

Iowa Farm Outlook

Department of Economics
Ames, Iowa

June 2018

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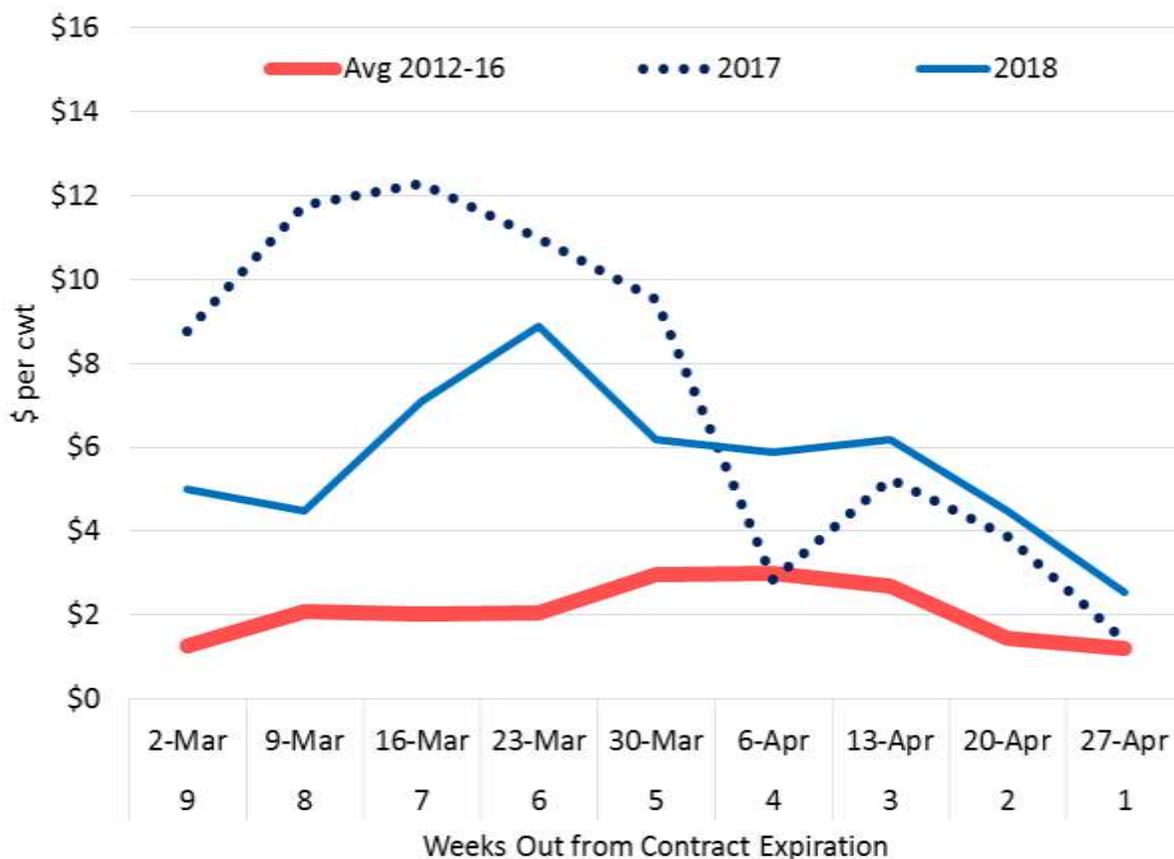
Strong Basis Helps Keep Fed Cattle Marketings Current

Live cattle futures contracts have been on a roller coaster ride in 2018. In mid-February, the June contract peaked at \$118.825 per cwt. It fell rather precipitously through the first week of April to a low at \$99.625. The June contract recovered some to \$104.800 by June 1. The April contract showed a similar pattern, with prices eroding in late February and March, then rallying to expire at \$123.750.

Corresponding cash markets have maintained relative firmness compared to the sharp declines seen in the April and June futures contracts. Evidence of this is seen in 2018 deviations in basis, the difference between the cash price and the futures price, compared to historic basis norms.

