

Iowa Farm Outlook

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May 2017

Econ. Info. 2085

Higher Production Trims Livestock Prices, Cash Receipts

In Iowa, the livestock industry is a significant part of the state's agricultural sector and Iowa's overall economy. Iowa's cow-calf farms, feedlots, pork, dairy, poultry, and other livestock operations represent about half of all cash receipts for Iowa agriculture.

USDA's National Agricultural Statistics Service compiles annual estimates of livestock inventories, output and sales. Reports for 2016 confirm deterioration in financial positions of livestock producers. The reports provide a general understanding of the roles various livestock segments play in the national and state economies and what drives regional differences.

Lower prices trim cattle receipts

- Nationally, 2016 cash receipts for cattle and calves totaled \$63.945 billion. That figure is 18.2% smaller than 2015's \$78.129 billion and 21.5% lower than 2014's record \$81.478 billion. This marks the lowest level of cattle industry cash receipts since 2011.
- Last year's value of beef production slipped 18.7% to \$48.626 billion from 2015's \$59.836 billion. Value of beef production removes the value of sales between producers (predominantly calves and feeder cattle) leaving just net value added by cattle producers. Marketing's rose 4.0% year over year in 2016, so the value of production drop was all caused by lower cattle prices.
- Iowa remained the number four state for cash receipts (\$3.859 billion) and number five state for value of production (\$2.487 billion). Nebraska (\$10.976 billion), Texas (\$8.470 billion), and Kansas (\$7.864 billion) took the top three spots for total cash receipts. Texas remained the number one state for value of cattle and calf production (\$7.243 billion) due to its larger cow-calf sector. That sector represents primary production from breeding cows and birthing calves. Feedlots make up a larger portion of Nebraska's cattle industry. Value of feeder cattle that feedlots buy is deducted from total cash receipts to compute the value of actual production in Nebraska. The same can be said for Oklahoma over Iowa with respect to value of production. Nebraska produced \$6.331 billion in value of cattle and calves last year, Kansas produced \$4.590 billion, and Oklahoma produced \$2.557 billion.

Hog receipts ease on record production

- Last year set a new record of 35,611 billion pounds of hogs produced. That figure is 2.2% larger than 2015's 34.856 billion pounds, and marks the second straight year in which hog production has been record large.
- Total cash receipts from hogs and pigs slipped in 2016 amid the larger production, falling to \$18.857 billion, 8.6% lower than 2015's \$20.624 billion and 28.9% lower than 2014's record \$26.518 billion. The last time hogs and pigs cash receipts were this low was in 2010.
- The total value of U.S. pork production also eased in 2016 to \$17.215 billion, down 8.8% from 2015's \$18.877 billion. The value of pork production represents a much higher percentage of total cash receipts than is the case with cattle and calves for several reasons. First, a much higher proportion of the pork production process is completed within one year. Pigs are harvested at roughly 6 months of age, so

production turns into cash at a faster rate. Second, a much higher proportion of pork production comes from companies that control the entire process from breeding to harvest meaning pigs do not change hands in the middle and thus create a cost of goods sold expense line. Finally, the value of a weaned pig has historically represented about 20% to 30% of the value of a finished hog where the value of a feeder steer or heifer represents a much higher proportion—about 65% to 75%.

- Iowa continues to be the far-and-away leader in hog production, having 2016 cash receipts and production value of \$6.351 billion and \$5.516 billion, respectively. Those represent 33.7% of total U.S. cash receipts and 32.0% of total U.S. hog production value.
- Minnesota maintained, over North Carolina, the number two ranking for cash receipts from hogs. In 2016, Minnesota's producers generated \$2.277 billion from hog sales while North Carolina's industry realized \$2.103 billion in receipts. North Carolina has led Minnesota for several years in value of production since a higher proportion of Minnesota's total output is produced from purchased weaned or feeder pigs whose value is, just as is the value of feeder cattle for the feedlot sector, deducted from cash receipts to arrive at production value. Those value of production figures for 2016 were \$2.074 billion and \$1.974 billion, respectively.

