IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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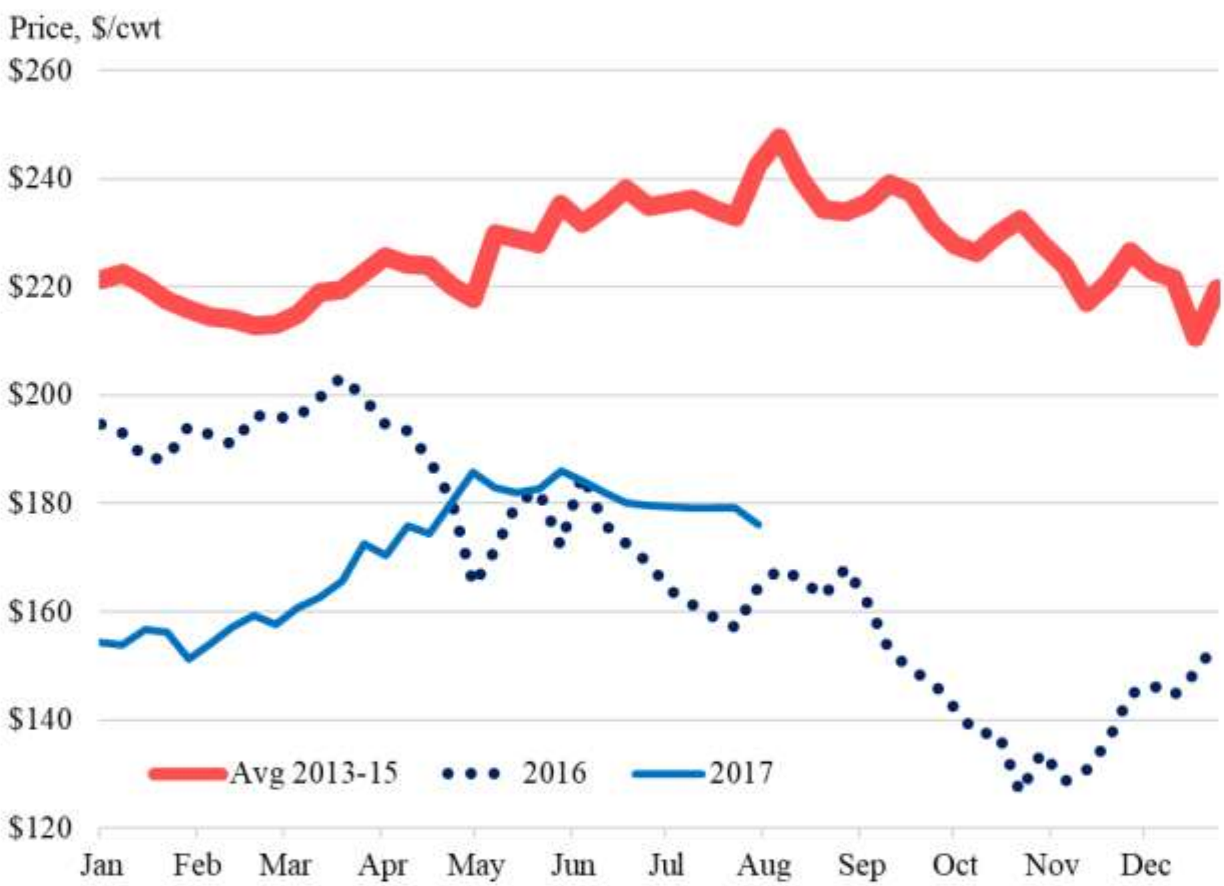
Fall 2017 Calf Marketing Considerations

As fall weaning nears cow-calf producers should assess backgrounding prospects. Likewise, stocker operators who buy calves should size up available margins. Markets are dynamic. Producers should "run the numbers" frequently and consider implementing risk management when good margins exist.

No "best" fall calf crop marketing choice exists for all producers. Deciding factors include: type and quality of cattle, cash flow needs, feed availability, and labor and management constraints. No strategy will be best every year. Only time will tell if a strategy proves profitable.

Feeder cattle prices peaked in June. They eased lower seasonally in July and August. The transition from relatively tight feeder supplies to growing supplies and waning feedlot demand played a role as well. Prices for calves less than 600 pounds are roughly 5% lower than their June peak (Figure 1). Prices for feeders over 700 pounds are down 7%. Feeders weighing 600 to 700 pounds are experiencing a bit of a hole, down 10%.

