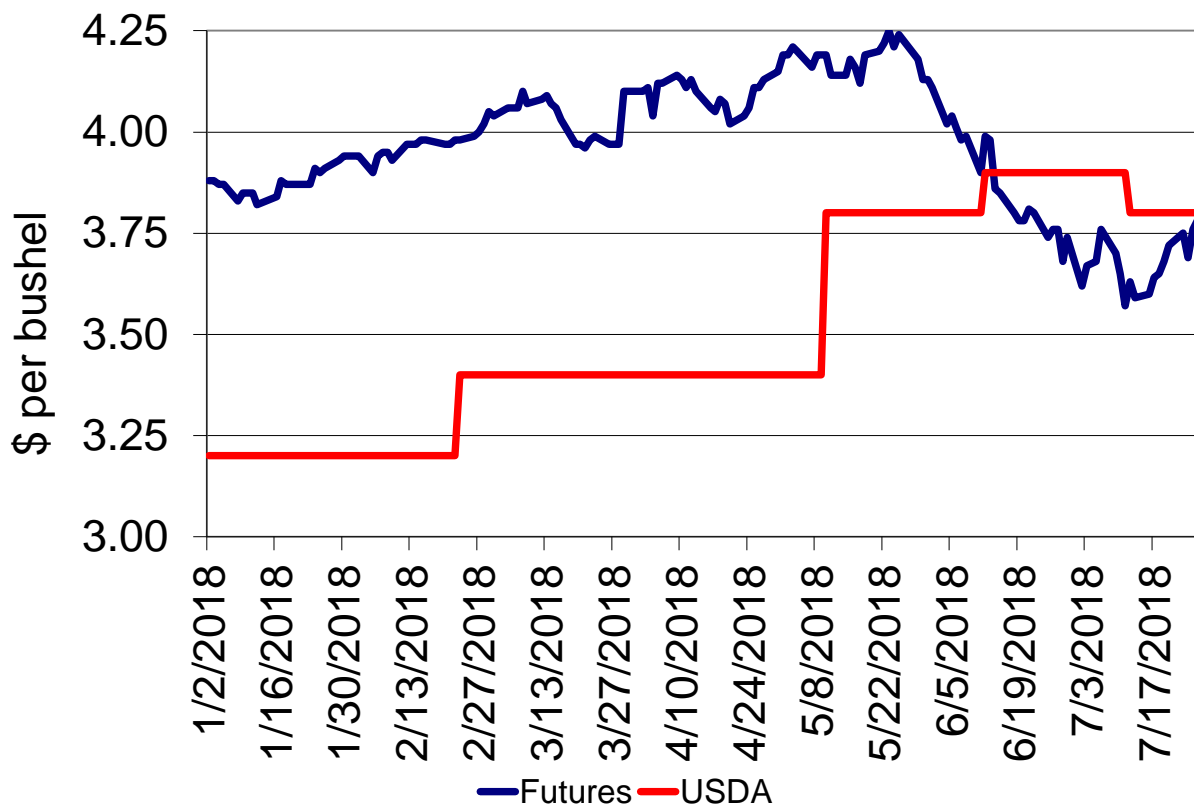


For corn, the 71% Good to Excellent rating translates to an average national yield of 178.0 bushels per acre. If realized, that would be 1.4 bushels above last year's record yield of 176.6 bushels per acre and roughly 5 bushels above the 30-year trend. Given the 89 million acres planted to corn this spring, that would also indicate potential production of 14.5 billion bushels this year, making it the 3rd largest corn crop ever. As the graph shows, there are a few years where the model will over-estimate yields, for example, 2010-2012. But the model has been fairly accurate for the last four years.

For soybeans, the 67% Good to Excellent rating points to a national yield of 48.5 bushels per acre. It would be the 3rd highest national soybean yield, trailing only the 2016-17 crops. Production will again exceed 4 billion bushels. And unlike the corn model, the soybean model exhibits much more noise in the estimates. August and September precipitation will greatly affect the yield outlook.