Dairies feel financial squeeze

- Nationally, milk production rose 1.8% in 2016 to 212.436 billion pounds. The rate per cow, at 22,774 pounds, was 378 pounds or 1.7% above 2015. The annual average number of milk cows on farms, excluding heifers not yet fresh, was 9.328 million head, up 14,000 head from 2015. Cash receipts from marketings of milk during 2016 totaled \$34.543 billion, 3.3% lower than 2015. Producer returns averaged \$16.34 per hundredweight (cwt), 5.1% below 2015.
- In 2016, over 50% of the milk produced in the U.S. came from five states: California (19.0%), Wisconsin (14.2%), New York (7.0%), Idaho (6.9%) and Michigan (5.1%). Iowa ranked 12th with 2.4% of the total U.S. milk production. Iowa also ranked 12th in cash receipts at \$833.154 million.
- Colorado had the highest milk production per cow, averaging 25,980 pounds. Iowa ranked 8th at 23,634 pounds per cow. Iowa ranked in the bottom 3rd for producer returns at \$16.60 per cwt. Lower than the returns in Hawaii (\$26.70 per cwt), Alaska (\$21.90 per cwt) and Florida (\$18.70 per cwt) but higher than in Montana (\$13.90 per cwt), California (\$15.00 per cwt), and Michigan and Arizona (\$15.10 per cwt).

More poultry production pressures prices

- The total value of U.S. poultry production in 2016 was \$38.688 billion, down 19.6% from 2015. Broilers accounted for \$25.936 billion of the total, 9.7% lower than last year, which, along with a 52.4% drop in eggs to \$6.483 billion cancelled, out an 8.3% increase in turkey value, up to \$6.184 billion. Non-broiler chickens accounted for \$84.869 million, down 17.8%.
- Production of broilers, chickens, turkeys and eggs were all up in 2016, pressuring prices. The total number of broilers was 8.777 billion head, up 1.0% with a weight of 54.259 billion pounds, up 1.7%. Turkey production was 244 million head, up 4.7%, and production was 7.487 billion pounds, 6.4% higher. Egg production was 101.953 billion, 4.9% higher.
- Iowa jumped one spot to be the 6th largest turkey producer in 2016 with 11.400 million head raised, 460.980 million pounds produced, and \$380.769 million in value of production.
- Iowa is the largest egg producer by a notable margin compared to the next largest producing states—Ohio, Indiana, and Pennsylvania. Iowa produced 13.608 billion eggs with a value of production of \$556.138 million dollars.

For a full copy of the reports visit:

- Meat Animals Production, Disposition, and Income Annual Summary <http://usda.mannlib.cornell.edu/usda/current/MeatAnimPr/MeatAnimPr-04-27-2017.pdf>
- Milk Production, Disposition, and Income Annual Summary <http://usda.mannlib.cornell.edu/usda/current/MilkProdDi/MilkProdDi-04-27-2017.pdf>
- Poultry Production and Value <http://usda.mannlib.cornell.edu/usda/current/PoulProdVa/PoulProdVa-04-28-2017.pdf>

