



## County Corn and Soybean Yields in 2015

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In 2015, most counties in the western Corn-belt had yields above trend, while many counties in northern Indiana, northwest Illinois and western Ohio had yields below trend. Illinois yields were mixed. Maps of county yields are presented in this article.

### 2015 Corn Yields

County yield data were obtained from the National Agricultural Statistical Service (NASS), an agency of the U.S. Department of Agriculture. Yields reported in this article represent the "all" county yield, including irrigated and non-irrigated acres. NASS computes irrigated and non-irrigated yields for some counties, mostly located in Nebraska, Kansas, and surrounding states. Again, yields reported here are for all acres in a county.

Many counties in eastern Nebraska, northern Iowa, southern Minnesota, and Illinois had 2015 yield over 200 bushels per acre (see Figure 1). Three counties in the Midwest had yields above 215 bushels per acre: Piatt County in Illinois (221 bushels per acre), Phelps County in Nebraska (224 bushels per acre), and York County in Nebraska (215 bushels per acre). On the other hand, other counties had lower yields. Many counties outside the eastern Nebraska, southern Minnesota, Iowa, Illinois that had yields below 140 bushels per acre.

Actual-to-trend yields add perspective on whether yields were above or below expectations.

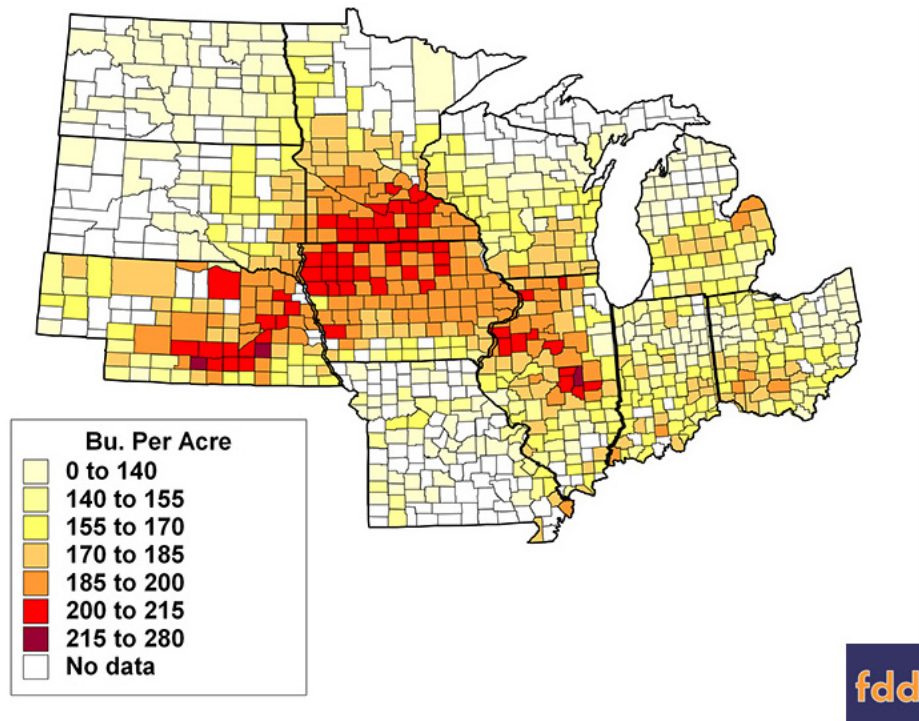
Actual-to-trend yield equals actual yield divided by trend yield. A trend yield represents the expected yield for a county given "normal" growing conditions. Trend yields were calculated by fitting linear lines through data from 1972 through 2014 using regression methods. Then, the linear regression lines were extended to 2015 to arrive at trend yields.

The interpretation of actual-to-trend yield is illustrate using Piatt County, Illinois. Its actual yield in 2015 was 221 bushel per acre, its trend yield was 188 bushels per acre, giving an actual-to-trend yield of 1.18 (221 actual yield / 188 trend yield). In 2015, Piatt County's corn yield was 18% above trend. Piatt County had an excellent growing year in 2015. Actual-to-trend yields above 1.0 indicate that yields were above trend while values below 1.0 mean 2015 yields were below trend.