The combination of the weather premium in corn futures and the wider basis levels due to large crop stocks had created a significant gap between USDA's price projection and a futures-based price projection earlier this year. However, the combination of the trade disputes and good crop rating collapsed that gap (actually, reversed it for a while). Futures pointed to a season-average price north \$4 per bushel for much of the spring. But those estimates dropped significantly as the tariffs were threatened and implemented and the crop grew. Given the average 5-year basis, corn futures are now pointing to cash prices in the \$3.80 range, which also is the USDA projection at the moment. It's one of those rare times in the growing season where futures and USDA agree.

Figure 3. Projected 2018/19 season-average prices for corn.



For soybeans, the gap between the futures-based projection and the USDA projection had nearly disappeared in May. But the trade and crop conditions opened up a sizable gap between the estimates. Early in the year, futures had been more bullish for soybeans. Now, the opposite is true. While USDA reverted back to its early season estimate of \$9.25 per bushel, futures point to a marketing year average price below \$9 per bushel. For a week or so, that estimate had dropped below \$8.50.

Margin estimates for the 2018 crops had been positive for most of 2018, reaching a peak at the end of May. The June price swoon took margins back below breakeven for both crops. As the markets currently stand, corn

margins are slightly negative, while soybean margins are running at \$60 per acre loss. Prices have perched up some over the past week as some smaller export targets have ceased on the lower crop prices as an opportunity to purchase some bargain U.S. crops. However, the overall picture seems to be a repeat of the last several years of large crops and minimal returns.

Figure 4. Projected 2018/19 season-average prices for soybeans.