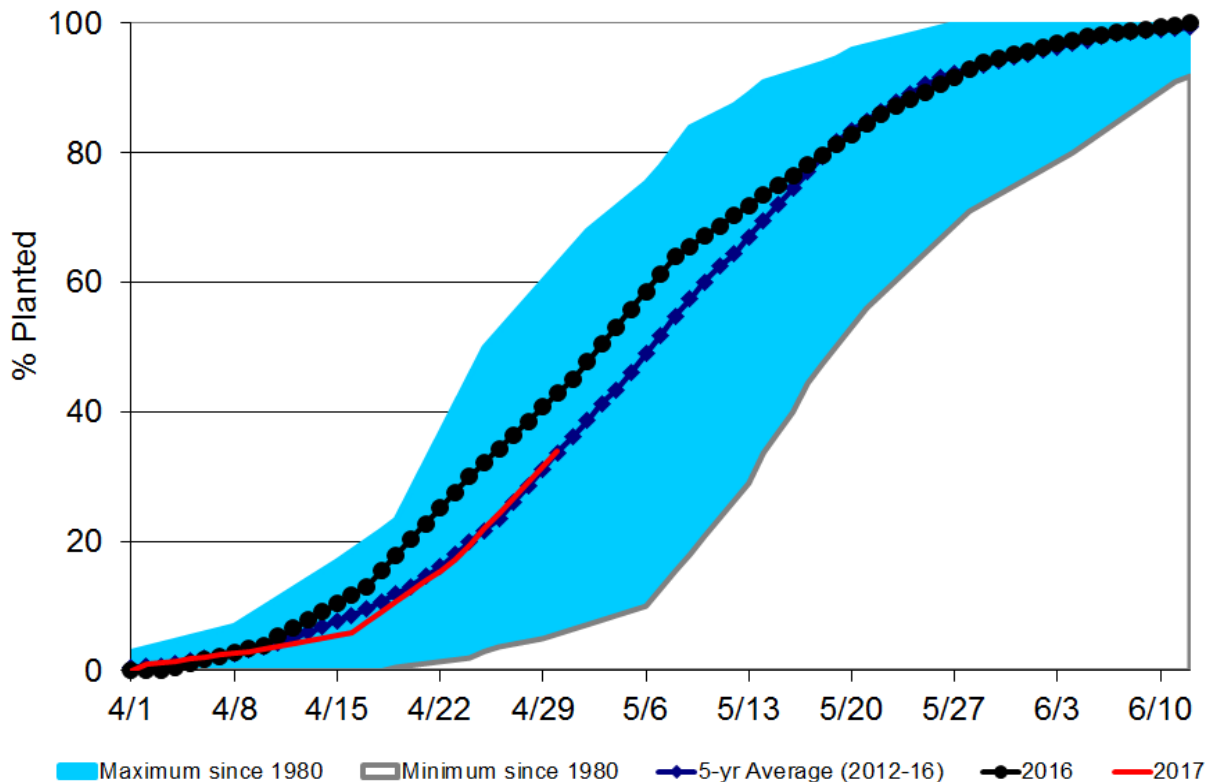
Lee Schulz

Rain and Grain

Crop markets tend to rally this time of year on the basis of good demand and the potential for weather issues to limit supplies. So far in 2017, corn and soybean demand has held up very well, but despite the weather challenges this year, projected supplies remain large enough to deter any significant upward price movement. Figures 1 and 2 show the national planting progress through the end of April. Corn plantings are running along the 5-year average pace, while soybean plantings jumped out to a quick start. While Iowa is a bit behind, most of the Corn Belt states have seen producers race through a few more fields than usual. So while we have seen snow in the Plains states and flooding in the mid-Mississippi River region, those weather events have not yet dramatically altered the projected crop supply picture.

As Figure 1 displays, we are now in the window when the bulk of the corn crop gets planted. During the next 3 weeks, half of the U.S. corn is typically planted. And one good week can translate into millions of acres. Back in 1992, corn planting progress jumped from 28% to 71% over the course of one week. So early delays can be

