



Historical Planted Acre Changes for Corn and Soybeans

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At its annual Agricultural Outlook Conference in February, [USDA projected](#) that planted acres of corn would decrease from 94.0 million acres in 2016 to 90.0 million in 2017, a decrease of 4 million planted acres. At the same time, soybean acres are projected to increase from 83.4 million acres in 2016 to 88.0 million in 2017, an increase of by 4.6 million acres. Herein, we evaluate historical changes in acres across counties, thereby providing perspective on where likely 2017 acreage changes may occur.

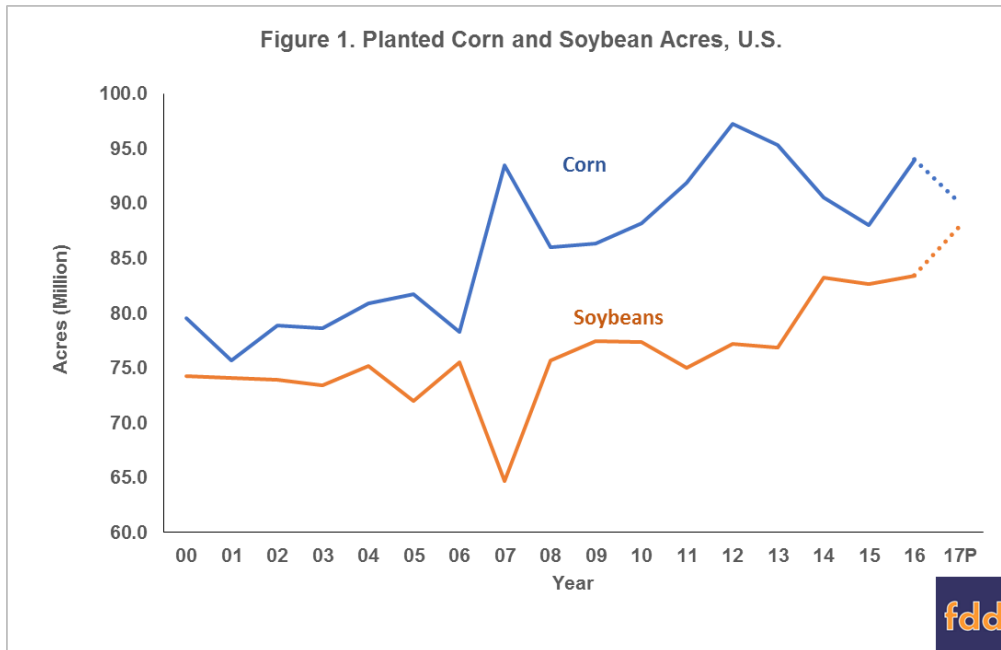
U.S. Planted Acres

In 2016, planted acres to corn in the United States was 94.0 million acres (see Figure 1). This acreage level was the third highest number of planted acres since 2000, only being exceeded by 2012 (97.3 million acres) and 2013 (95.4 million acres). The 2017 projection of 90 million acres would be a 4.0 million acre decrease from the 2016 level. Plantings of 90.0 million acres would be about the same level as occurred in 2014 (90.5 million acres) and would be below the average planting for the last ten years.

In 2016, planted acres to soybeans was 83.4 million acres, the highest amount ever planted in the United States. Before 2014, planted acres to soybeans never exceeded 80 million acres (see Figure 1). Planted acres exceeded 80 million acres in each year since 2014: 83.2 million acres in 2014, 82.6 million in 2015, and 83.4 million in 2016.