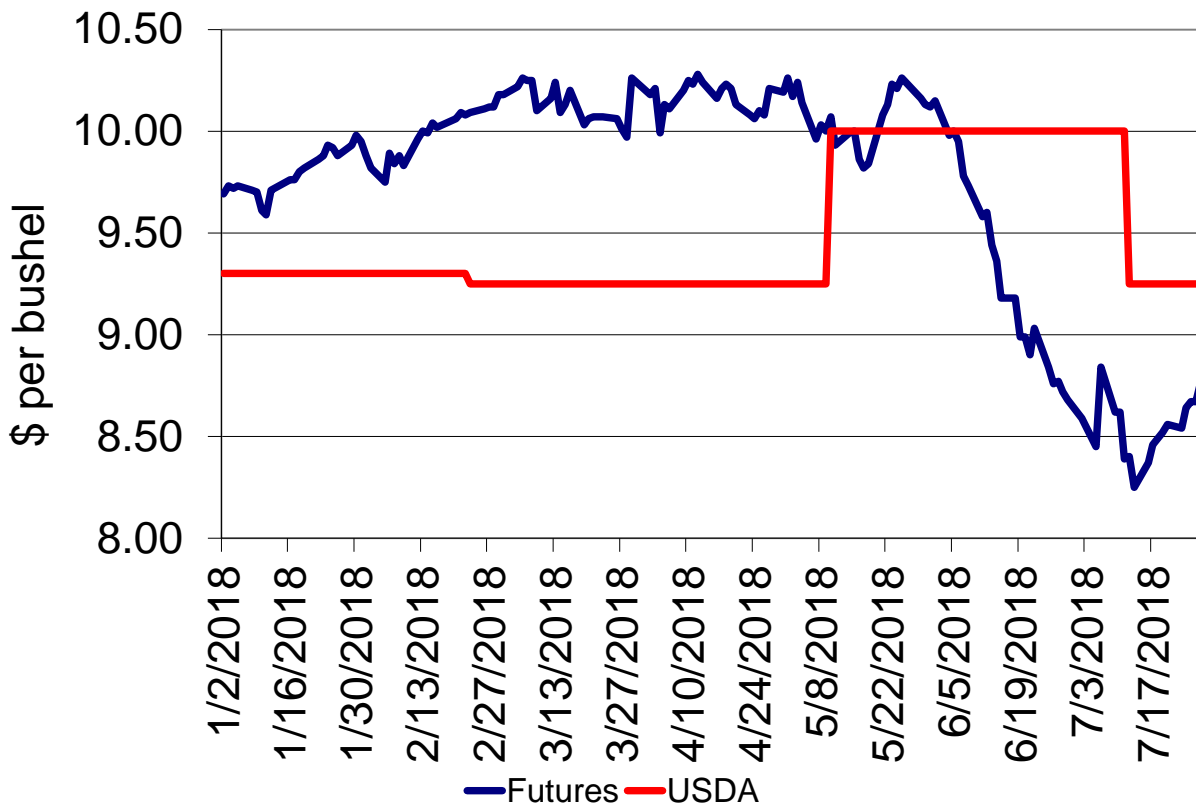
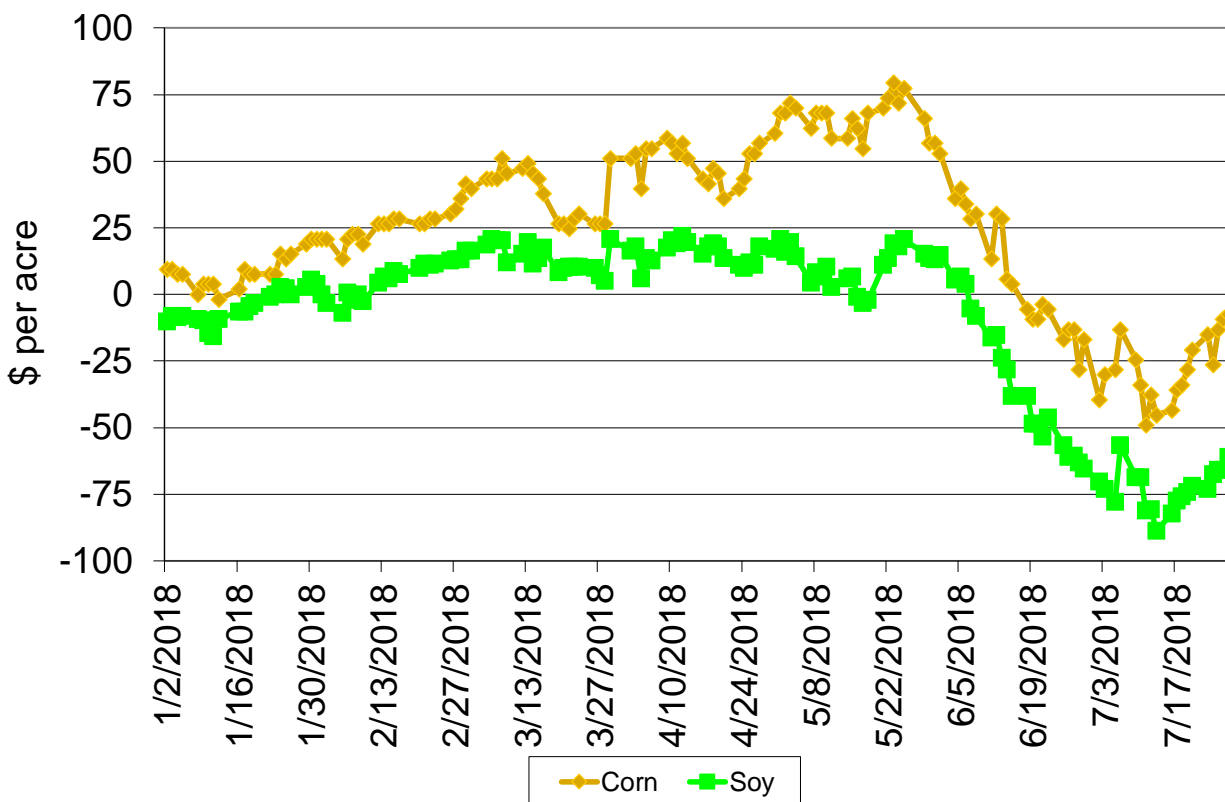


Figure 5. 2018/19 projected crop margins.



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