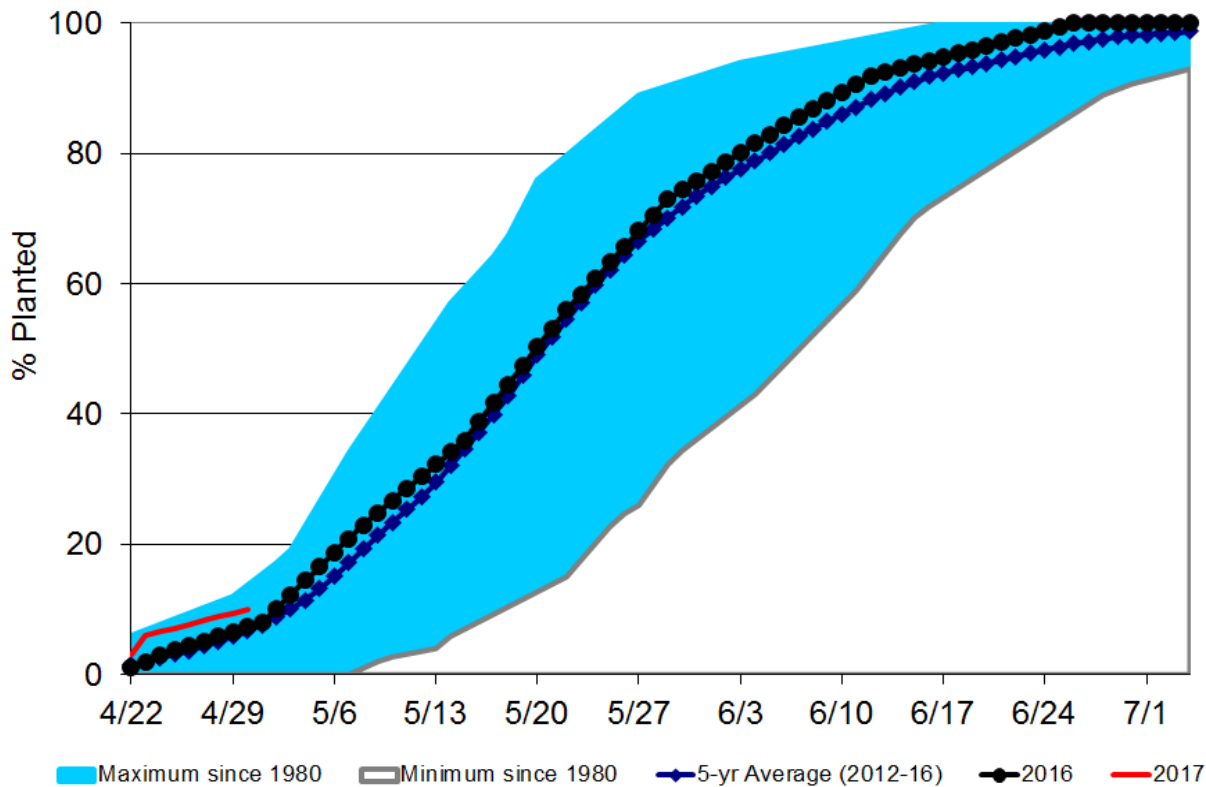
Figure 1. U.S. corn planting progress (Source: USDA-NASS).



made up quickly, weather permitting. Looking back to 1980, the closest parallel year in terms of planting progress is the 2002 crop year. Planting patterns that year closely followed the 5-year average, with approximately 8% of the crop being planted in June. In recent years, the 2011 and 2013 planting seasons got off to significantly slower starts.

For soybeans, late May and early June are the critical periods for planting. The early jump in 2017 is the 3rd fastest start for the national soybean crop, only 2010 and 2012 started out faster. And with the drier forecasts for most of the Corn Belt for the 1st half of May, corn and soybean plantings should continue to meet or exceed the 5-year average pace. So the supply storyline is not supporting a late spring “weather rally.”

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



But the crop demand is supportive of a rally. Crop usage remains strong as the calendar shifts to May. Livestock projections support strong feed use. Export sales are holding up well, despite the trade rhetoric. And biofuel usage of crops, while it has slowed from record levels, is still substantial.

Corn exports have maintained a significant positive shift over the course of the marketing year. Currently, corn export sales are running roughly 500 million bushels ahead of the pace we saw in the 2014 and 2015 marketing years. And that growth has been broad-based, with Mexico, Japan, South Korea, Taiwan, and Peru (5 of our top 6 corn markets) increasing their purchases. South Korea is where we have seen the largest surge in corn demand, as export sales have grown by nearly 250%. USDA currently projects that this marketing year will be the 2nd largest in terms of corn exports, trailing the 2007 crop year.

