



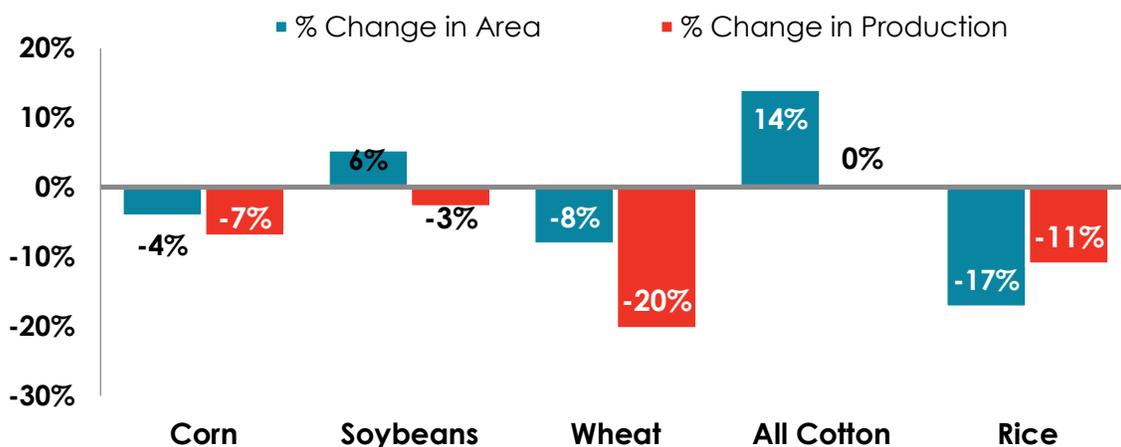
## Cropland Area and Production Projected Lower, Prices Higher in 2017

John Newton, Ph.D. [jnewton@fb.org](mailto:jnewton@fb.org) (202) 406-3729

In late February 2017 USDA held the annual [Agricultural Outlook Forum](#) and updated expectations for 2017/18 cropland planted area, production, and prices. Total cropland area for the eight principal crops was projected at 249.8 million acres, down 1.4 percent from 2016. If realized this would be the lowest planted area since 2011 when 249 million acres were planted to the eight crops including corn, soybeans, wheat, barley, sorghum, oats, rice, and cotton.

Many of the crops are expected to see declines in planted area. Corn area is projected to decline by 4 million acres, -4.3%, to 90 million acres, Figure 1. Wheat is also projected to lose nearly 4 million acres, -8.3%, to 46 million acres. Lower wheat planted area follows the lowest level of winter wheat seedings in over a century as reviewed in [AFBF's January Crop Market Update](#). Finally, rice planted area is expected to decline by 600 million acres, -17.4%, to 2.6 million acres. The only major crops with expected increases in planted area are soybeans and cotton. Soybean acreage is expected to increase 4.6 million acres, +5.5%, to 88 million acres. All cotton (upland and ELS) planted area is expected to increase 14.2% to 11.5 million acres in 2017.

**Figure 1. Percent Change in Planted Area and Production**  
 2016 to 2017



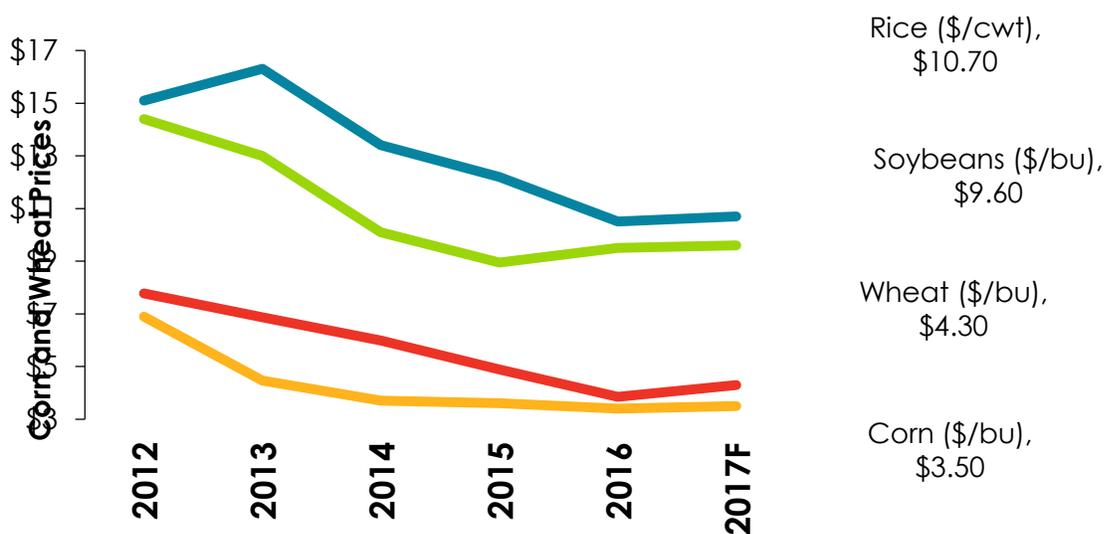
Source: USDA OCE

In addition to fewer acres being planted, USDA also projected crop yields for many crops to retreat from the higher levels experienced in 2016. Yield declines combined