Figure 1. Iowa 500-600 Pound Steer Prices, Medium & Large No. 1, Weekly

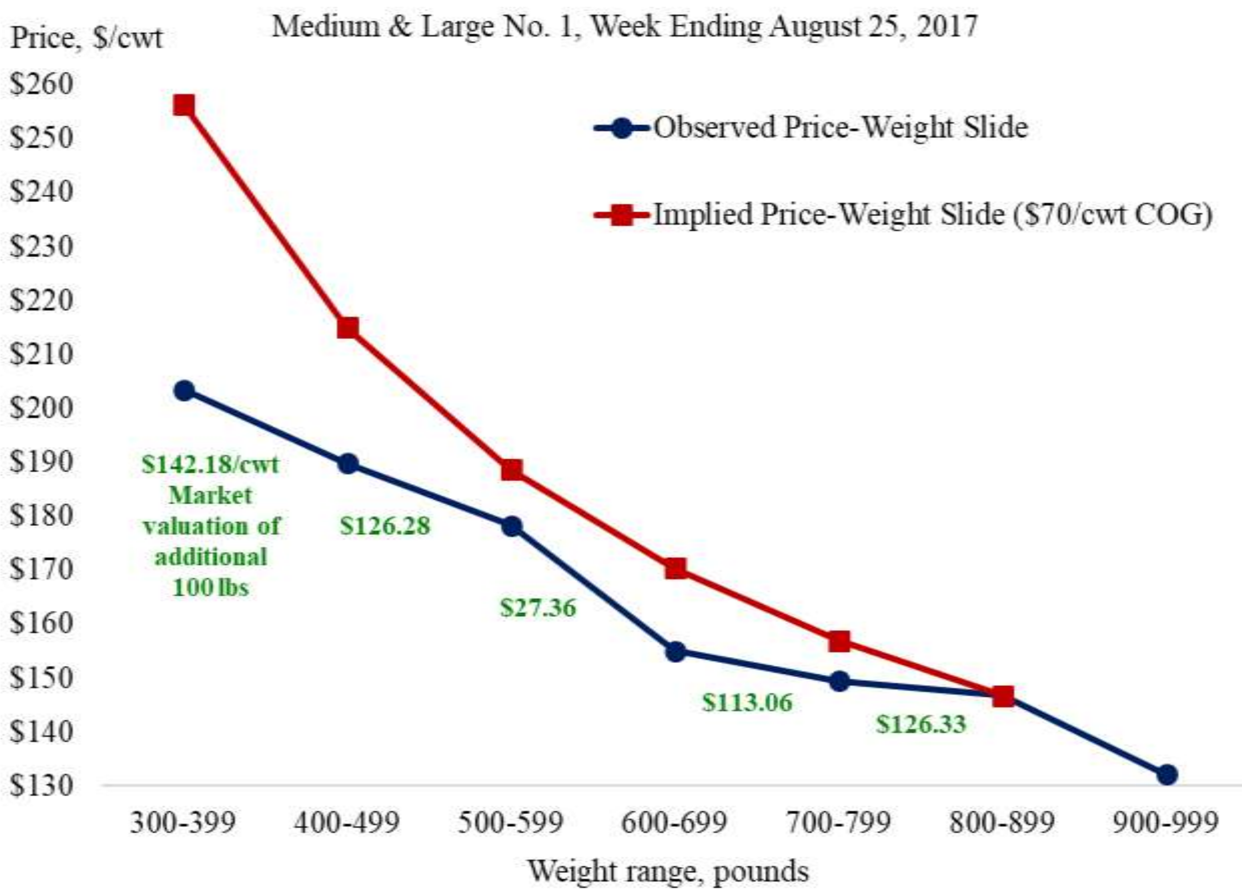


Data Source: USDA's Agricultural Marketing Service.

Evaluating options pits expected cost of gain against expected value of gain

Cost of gain drives relative value of lighter weight versus heavier feeder cattle. Figure 2 shows the equivalent price of lighter weight feeder cattle compared to heavy feeders assuming an average cost of gain of $70/cwt. This is the current feedlot cost of gain reported by the Iowa State University Estimated Yearling to Finish Returns. All else equal, a lower cost of gain will make the price-weight slide steeper, implying a sharper discount in feeder prices as weight climbs. Conversely, higher cost of gain will flatten the price-weight slide demonstrating heavier weight feeders are worth relatively more. Often and on average, the two price-weight slides will coincide. That means feeder cattle markets are in "equilibrium"— the value of putting weight on cattle roughly equals the cost to put weight on.

Figure 2. Iowa Weighted Average Feeder Steer Price-Weight Relationship



Data Source: USDA's Agricultural Marketing Service.

Feed costs matter

Late August average market prices have diverged significantly at lighter weights from what the cost of gain dictates they should be. Lightweight feeder cattle appeared to be underpriced relative to cost of gain. Corn prices matter in this relationship. Continuing relatively low-priced corn should make the price-weight slide steeper because lightweight feeders are worth more relative to heavyweight feeders when cost of gain is lower. Feedlots and stocker operators alike will prefer light weight cattle as operators will want to capture the value by putting on the gain themselves, rather than buying it. This should lift lightweight calf prices.

The slump in lightweight feeder prices is simultaneously an opportunity for cow-calf producers to background and a purchase signal for stocker producers. The observed value of gain for lightweight cattle is higher than the current cost of gain and is averaging from $126/cwt to about $142/cwt. The observed price weight slide is not a smooth line but includes a kink from 500 to 600 pounds. This translates into the highest value of gain at weights between 300 and 500 pounds and 600 and 900 pounds.