Soybean exports have been setting records for the past few years and this year is no exception. Export sales have already exceeded 2 billion bushels. And just as in the previous years, China is the dominant market. Compared to last year, Chinese export demand has grown by over 300 million bushels. Other growth markets have been in Mexico, Indonesia, and Taiwan. Concerns about the withdrawal from the Trans-Pacific Partnership (TPP), the rumors about the North American Free Trade Agreement (NAFTA), and the emergence of several commodity specific trade disputes have not had a significant impact on corn and soybean international sales. However, the outlook to maintain these trade flows is clouded by those concerns and the eventual push from the large South American crops.

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

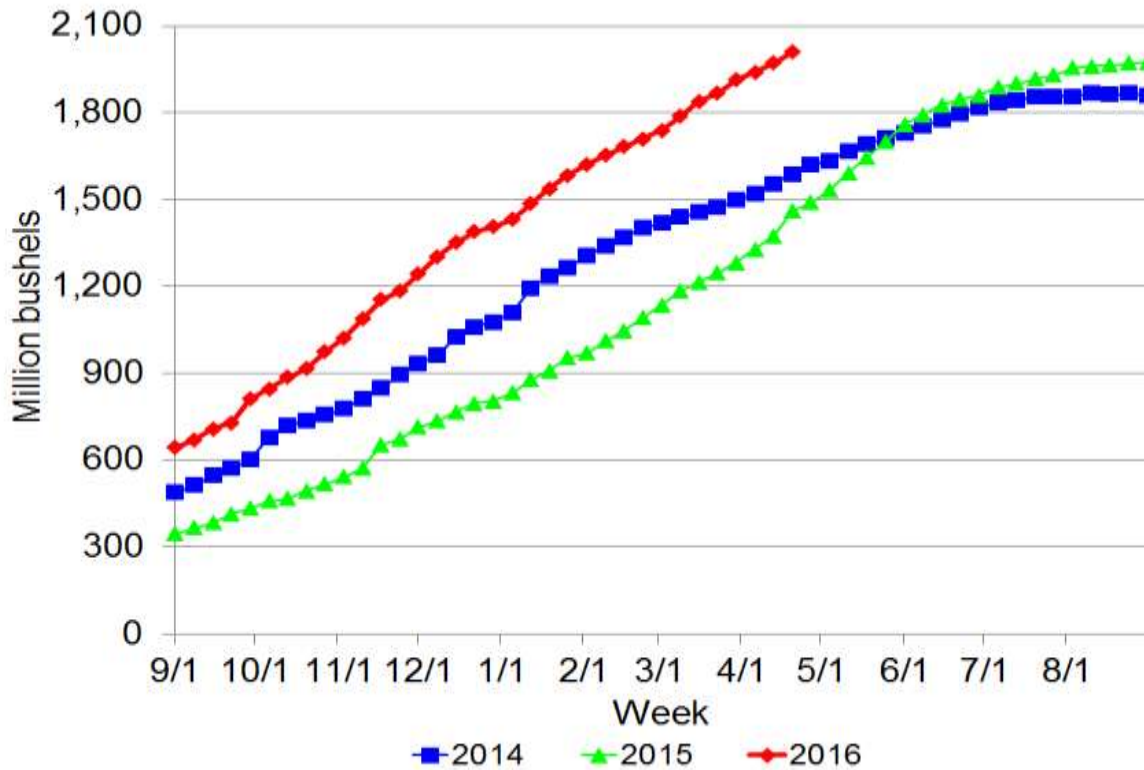
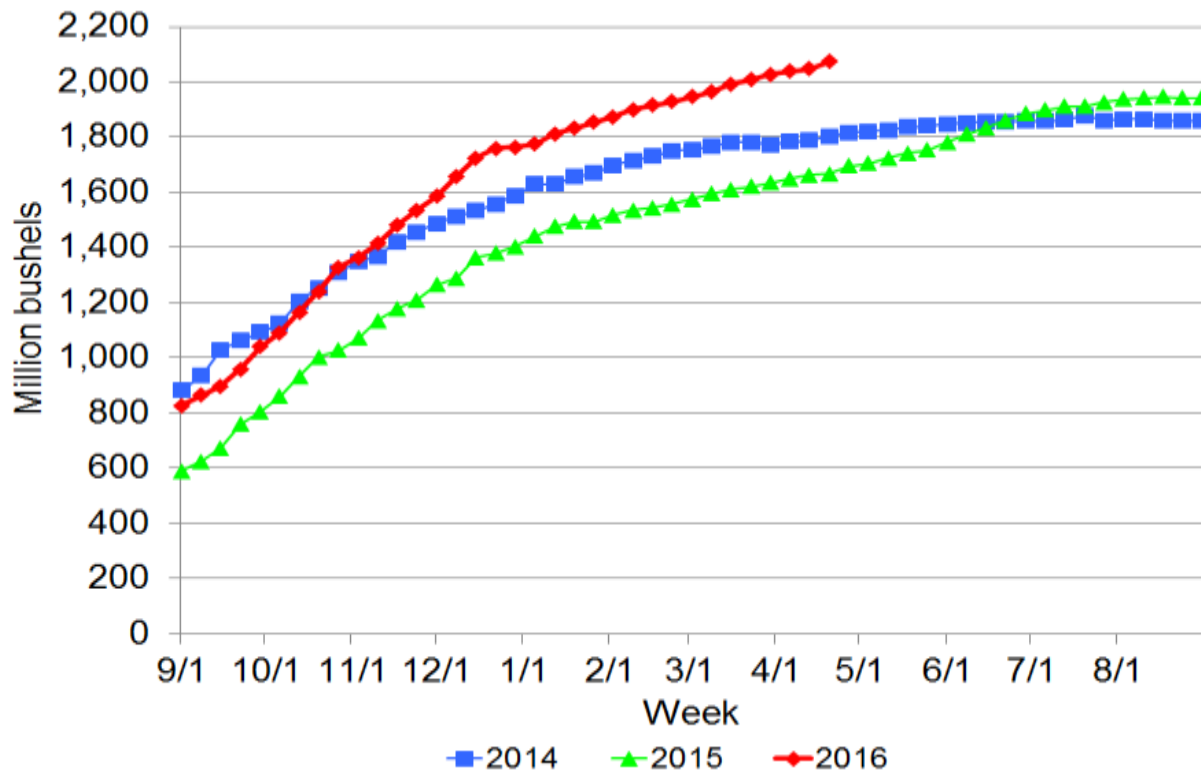
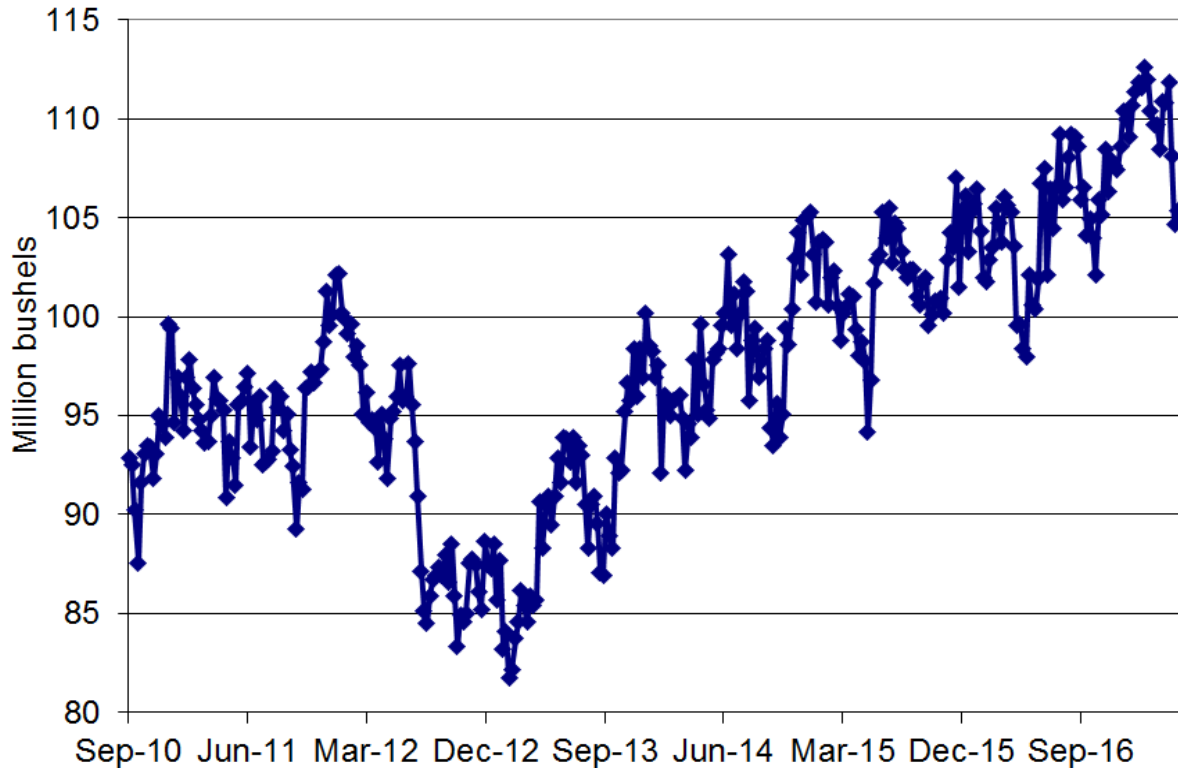


