



## Weekly Farm Economics: 2022 County Crop Yields

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The National Agricultural Statistics Service (NASS) recently released 2022 county yields for corn and soybeans. Overall, U.S. average yields were below trends for corn and soybeans. Drought reduced yields in the Great Plains, Delta, and mid-South were partially offset by above-trend yields in many counties of the Midwest.

### Corn Yields

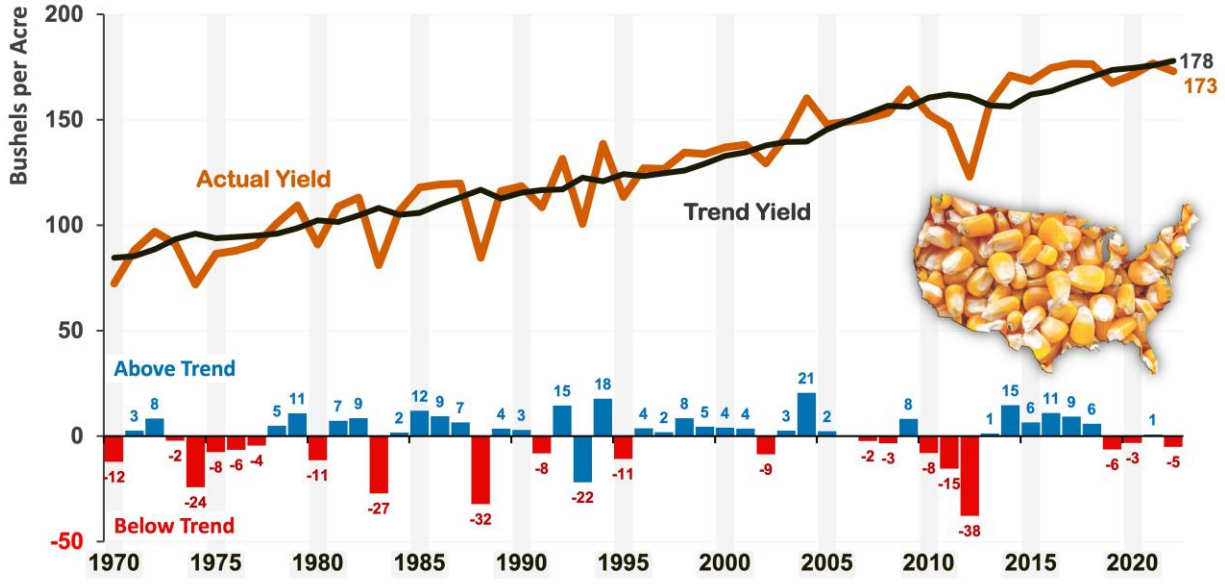
According to NASS, the U.S. average corn yield for 2022 was 173 bushels, 5 bushels below the trend yield of 178 bushels per acre. The 2022 trend yield represents an estimate of the expected yield for 2022 under normal growing conditions and is found by fitting a straight line through the previous 20 years of yields (i.e., 2002 to 2021 yields for the 2022 trend yield). The fitted line is then extended into 2022. Being 5 bushels below trend means that the 2022 yield was below expectations by 5 bushels.

U.S. yields have been below trend in three of the last four years: -6 bushels per acre in 2019, -3 in 2020, +1 in 2021, and -5 in 2022 (see Figure 1). These below-trend yields coincided with above-average corn prices beginning in 2020 (see *farmdoc daily*, [May 31, 2022](#)). While many factors influence corn prices, U.S. yields are significant factors. A below-trend yield acts to increase the price because of lower supply. The reverse is true as well. Above trend yields lead to higher supply and place downward pressure on corn prices. The period from 2013 to 2018 had above-trend yields, which tended to put downward pressure on prices. From 2013 to 2019, corn prices were generally low (see *farmdoc daily*, [May 31, 2022](#)).

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**Figure 1. U.S. Corn Yields in Bushels per Acre, 1970 to 2022**