Understand market fundamentals

Feeder cattle price relationships help producers understand backgrounding and purchase signals. Of course, the ultimate value of gain depends on market values for cattle at the time of purchase (or at the time of the decision to background) versus at the time of sale. Feeder price adjustments over time may be unequal across cattle weights, like the example of the current weakness in six-weight steer prices relative to prices for other feeder weights.

Projected value of gain is largely driven by cattle market fundamentals and can be assessed using available futures market and basis information. The broader cattle market conditions indicate that feeder cattle supplies will build over time but demand appears to be strong. Feeder prices look to be somewhat flat through 2017 but may begin to soften in 2018.

Producers with a specific weight gain and feeding duration in mind can project value of gain. As an example, on September 5th suppose an Iowa producer was planning to sell steer calves weighing 550 pounds on October 15th at $167.21/cwt. October 2017 feeder cattle futures are trading at $142.50/cwt and a 5-year (2012-2016) historical October basis for 500-600 pound steers is $24.71/cwt. Further suppose this producer was considering retaining ownership by backgrounding the calves to 650 pounds by November. The projected value of gain would be $87/cwt (Figure 3).

Alternatively consider a stocker operator who is assessing buying these October weaned calves with a planned sale date in January or February. A value of gain between $74/cwt and $84/cwt may be expected for ending weights in the 750 to 850 pound range.

Figure 3. Backgrounding and Stocker Example, October 15th 550 Pound Calves in Iowa

Sale Weight	Sale Date	Sell Price, $/cwt	Average Daily Gain	Days on Feed	Value of Gain, $/cwt	Value of Gain, $/head
650	11/24/17	$154.93	2.50	41	$87.36	$87.36
750	1/3/18	$145.06	2.50	81	$84.13	$168.26
850	2/12/18	$134.25	2.50	121	$73.83	$221.49

Data Source: CME Group & USDA's Agricultural Marketing Service.

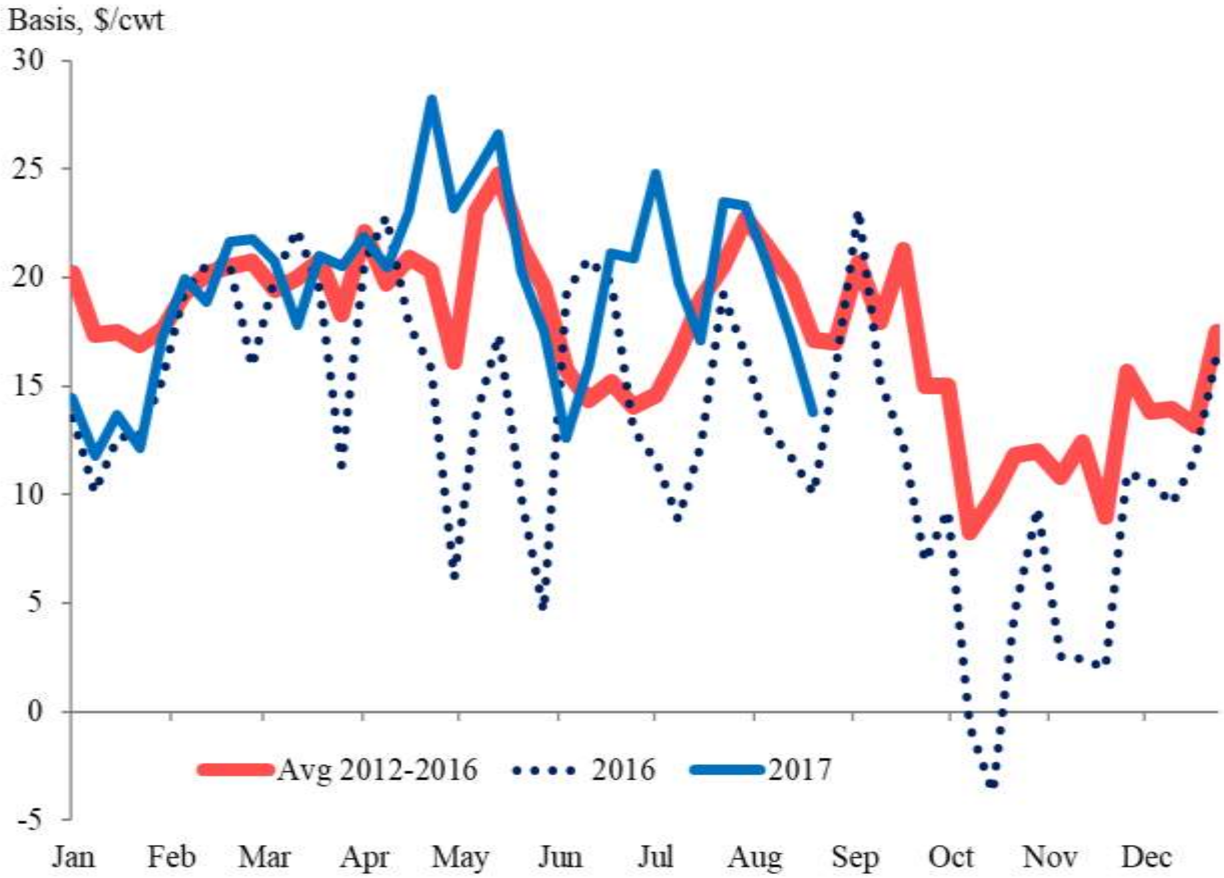
Note these projections presume no premium at marketing such as for preconditioning. Premiums for preconditioned calves sold in Iowa have ranged from $2/cwt to $7/cwt in recent years. Producers who can capture a premium by proactively marketing preconditioned calves capture more value per pound of gain.