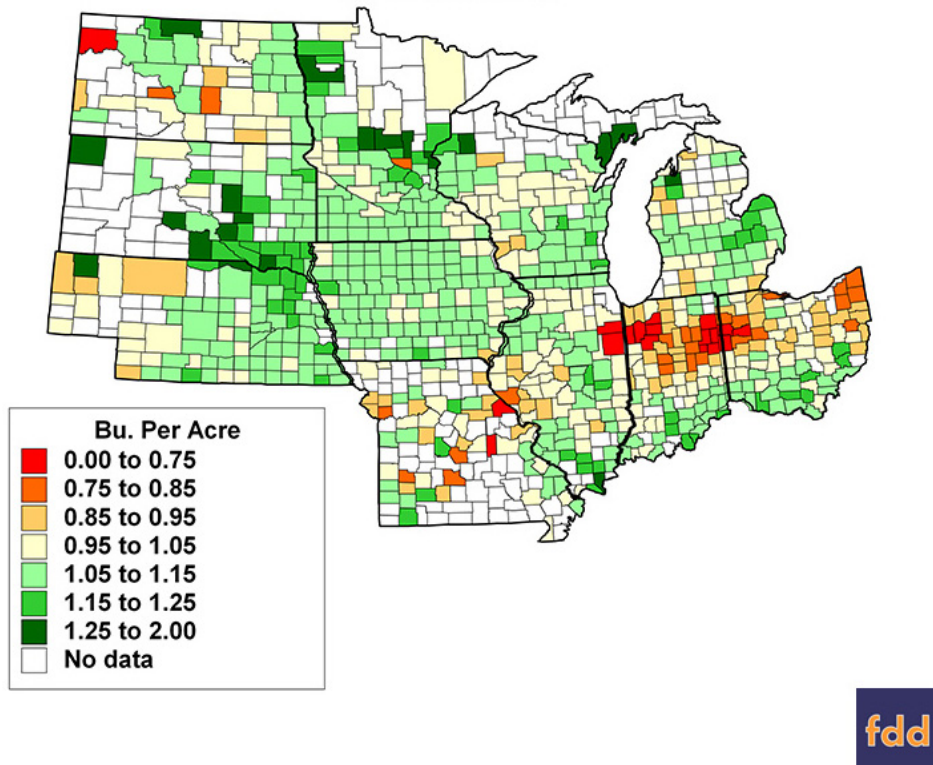
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**Figure 1. 2016 Corn Yields in the Midwest**