Early in the 2018 live cattle futures slump, basis moves held within historical basis norms. However, as the April futures contract downturn accelerated, the futures skid outpaced the cash market dip. Typically, the Iowa/Minnesota cash market trades at a premium to the April live cattle contract on a weekly basis. From 2012-16 this positive basis averaged \$2.08 per cwt over the futures market in the months of March and April (Figure 1). Last year provided some historically strong basis levels in March and April, averaging \$7.41 per cwt and ranging from \$1.40 to \$12.29 per cwt.

Figure 1. April Weekly Live Cattle Basis for IA/MN



In mid-March this year, basis again significantly strengthened against the April contract, with the Iowa/Minnesota cash market selling in several weeks at more than \$5.00 per cwt, and up to \$8.89 per cwt, above the April live cattle contract. As the April futures contract neared expiration, cash and futures prices did converge some, but basis was still stronger than in 2017 and the five-year average before that.

Trading price risk for basis risk

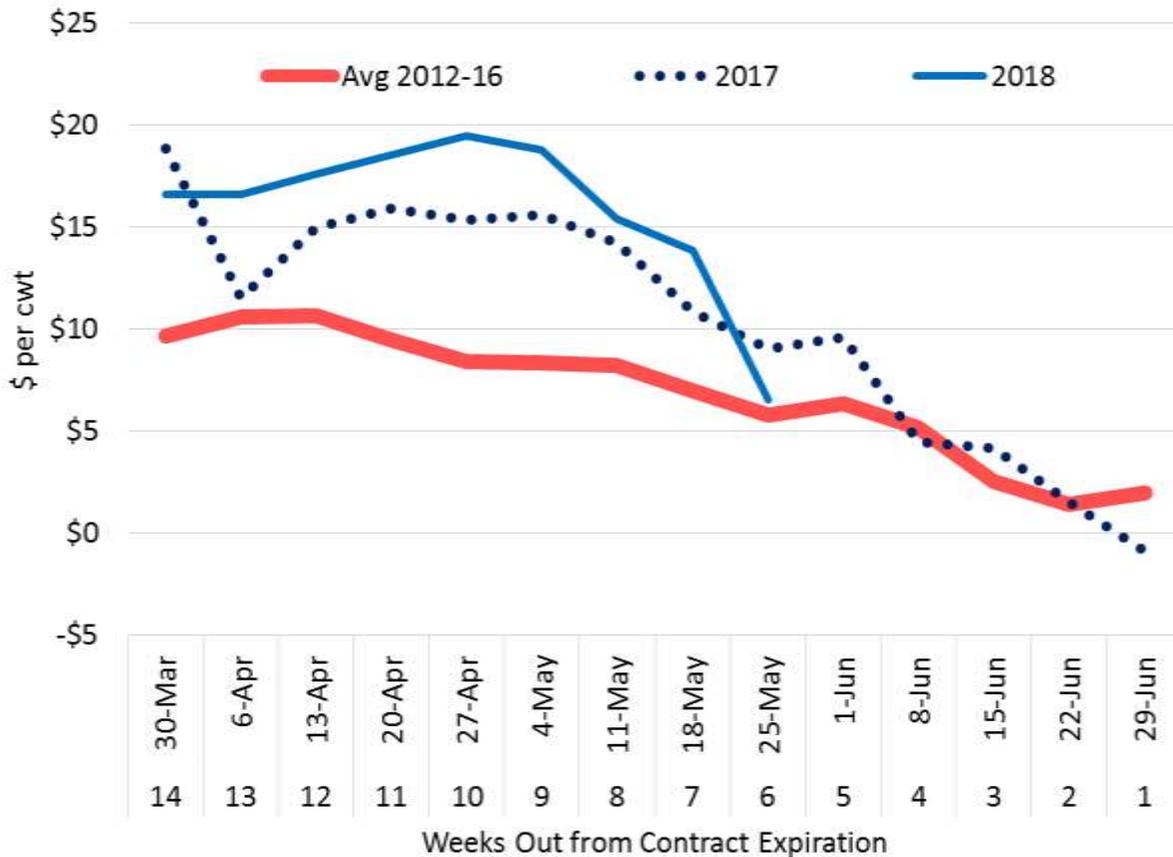
Will a super strong basis occur again in 2019? It's way too early to even guess at that. But this does raise the issue of the importance in accurately predicting basis.