Besides expected value of gain you need to know expected cost of gain to assess $/cwt and $/head margins for all backgrounding and stocker placement possibilities. Producers with some insight on their own cost of gain can compare those estimates directly with the value of gain to estimate margins. If selling preconditioned calves, include the cost to precondition in your cost of gain calculations.

Projections here hinge on historical basis levels accurately predicting the future. For example, October through December 2016 and January 2017 basis for 600-700 pound steers was weaker than average levels while basis since then has been close to average with some periods of strength (Figure 4). Risk management will be important in the coming months but is challenging due to basis uncertainty. After producers choose to background or buy calves they should repeat value of gain projections and derive updated values post-placement to identify optimal marketing times.

Any effort at delaying cattle sales, or purchasing cattle for later sale at heavier weights, exposes an operation to both down- and up-side price risk. Both production and price risk considerations of owning cattle over time and the challenges of managing those risks are additional considerations beyond the retention and purchase opportunities in the current market. Carefully consider market conditions, production plans and costs, and value-added opportunities this fall.

Figure 4. Iowa Feeder Cattle Basis, 600-700 Pound Medium & Large #1 Steers



Data Source: USDA's Agricultural Marketing Service.

Lee Schulz

Another Year with the Same Issues

The amazing productivity of the U.S. agricultural sector is showing up again this fall. USDA's August projections detail another set of large crops for the markets to digest over the 2017/18 marketing year. And thus, we find ourselves headed into the harvest season in a similar situation to the last few years, where prices are lower than producers would hope and profitability is a challenging proposition.

Starting with the corn yield projections, the dry conditions that have plagued the northern and western Corn Belt do show up in the yield figures, but they are offset by the strong yield outlook for the southern and eastern Corn Belt. The Dakotas are the hardest-hit area, with corn yields 20 to 40 bushels below last year. Iowa and Illinois are projected to be down 9 to 15 bushels. So the drought did take a bite out of production. However, the national corn yield is still estimated as the 3rd highest ever. The same is true for Iowa corn yields, with the 188 bushel projection being the 3rd largest, behind 2015 and 2016 yields. Another year leads to another large crop.

The August numbers from USDA are typically driven by ear counts, whereas problems with grain weight tend to show in the later USDA estimates (Sept.-Nov.). There is still a chance that corn yields and production could slide lower. But many of the private forecasts are falling inline with the USDA and the corn market has reacted accordingly.

The projections for soybean yields follow a similar pattern to corn. Losses in the north and west are offset by stronger yields in the south and east. Given the record acreage planted to soybeans this year, the projected yields are high enough to set another national production record, at 4.38 billion bushels.

Figure 1. Corn yield projection (Source: USDA-NASS).