**Figure 2. 2015 Corn Yields Relative to Trend Yields in the Midwest**

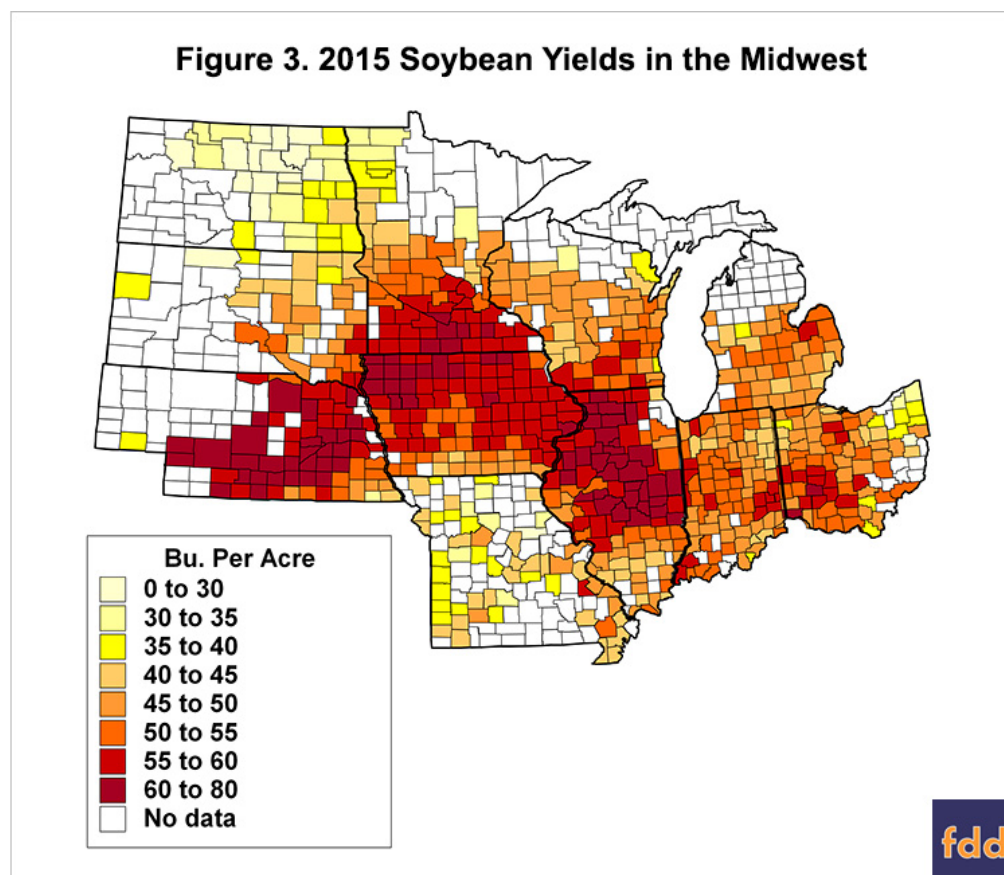


Actual-to-trend values above 1.0 occurred in most counties along the Red River Valley in North Dakota and Minnesota, in eastern South Dakota and eastern Nebraska, central and southern Minnesota, and in Iowa. Overall, corn yields in the western Corn-belt tended to be above trend.

On the other hand, there was a large band of counties in the eastern Corn-belt that had actual-to-trend yields below 1.0. This band begins in northeast Illinois, extended across northern Indiana, ending in northern Ohio. Very wet spring and early summer conditions led to much lower yields in this band.

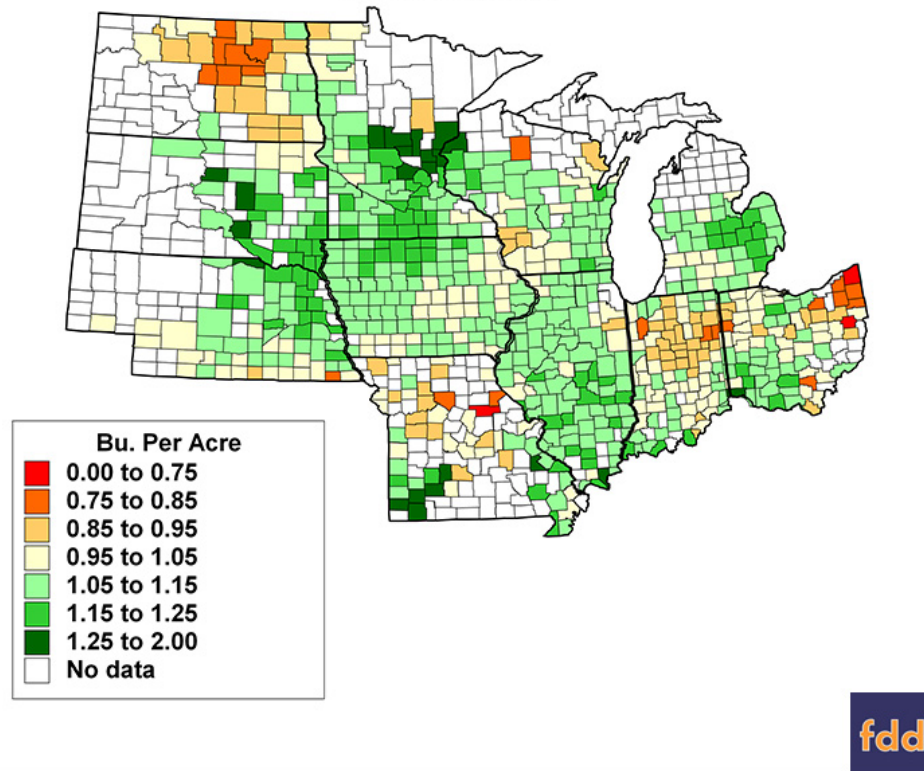
### 2015 Soybean Yields

Many counties had soybean yields above 55 bushels per acre. A majority of these counties occurred in a band beginning in Nebraska, extending along southern Minnesota, going through northern and central Iowa, and ending in northern and central Illinois (see Figure 3). Other counties outside this area also had yields above 55 bushels per acre. Three counties had yields over 70 bushels per acre: Piatt County in Illinois (73 bushels per acre), Dawson County in Nebraska (72 bushels per acre), and Phelps County in Nebraska (70 bushels per acre). On the other hand, lower yields occurred in many counties in North and South Dakota, Wisconsin, Michigan, Ohio, Indiana, and Missouri.