Fed cattle prices can swing dramatically over time. Basis can vary, too. But basis swings are generally much narrower. When cattle feeders sell futures to hedge they remove their exposure to potentially collapsing futures prices. But the net cash selling price they expect to receive remains subject to errors in projecting what basis will be at the time they lift the hedge.

If basis ends up stronger than expected, producers net more than the expected net cash price. If basis ends up weaker than projected, the net cash price from the hedge falls a bit short of the price the hedge was expected to capture at the time the producer sold futures. Thus how close the actual net cash price comes to the expected price is predicated on the ability to forecast basis.

Hedgers often use historical basis information to predict basis. A five-year average basis is typically long enough to smooth out annual aberrations and short enough to adjust to changes in seasonality and local market conditions. But, expected basis should be adjusted if a change from historical norms is anticipated.

Figure 2. June Weekly Live Cattle Basis for IA/MN



Data source: CME Group & USDA-AMS

Short hedgers cash in

Eleven and ten weeks before expiration of the June 2018 contract, basis differences were dramatic. During 2012-2016, late-April cash prices averaged about a \$9 per cwt premium to the June contract, last year a \$15.50 per cwt premium, and this year that number was \$19 per cwt (Figure 2). For a short hedger, selling May cattle ahead with this kind of basis was a dream. To illustrate, in the last week in April some cattle sold in Iowa for over \$124 per cwt for delivery in May. In this case, a short hedger missed their predicted net price received but the basis prediction error was in their favor. That is, net price received was higher than predicted. If a \$10 basis was expected using the five-year historical average, then the \$19 actual basis resulted in a \$9 per cwt higher price than expected.

As June live cattle futures move toward expiration, the basis gap would be expected to close. However, in the first four weeks of May Iowa/Minnesota cash fed cattle averaged a \$13.66 premium over the June live cattle contract, over \$6 per cwt higher than the 2012-16 average basis for those weeks and even \$1 per cwt higher than last year's historically strong basis.

In the next five weeks the difference between cash and futures will get smaller, but which will give more the cash market or the futures? Probably some of both. Regardless, basis is attractive enough that it will incentivize cattle feeders to move hedged fed cattle to market quickly.

Lee Schulz

Resilient Markets

So far, the 2018 calendar year has reminded me of an ancient quote attributed to Confucius, "May you live in interesting times." 2018 has certainly been interesting. Drought and delayed planting have created some supply uncertainty. Ever changing trade policies and rumors about the Renewable Fuels Standard have amplified demand uncertainty. But through all of the market-changing stories, crop prices have worked their way higher over the course of 2018. In a typical year, crop prices generally reach their peak for the year in the late spring. While this isn't a typical year, crop prices seem to be following the typical pattern.