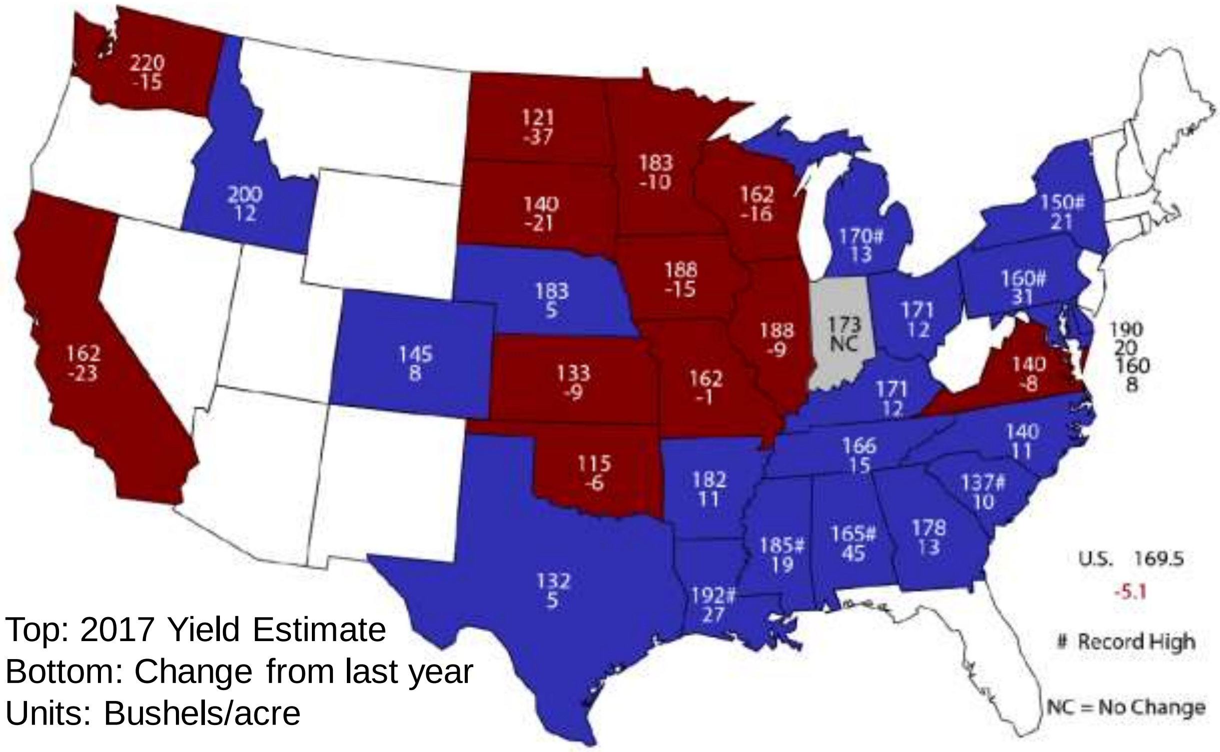
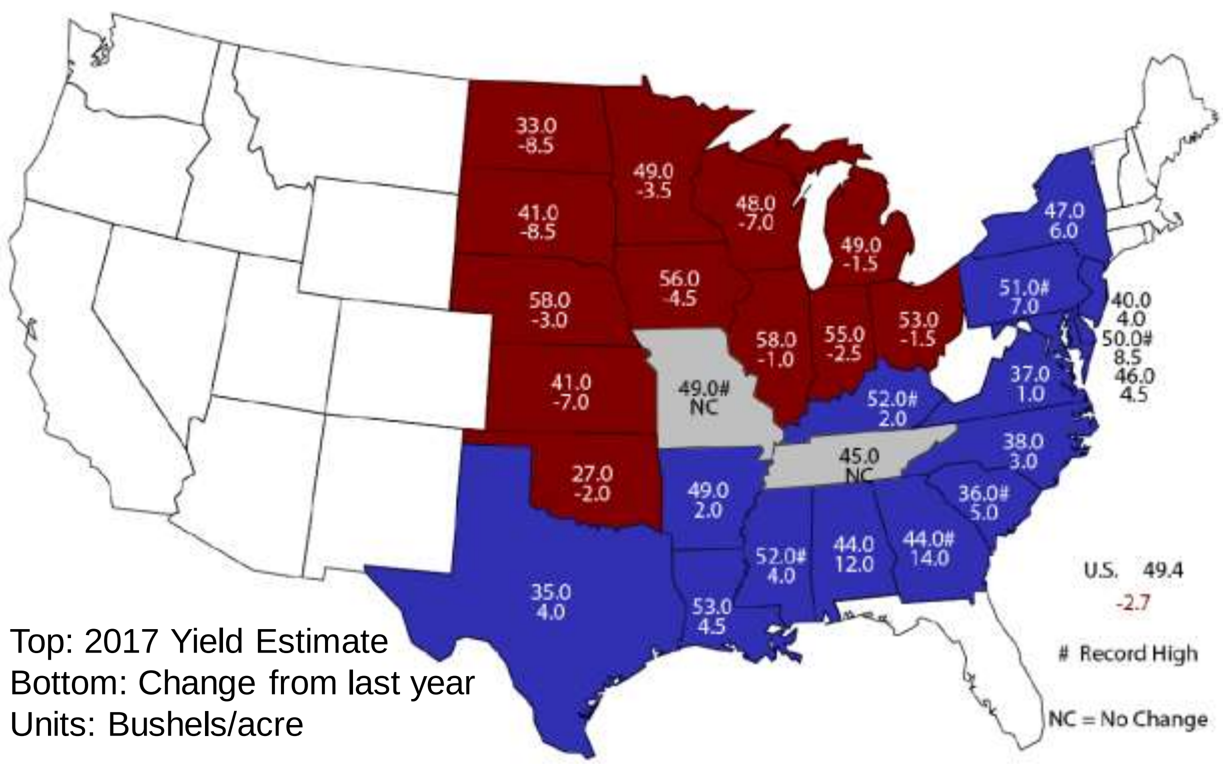


Figure 2. Soybean yield projection (Source: USDA-NASS).



And while late season rains to add to this total, the heavy rains and flooding from Hurricane Harvey may knock out a few of the soybean bushels grown along the Mississippi Delta. However, on balance, soybean supplies look ample enough to meet to demand. Thus, our run of incredible agricultural productivity continues.

But so does the run of global crop usage. Over the past few years, crop usage has also maintained a record pace. And, for the most part, USDA's demand projections continue that trend as well. The wildcard will be the export picture. Exports are the swing sector for crop usage, typically moving higher with larger crops and lower with smaller crops. USDA's projections for exports this marketing year reflect that pattern. Corn exports are expected to fall by nearly 400 million bushels, given that production is set to be a billion bushels lower. And we do see some softness in advance export sales, as they are running roughly 200 million bushels below last year's pace. The delay in purchases could be driven by importing countries waiting to see the size of the U.S. crop and the typical fall in prices going into harvest time. Another factor is the increased competition in the global markets as other countries have also ramped up corn production.