Actual-to-trend yields were above 1.0 in the majority of counties in eastern Nebraska, South Dakota, Minnesota, Iowa, Wisconsin, Illinois, and Michigan (see Figure 4). Many counties in northern Indiana, western Ohio, and northeast Illinois had actual-to-trend yields below 1.0. As described above, this area also had low corn yields. In this area, the wet weather took its toll on both corn and soybean yields. Other areas of low yields include North Dakota, Northern Missouri, and Eastern Ohio.

**Figure 4. 2015 Soybean Yields Relative to Trend Yields in the Midwest**



### Summary and Commentary

Most counties in the western Corn-belt had yields above trend, indicating a good growing year for much of the western Corn-belt. Yields in many eastern Corn-belt counties were below trend. Yields in northern Indiana, northeast Illinois and northeast Ohio suffered because of wet weather in spring and early summer. Yields in Illinois were mixed. Corn yields in Illinois varied from exceptional to well below average. Most Illinois counties had yields above trend for soybeans, except for some counties in Northeast Illinois.

In 2015, U.S. corn yield was 168 bushels per acre and soybean yield was 48 bushels per acre. Both corn and soybean yield were above trend. Obviously, these national yields would have been higher had eastern Corn-belt yields been higher. To have exceptionally high U.S. yields, the vast majority of counties in the Midwest usually have yields above trend (see [farmdoc daily March 25, 2014](#) for more discussion).

Farm incomes were extremely low in 2015. Northern Indiana, northeast Illinois, and northwest Ohio likely will have lower incomes than other areas because of low yields. As a result, financial reserves went down more in areas of low yields.

### References

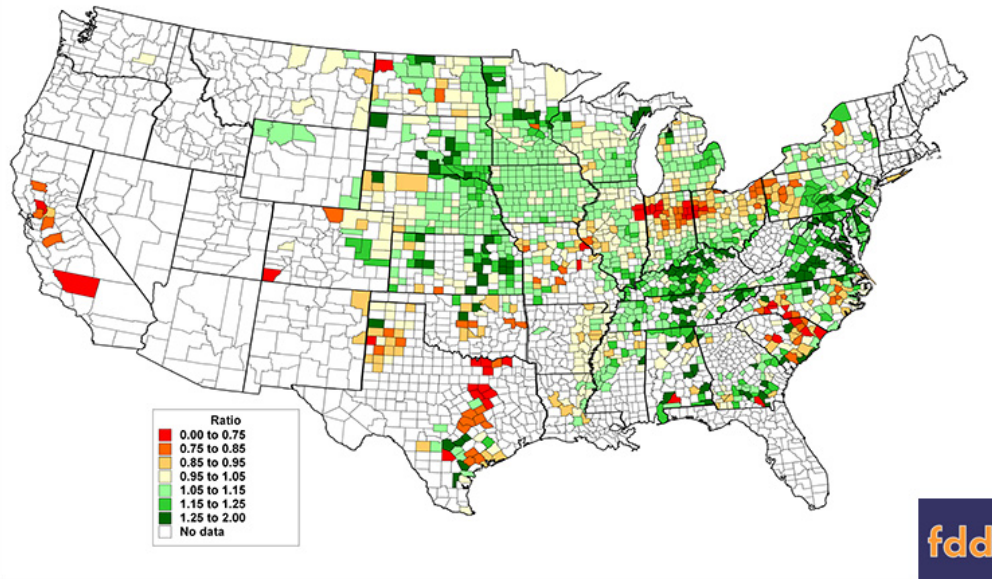
Schnitkey, G. "Causes of High U.S. Corn Yields: Evaluation of County Yields." *farmdoc daily* (4):55, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, March 25, 2014.



## Appendix Figures

The following two figures show actual-to-trend yields for the U.S, thereby expanding the area shown in Figures 2 and 4.

**Figure 5. 2015 Corn Yields Relative to Trend Yields in the U.S.**



**Figure 6. 2015 Soybean Yields Relative to Trend Yields in the U.S.**