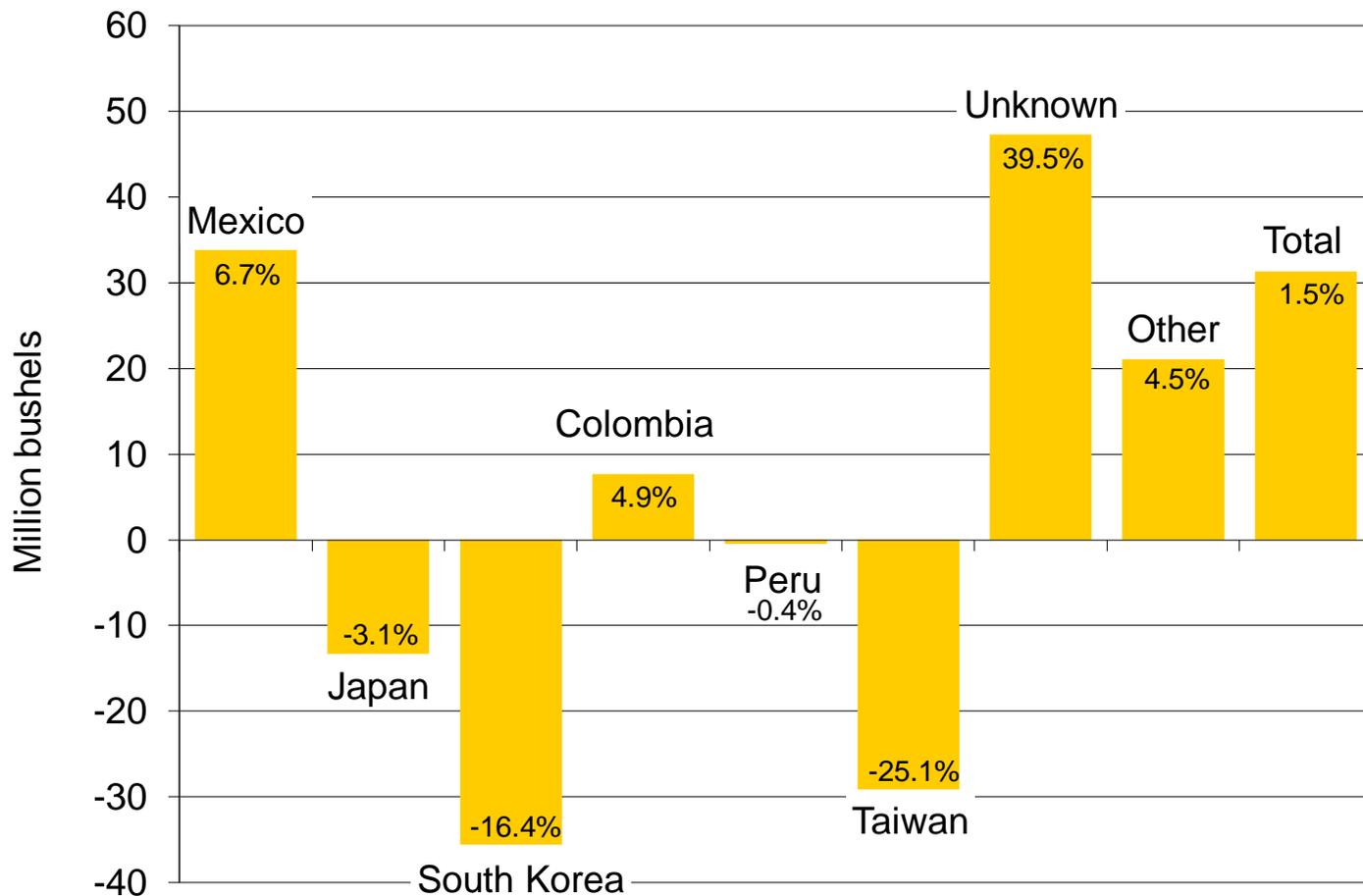
A cooler April led into a very warm May. The warmer conditions helped dry out most fields and allowed planting on a national scale to get back to near normal. Some areas, such as far northern Iowa are still behind schedule, but, in general, the nation's corn and soybean crops are emerging on schedule. Drought conditions still plague the Southern Plains and reach into southern Iowa. The current one-month out weather projections suggest the warmer and drier conditions will remain in place as we enter summer. So while there is some potential for weather to limit crop production, current conditions point to another round of significant corn and soybean production. Supplies will be smaller due to the reduction in acreage for both crops, but expected production for both crops is still set to be among the 5 largest of all time. USDA has the corn crop estimated at roughly 14 billion bushels, while the soybean crop is projected at 4.3 billion bushels. The string of large crops continues, but the gap between production and demand seems to be shrinking.