Figure 3. Advance corn export sales (Source: USDA-FAS).

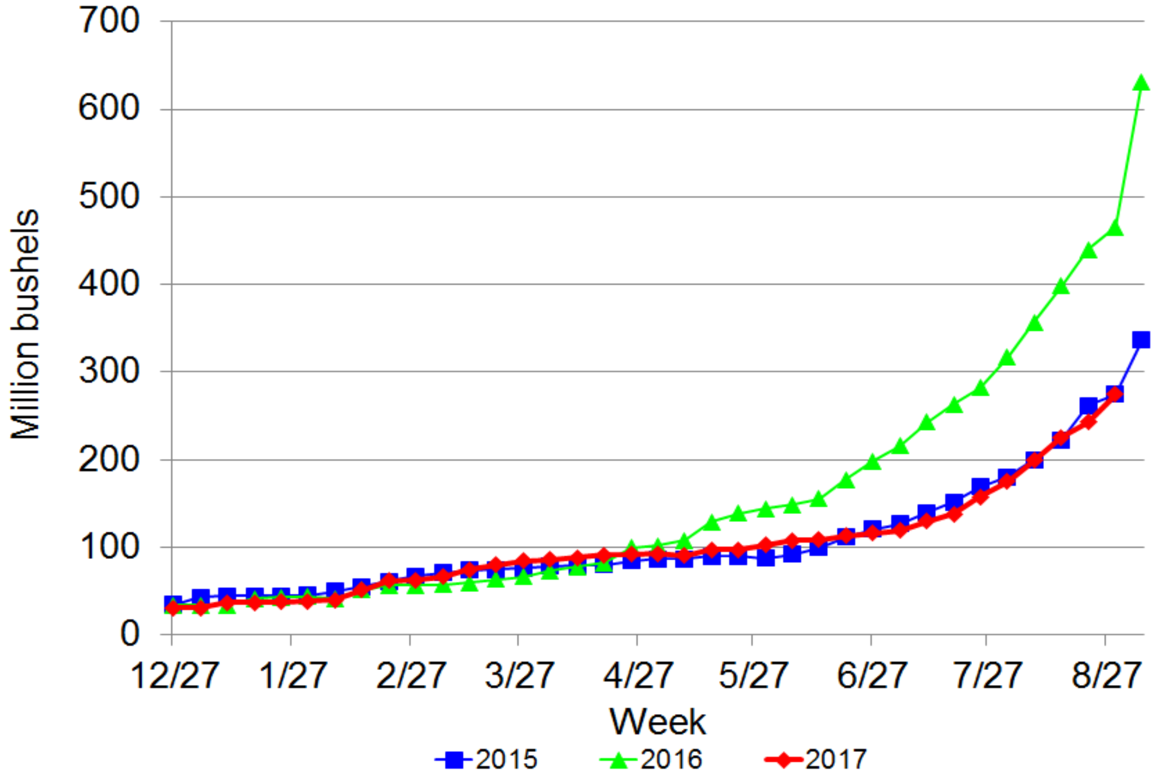
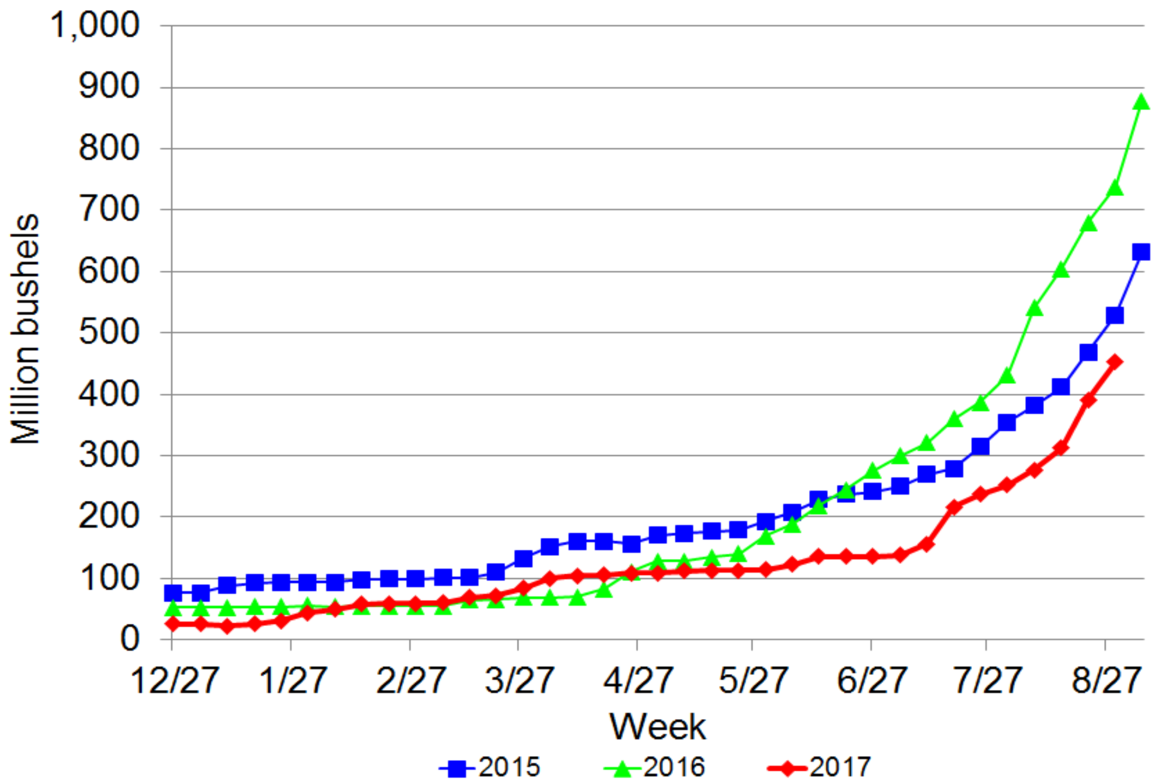