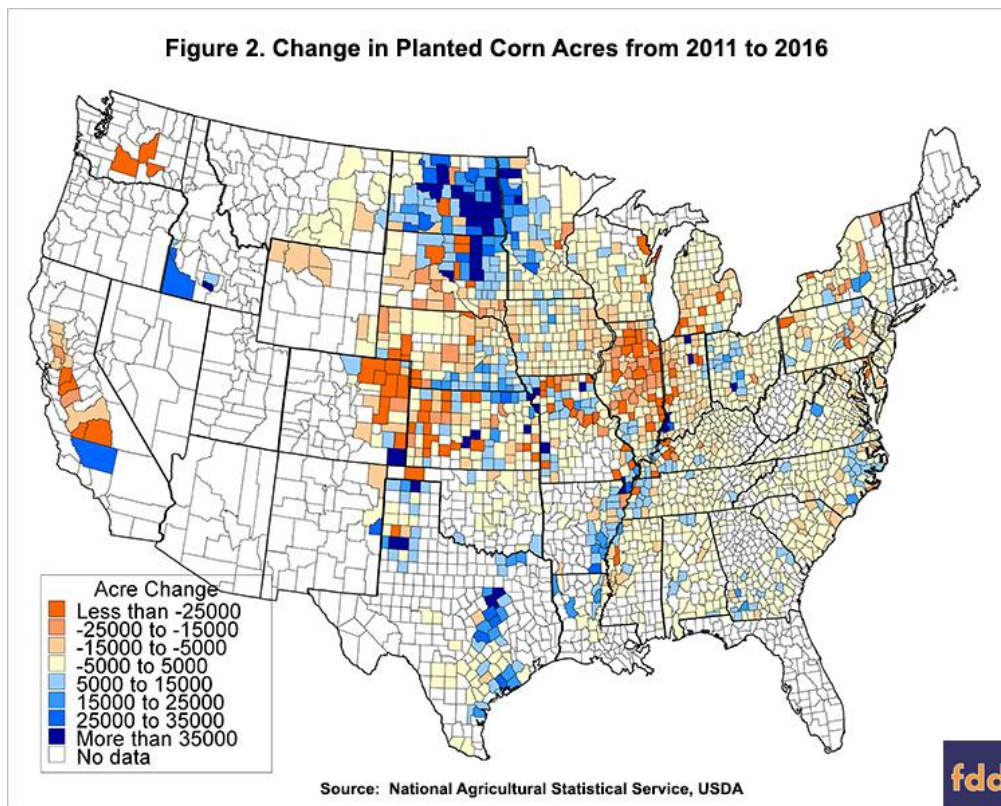
In the following maps, acreage changes from 2011 to 2016 will be shown. In 2011, U.S. corn acres were 91.9 million, 1.9 million acres higher than in 2016. Reversing the corn acre increases during this five year period would go part way to reaching the decreases projected for 2017. The soybean acreage increase from 2011 to 2016 of 8.4 million represents twice the change projected from 2016 to 2017.

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Corn Acre Changes

Figure 2 shows a map color coded to give changes in acres from 2011 to 2016. Counties colored blue had increases in acres, counties coded in orange had decreases in acres. Those counties that are yellow had essentially the same acres in 2016 as they did in 2011.