with lower planted area resulted in USDA reducing production expectations for many crops in 2017. Corn production is expected to decline by a billion bushels, -7%, to 14.1 billion bushels in 2017. Soybean production is projected to decline by 127 million bushels, -3%, to 4.2 billion bushels. Wheat is expected to have a sharp production decline in 2017, down 473 million bushels, -12%, from 2016 levels. Cotton production is expected to remain in line with prior year levels at 17 million bales. Finally, a 7% increase in rice yields is expected to offset the decline in planted area. Rice production is projected at 199 million hundredweight, down 25 million hundredweight from 2016.

As supplies for grain and oilseeds reduce in 2017, prices are expected to increase. The 2017/18 marketing year average prices for corn, soybeans, and wheat are projected to increase to \$3.50, \$9.60, and \$4.30 per bushel (respectively), Figure 2. However, these prices remain well below the record highs experienced in 2012. Rice prices are expected to increase to \$10.70 per hundredweight. With cotton production remaining mostly unchanged, cotton prices are expected to decline in 2017 to 65¢ per pound. For rice, corn, and wheat the projected prices are below the Price Loss Coverage reference prices, and if realized would trigger Farm Bill program payments for the 2017/18 crops.

**Figure 2. Actual and Projected Commodity Prices**  
2012 to 2017F



Source: USDA OCE

**Implications**

Given that commodity prices are forecasted higher for many commodities these projections from USDA are favorable for the ag economy. Additionally, the [Purdue University/CME Group Ag Economy Barometer](#) indicates many growers remain optimistic about future economic conditions in agriculture. However, the 2017/18 crop year only recently began across parts of the U.S. In Arizona, cotton planting reached 1% planted as of March 5<sup>th</sup>, and corn and rice plantings will soon follow in many parts of

the South. The pace of plantings and crop conditions will be important to monitor throughout the growing season.

The next opportunity to substantially revise expectations will be at the end of March when USDA releases the much anticipated [Prospective Plantings](#) report. After intentions are known the market will reevaluate forecasts for the 2017/18 balance sheets and prices. Then, from April through harvest the market will process weekly reports to update expectations on U.S. and global supplies and demand. While expectations for a better ag economy are high, a significant amount of uncertainty remains.

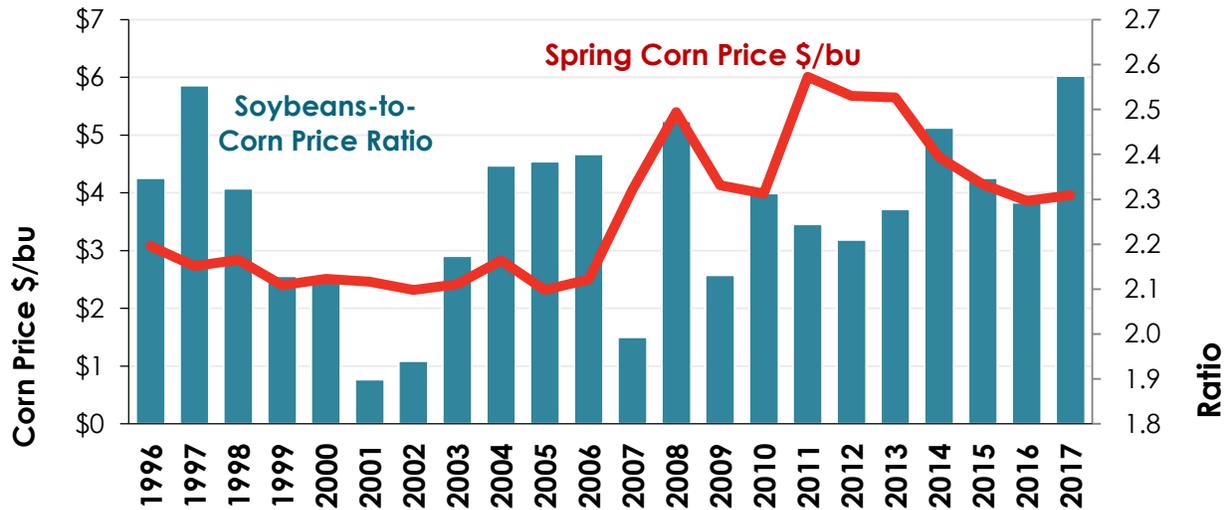
### **Spring Crop Insurance Prices Discovered**

Every year USDA's Risk Management Agency (RMA) recalibrates crop insurance programs to reflect market expectations of prices and price risk. Market expectations for commodity prices are determined by averaging futures contract settlement prices during a month-long price discovery period. For example, during February, December futures contract prices are averaged to determine the spring projected price for new-crop corn (the November contract is used for soybeans). These prices form the basis for most the corn and soybean crop insurance policies sold.