Figure 4. Advance soybean export sales (Source: USDA-FAS).

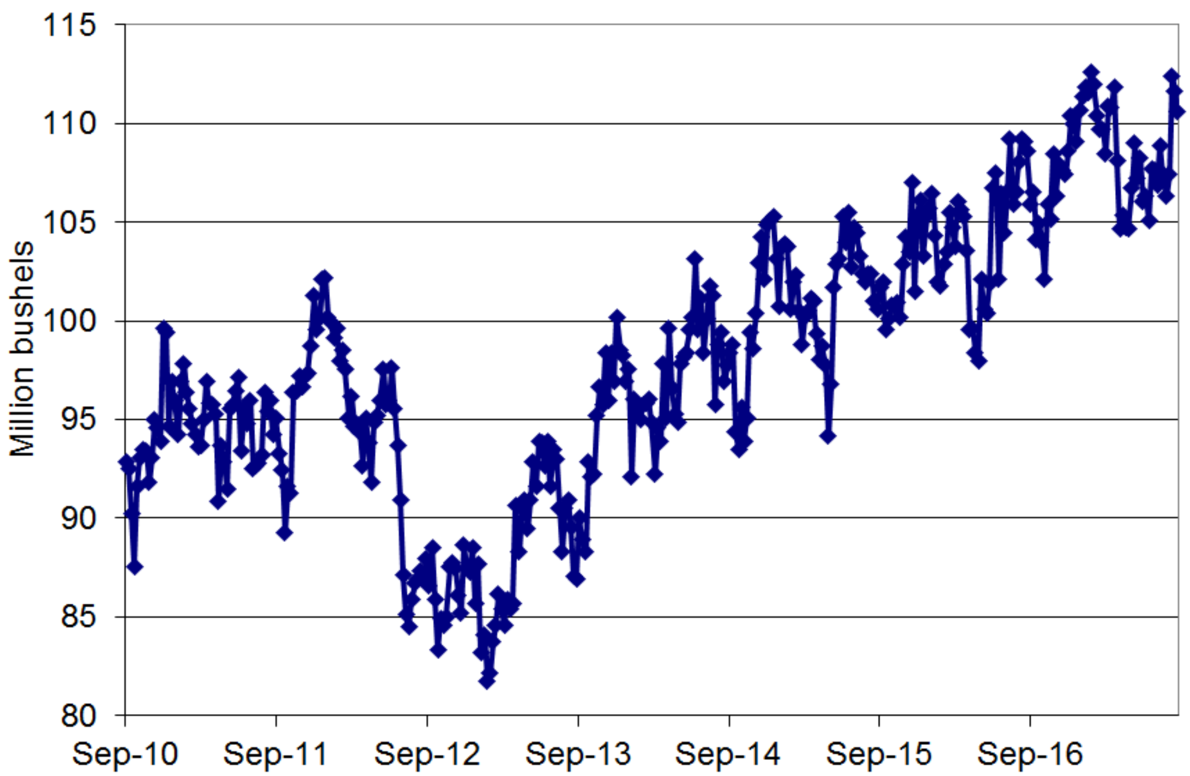


Advance soybean export sales have also slowed behind the pace of the last couple of years, down roughly 300 million bushels from last year. However, USDA's outlook shows that soybean exports should reach another record by next fall. China remains the key for soybean exports.

Exports are another area where Harvey may have a significant impact on agriculture. If the flooding significantly damaged the port and rail systems along the Texas and Louisiana coasts, then export shipments will be delayed and some sales may be lost to competitors. And at a time where we need all of the buyers we can find, any export losses would be a drag to the markets.

The other sources of crop usage are holding firm though. Feed usage remains robust as all of the major livestock sectors are still expanding. Food and seed usage is also projected to increase over the marketing year. And biofuels continue to be supportive as well. Corn grind for ethanol remains on record pace. And the biodiesel industry is projected to increase its soybean oil consumption.