Figure 4. U.S. soybean export sales (Source: USDA-FAS).



Biofuel usage of crops remains strong as well. Soybean and corn oil continue to be well utilized for biodiesel production. Corn usage for ethanol is averaging roughly 110 million bushels per week so far in 2017. Even with the recent slowdown in ethanol production, the production pace is on par with what was record levels in 2014. So combined, the crop demand sectors are working through last fall's massive crops, just not fast enough to boost price significantly.

Figure 5. Ethanol's corn usage.



Futures market prices for soybeans are relatively flat as we look out to 2018 and 2019. As of May 2nd, there was roughly 20 cents of carry in the 2017/18 marketing year. In fact, given average basis levels for the past 5 years, the futures-based projected national season-average prices for soybeans for the 2016 and 2017 crops is the same, \$9.53 per bushel. These are slightly below USDA's projections of \$9.55 per bushel for 2016 and \$9.60 per bushel for 2017 (the 2017 price comes from USDA's Ag Outlook Forum).

For corn, the carry in the futures market is more substantial, roughly 30 cents. And the projections of lower corn plantings have helped corn futures post some relatively better prices. Given average basis levels for the past 5 years, the futures-based projected national season-average prices for corn for the 2016 crop is \$3.49 per bushel, while the 2017 crop is pricing in the \$3.90 range. The 2016 price is slightly above USDA's projections of \$3.40 per bushel, but the 2017 price is well above USDA's mark of \$3.50 per bushel (the 2017 price comes from USDA's Ag Outlook Forum). A major component here will be any recovery in basis. With a sizable chunk of last fall's record corn crop still in storage, basis levels have remained wide. The \$3.90 projection depends on basis improvement.

Scanning further ahead, the futures markets are indicating some continued improvement for corn, but also continuing struggles for soybeans. Futures-based projected national season-average prices for the 2018 crops currently stand in the \$4 range for corn and \$9.40 range for soybeans. The markets seem to be straddling breakeven. Based on ISU's production cost estimates, corn prices are hovering just above costs and soybeans are holding just below. And has been the case for the last few years, profitability will hinge more on your cost structure as prices remain lower.

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