The settlement process includes another price discovery period. During October, the applicable (December or November) futures contract prices are averaged to determine the harvest prices for corn and soybeans. Both the harvest price and projected price are important for crop insurance products including the harvest price option. For these policies, the revenue guarantee uses the maximum of the harvest price and projected price when determining crop insurance benefits. That is, when the harvest price is greater than the spring price it is substituted in the revenue guarantee and, if applicable, it will increase crop insurance payouts.

At the end of February [USDA's Risk Management Agency](#) finalized the spring projected prices for corn and soybeans for 2017/18 crop year. The spring corn price was announced at \$3.96 per bushel and the soybean price was announced at \$10.195 per bushel. These prices are 3% and 15% higher than the spring 2016 corn and soybean prices, respectively. The soybean-to-corn spring price ratio was 2.57 and the highest level since revenue policies were introduced, see Figure 3.

**Figure 3. New Crop Soybean-to-Corn Ratio During February**  
1996 to 2017

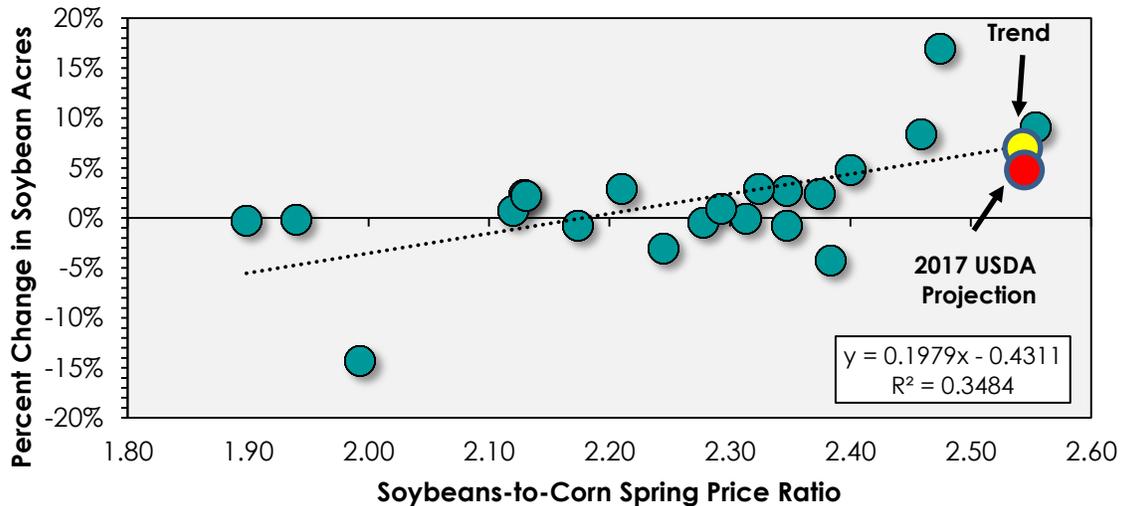


Source: USDA Risk Management Agency and AFBF Calculations

While the spring price discovery is important for crop insurance policies, many in the trade also use the spring price ratio to make projections for acreage changes in corn and soybeans for the upcoming crop year. Based on historical acreage data from 1996 to 2016 when the spring price ratio is greater than 2.2 a positive change in soybean acreage is expected. Alternatively, when the spring price ratio is above 2.4, a negative acreage response is expected for corn. Given that this year's ratio is record high, it is a predictable conclusion that fewer acres will be planted to corn and additional acres planted to soybeans in 2017. USDA confirmed these expectations during the most recent [Agricultural Outlook Forum](#).

**Figure 4. Percent Change in Soybean Acreage and Spring Soybean-to-Corn Price Ratio**

1996 to 2017F



A simple linear relationship between the percent change in acreage and the soybean-to-corn spring price ratio supports a 2% decline in corn acreage and a 7 to 8% increase in soybean acreage, holding all else constant. If realized, these percentages suggest corn acreage near 92 million acres and soybean acres between 89 and 90 million acres. These estimates are two million acres higher for both crops than USDA estimates but are in line with average estimates in the trade. However, only 35% and 10% of the deviations from trend are explained for soybeans and corn, respectively. The poor fit suggests that the model is reliable only in predicting the direction of acreage changes.

The March 31 [Prospective Plantings](#) report will remove some of the uncertainty on likely acreage decisions. Importantly, it will also answer a lingering question in the industry: “Will the U.S. plant more soybeans than corn in 2017?” Model results, and USDA forecasts, suggest that 2017 will indeed be another record year for soybean acres, but whether soybean acres surpass corn for the first time since 1983 is still undecided.