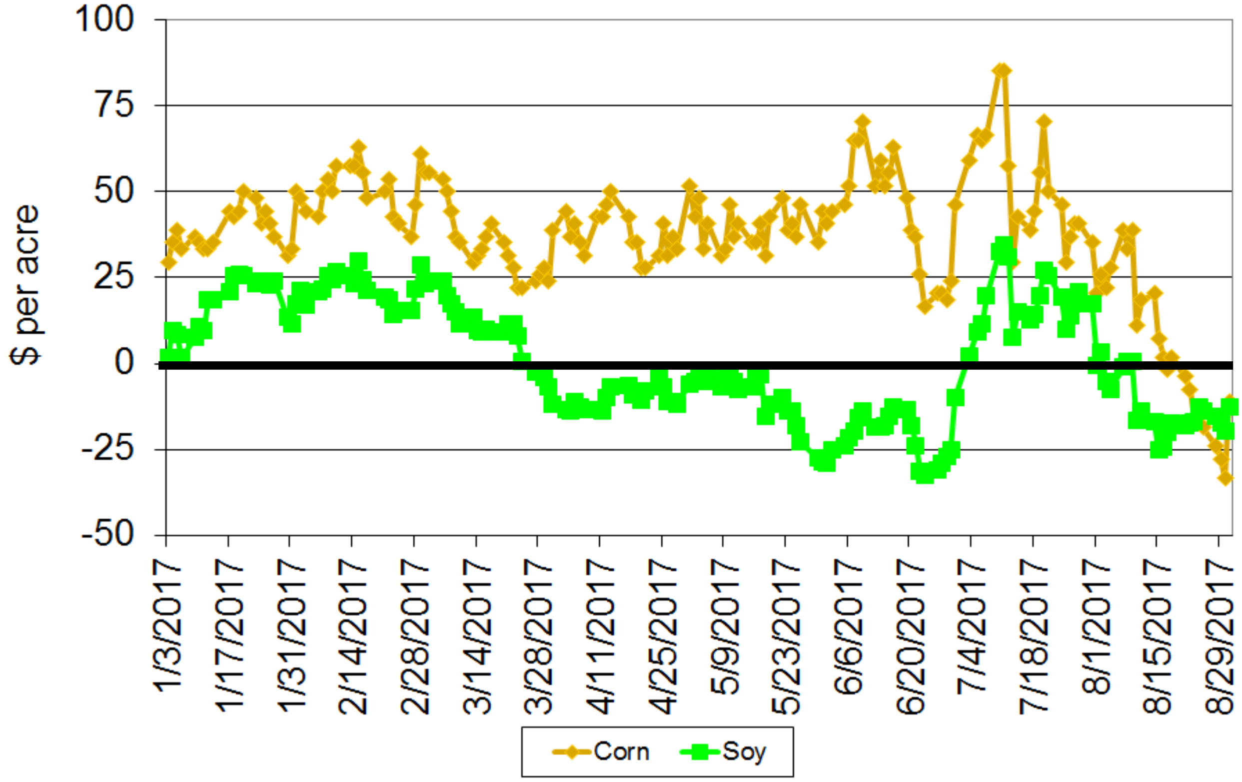
Figure 5. Corn grind for ethanol.



Crop usage is great, but crop supplies are greater. That has been the pattern for the past few years. And that pattern keeps crop prices low. USDA's current price projections point to marketing year average farm prices of \$3.30 per bushel for corn and \$9.30 per bushel for soybeans. The futures markets had been providing a brighter outlook than that for most of the summer. But with multiple sources now projecting large crops, farm price projections based on futures have fallen down within the USDA range. And that puts projected crop margins, based on ISU's production costs, in negative territory.

With the current low prices, many producers will be fully utilizing their crop storage once again. The futures markets are showing some carry throughout the marketing year. However, producers are having to sell some of the remaining 2016 crop to make room for the 2017 crop. Once that glut of crop clears, there should be some room for price improvement before the end of the calendar year, following a similar pattern to last year.

Figure 6. Projected 2017/18 crop margins.



The last three years have definitely stressed the agricultural sector. National net farm income has been cut in half. Working capital has been significantly reduced, especially for our beginning farmers. As the marketing year projections now stand, that stress will continue for the coming year. But hopefully we are near the trough of the cycle. The crop price projections are roughly similar year-over-year. Ag land values have stabilized over the past year. So while conditions aren't getting any better, they also aren't getting much worse.

Chad Hart

Dr. Chad Hart
Associate Professor of Economics
Extension Crop Marketing Specialist
478F Heady Hall
Phone: (515) 294-9911
Fax: (515) 294-3838
chart@iastate.edu
www2.econ.iastate.edu/faculty/hart/

Dr. Lee Schulz
Assistant Professor of Economics
Extension Livestock Economist
478 Heady Hall
Phone: (515) 294-3356
Fax: (515) 294-3838
lschulz@iastate.edu
www.econ.iastate.edu/people/faculty/schulz-lee