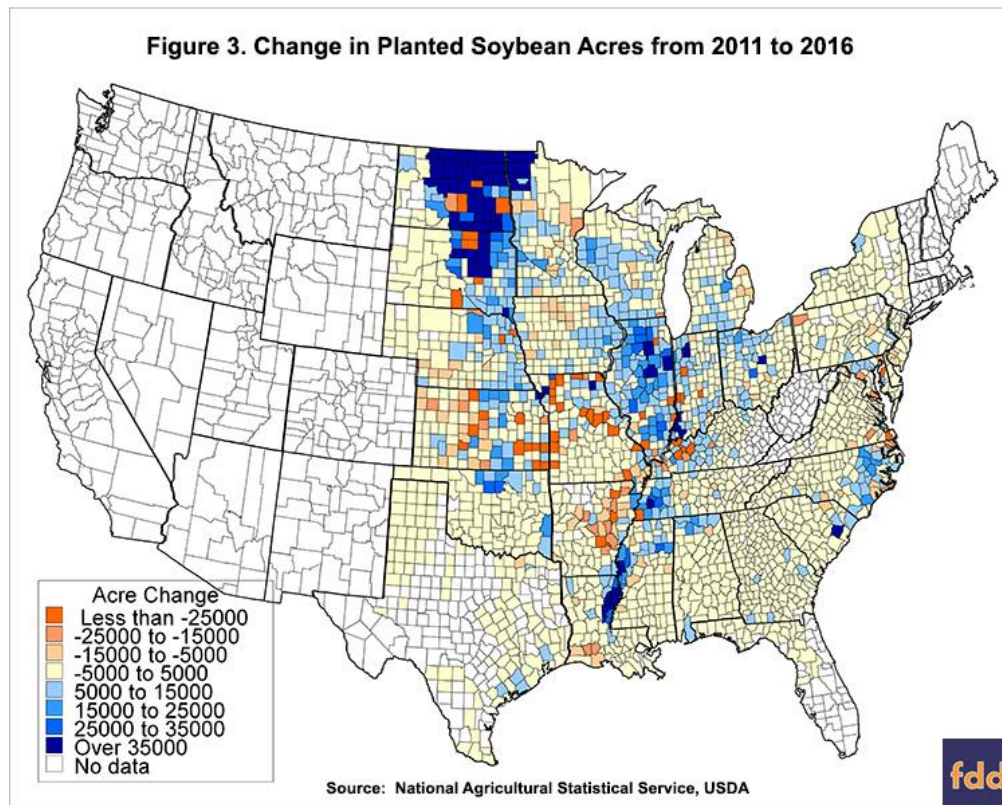


Several areas had pronounced increases. In particular, the northern Great Plains had sizeable increases. Between 2011 and 2016, North Dakota increased acres by 1.2 million, South Dakota by .4 million, and Minnesota by .4 million. Another area of sizable increase was Texas, with the planting .9 million more acres in 2016 than in 2011. Counties along the Mississippi River, especially in Arkansas, increased acres as well.

There were areas of notable decreases as well. Sizable decreases in corn acres occurred in Illinois. Between 2011 and 2016, planted acres in decreased by 1.0 million in Illinois. Indiana and Iowa had modest decreases as well.

Soybean Acre Changes

Figure 3 shows a map with planted acre changes for soybeans. Similar to corn, soybean acres increased in the upper Great Plains. Planted acres increased by 2.0 million acres in North Dakota, 1.1 million acres in South Dakota, and .5 million acres in Minnesota.



Other areas of significant increase were Illinois with a 1.1 million acres increase in planted soybeans. Planted acres also increased along the Mississippi River, parts of Kentucky and Tennessee, as well as areas in North and South Carolina.