USDA's latest demand projections for the 2018/19 marketing year put corn usage at 14.59 billion bushels. That's down slightly from the previous year, but it's still above projected production. Ethanol has taken over the top spot for corn usage. Increased fuel usage by U.S. and international drivers has boosted the market for biofuels. E-15 continues to grow in market share and ethanol exports have been robust for the first few months of 2018. Feed and residual corn usage is projected to decline slightly, mainly due to the residual part of the category. With the livestock sector continuing to expand production, corn feed usage should remain strong. However, a smaller corn crop should translate into smaller harvest and storage losses, which accounts for most of the residual. Food, seed, and industrial corn use is expected to be larger.

However, the crucial demand area for corn will be exports. Corn exports for the 2016 crop were the 2nd largest ever. Exports for the 2017 crop are on pace to be nearly as high. Actually, as Figure 1 shows, the current pace

of corn exports is running slightly ahead a year ago. The countries shown in the figure are the 6 largest export markets for U.S. corn. The bars show the change in the bushels headed to each market compared to last year. The percentages show the percent change in corn trade last year to this year. So, for example, Mexico has purchased 34 million more bushels of corn this year than they had at this time last year. That represents an increase of 6.7%. Overall, the U.S. has sold just over 30 million bushels of corn more into the export markets this year for a percentage gain of 1.5%. Many of these sales are currently as “Unknown”. That is the designation when the final destination for the corn has not been set. Often, these “Unknown” sales are shipped to our largest customers, such as Mexico and Japan.

Figure 1. U.S. corn export sale shifts (Source: USDA-FAS).



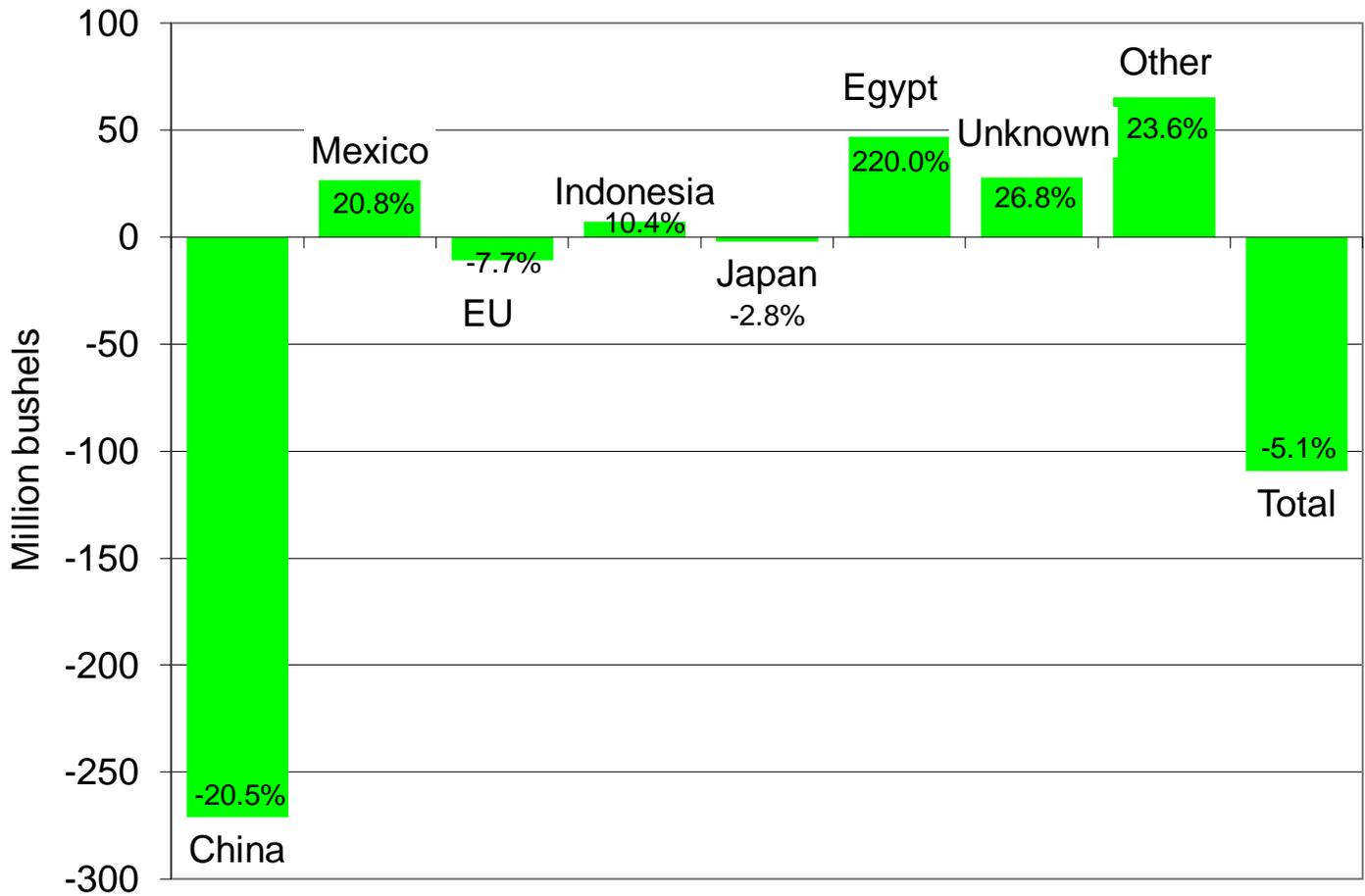
Thus far, the trade policy uncertainty has not damaged corn exports. But with NAFTA still under negotiations and the implementation of new border taxes both here and abroad, USDA has projected that corn exports for the 2018 crop will be lower. Mexico is a critical market to watch this summer. They are our largest corn customer. They are also our 2nd largest soybean customer.