Perspective on Changes for 2017

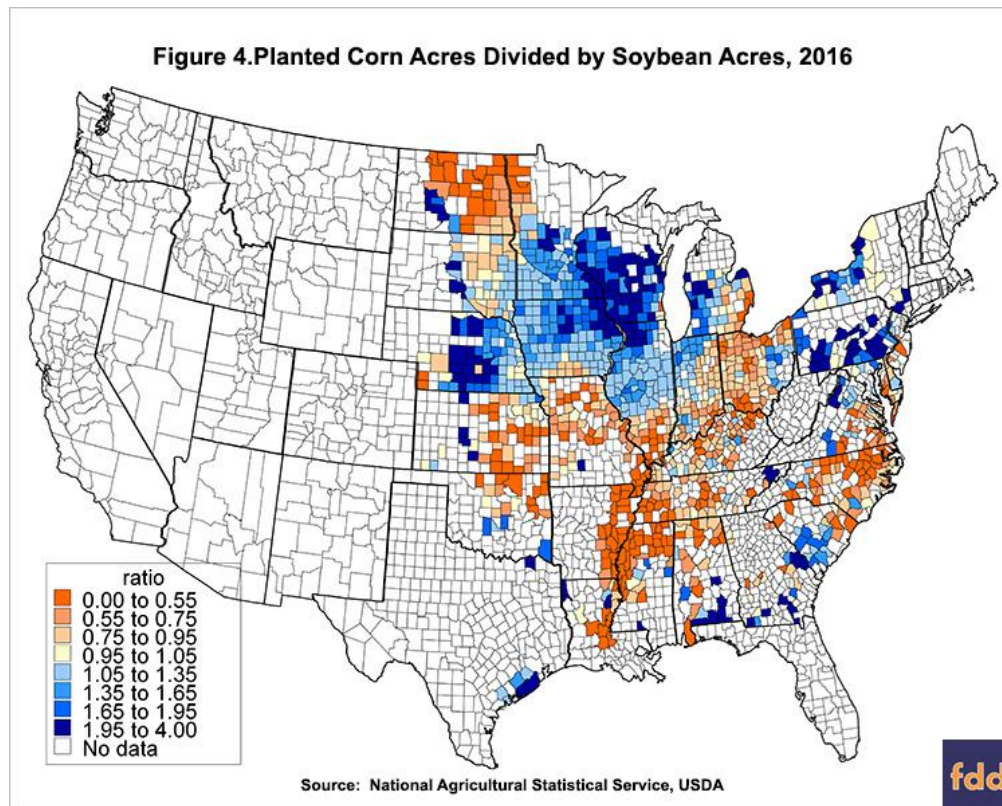
Areas with large acreage changes in the past likely will contribute in a significant way to acre changes from 2016 to 2017. These areas include the upper Great Plains, Texas, and the corn belt.

It seems conceivable that total corn and soybean acres could continue to increase in the upper Great Plains in 2017. Much of the acreage increases of corn and soybeans between 2011 and 2016 came from acres previously planted to wheat. In 2017, wheat acres could continue to decrease, leading to increases in corn and soybean acres. Whether corn acres will decrease while soybean acres increase in this region is an open question. One event that could lead to acre decreases is higher incidence of prevented planting. Prevented plantings were low in 2016, leaving open the possibility of increases in prevented planting acres in 2017.

Texas could see acreage shifts away from corn. Cotton prices look favorable, and an increase in cotton acres could contribute to fewer acres in corn.

Illinois and the corn belt in general could see shifts from corn to soybeans. Returns from crop budget suggest soybeans will be more profitable than corn (*farmdoc daily*, [December 6, 2016](#)), suggesting a shift is possible.

While budgets suggest the possibility, acre shifts have been slow in coming. Perhaps the most likely area where a shift will occur is where corn acres exceed soybean acres by a considerable margin. Corn acres divided by soybean acres exceed 1.0 in many counties in southern Minnesota, Iowa, northern and central Illinois, and western Indiana (see Figure 4). Bringing these areas back closer to a 50% corn – 5% soybean rotation, indicated by 1.0 corn divided soybean value, could increase profits suggesting that switches are possible.



Summary

Areas that experienced large acre changes in the past likely will be the ones where acres changes occur in 2017. This suggests focus on the upper Great Plains, Texas, and Illinois and the corn belt more generally. Continued corn and soybean acreage increases in the upper Great Plains seem reasonable to expect, except if prevented planting acres increase significantly. Texas could experience reduced corn acres. Budgets suggest switches to more soybeans from corn in the Midwest, although this is the case in previous years. Further indications of planting attentions will be received with the release of NASS's *Prospective Plantings* report on March 31.

References

Johansson, R. "Outlook for 2017." US Department of Agriculture, Office of the Chief Economist, February 2017. https://www.usda.gov/oce/forum/2017_Speeches/Johansson_Outlook_2017.pdf

Schnitkey, G., and D. Good. "2017 Crop Budgets and Current Prices Say Switch to Soybeans and Expect Low Returns." *farmdoc daily* (6):228, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 6, 2016.