For soybeans, export sales for the year are down roughly 5%. The Chinese market was down before the trade dispute started and has remained behind ever since. Other markets, such as Mexico and Egypt, have grown to partially offset the loss. But given the sheer size of the Chinese soybean trade, it's hard for the combined power of the other markets to match the changes from China. If soybean exports remain lower, this will be the first year in quite some time that soybean exports did not set a record. USDA has provided a fairly optimistic forecast, showing a rebound to record soybean exports for the 2018 crop. China will be the key to that outlook. The Chinese response to the newly announced tariffs will set the stage for soybean demand for the upcoming crop.

The other components of soybean demand are moving slightly higher. Domestic crush ramped up by 90 million bushels for the 2017 crop and another 5 million bushels of growth is expected for 2018. The need for soybean

meal in livestock rations and soybean oil for biodiesel is pushing that growth. Overall, expected soybean usage for the 2018/19 crop is set at 4.42 billion bushels. As with corn, projected usage exceeds projected production.

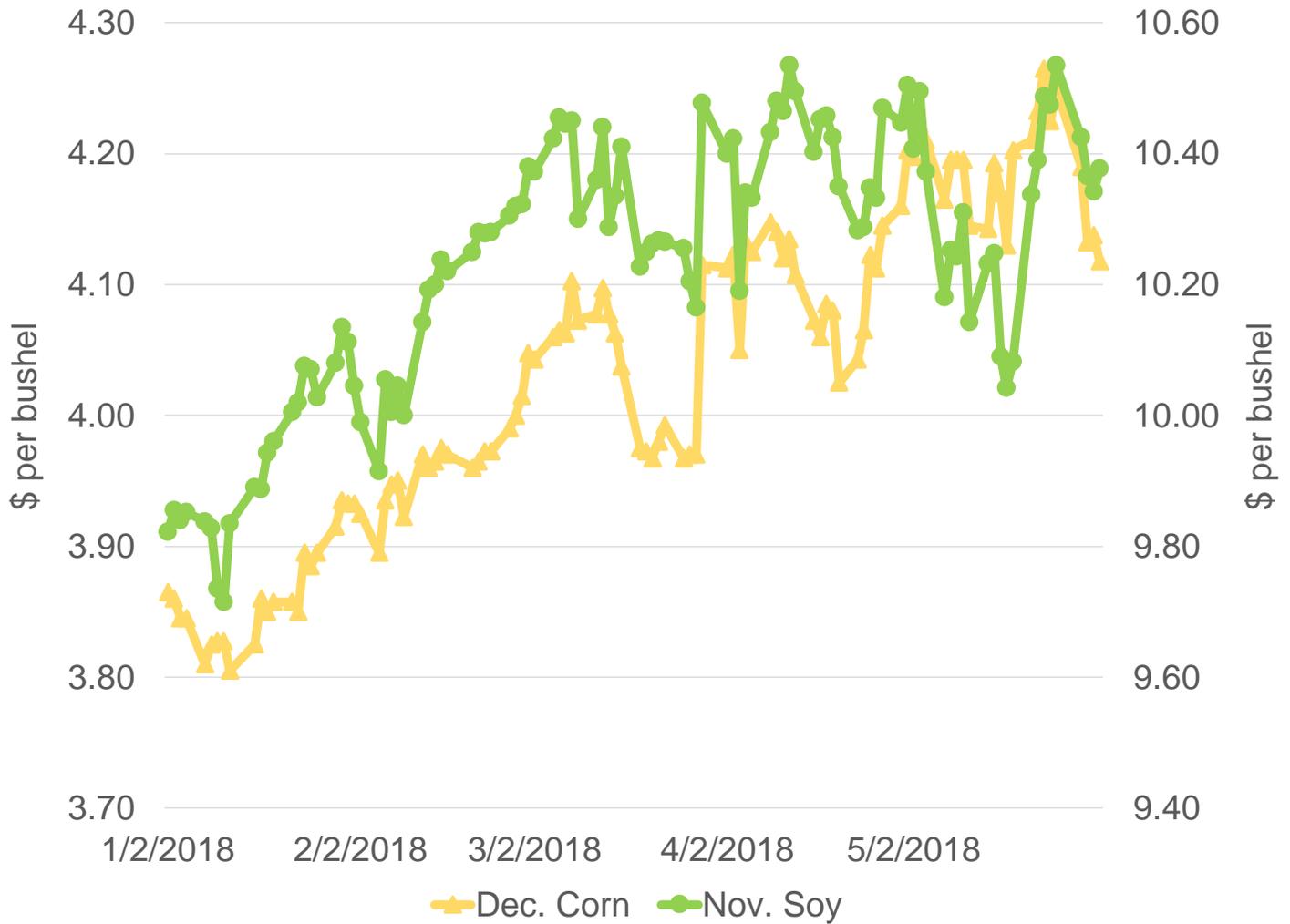
Figure 2. U.S. soybean export sale shifts (Source: USDA-FAS).



So as of now, with usage topping production, USDA projects higher average prices for the 2018 crops. The midpoints of USDA's season-average price ranges currently set at \$3.80 per bushel for corn and \$10.00 per bushel for soybean. If realized, that would be the highest average for corn since 2013 and for soybeans since 2014. Last year, harvest futures (December for corn and November for soybeans) reached their peak on July 11. Corn hit \$4.17 per bushel, while soybeans reached \$10.47 per bushel. As Figure 3 shows, this year's harvest futures have already exceeded last year's highs. Corn prices in May often topped \$4.15. Soybean prices have flitted above \$10.50 for brief periods of time.

While there has been some significant volatility in both markets due to trade skirmishes and planting delays, pricing opportunities have been available through most of the spring at levels at or near last year's highs. With the vast majority of the crops in the ground and growing, futures prices are set to entice some risk protection moves (hedges, forward sales, and options) and cover some costs. But as the summer rolls forward, if the typical pricing pattern holds, expect these opportunities to disappear as we get to the latter half of July, Continued trade disputes could make them disappear even faster.

Figure 3. Harvest futures (Source: CME Group).



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