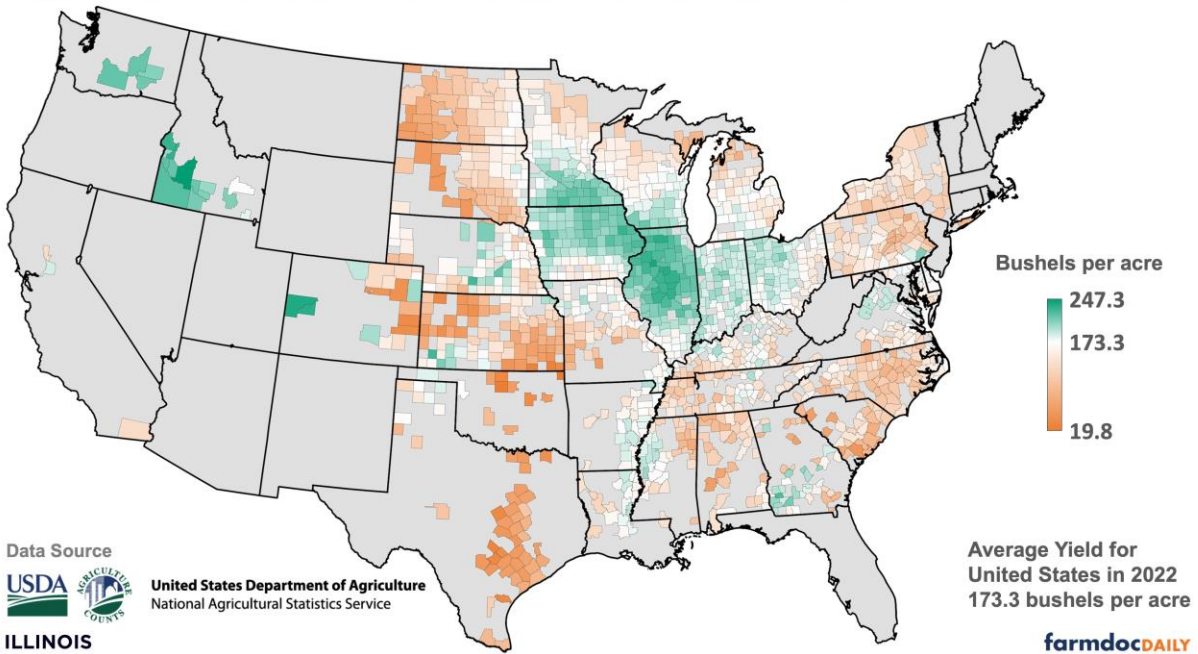
ILLINOIS

USDA United States Department of Agriculture National Agricultural Statistics Service

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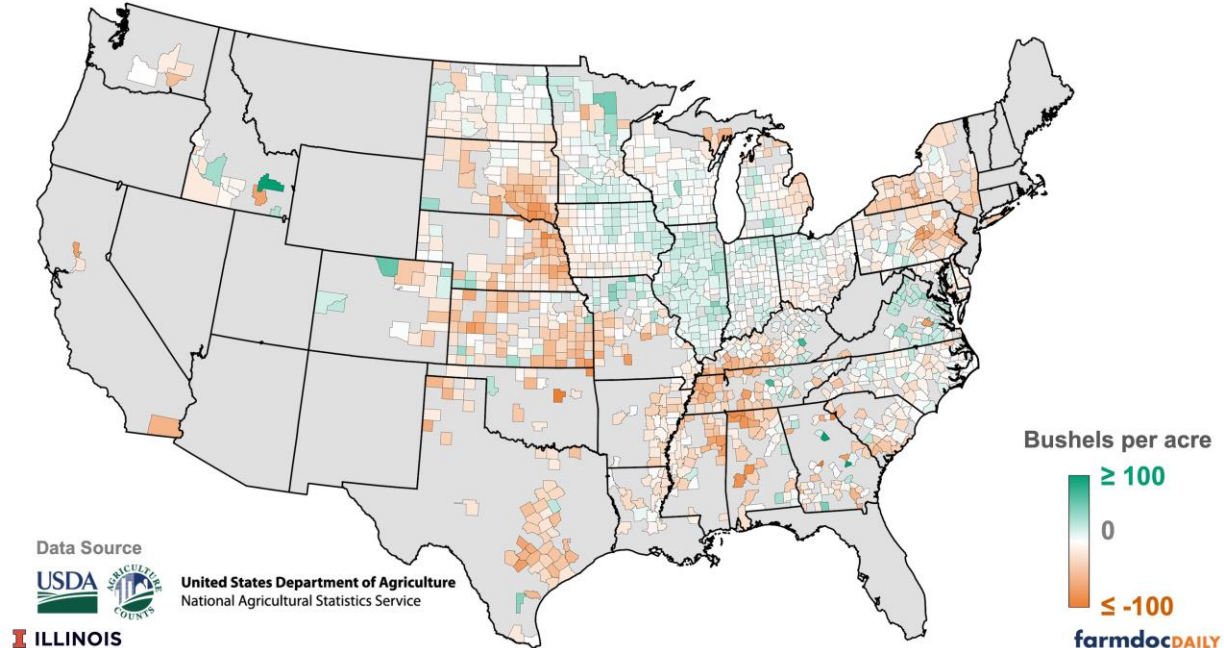
County yields for corn in 2022 are shown in Figure 2. The highest county yield was in Elmore, Idaho, with a yield of 247.3 bushels per acre. Many yields in Illinois were exceptional. Stark County, Illinois, had a yield of 240.6 bushels per acre. The next nine highest yields in Illinois were in Woodford County (235.7 bushels per acre), Ogle County (234.7), De Witt County (232.9), Macon County (232.5), McLean County (232.3), Henry County (231.9), and Sangamon County (231.9).

**Figure 2. County Yields for 2022 Corn in Bushels per Acre**



Actual yields are influenced by both inherent land productivity and growing conditions during a year. Evaluating yields relative to trends provides perspectives on how growing conditions impact yields. Above trend yields were in areas experiencing good growing conditions. Below-trend yields occur in areas of poorer growing conditions. Figure 3 shows county yields minus their respective trend yields. Trend yields were calculated in a manner similar to U.S. yields.

**Figure 3. County Yields Minus Trend Yields, 2022 Corn in Bushels per Acre**

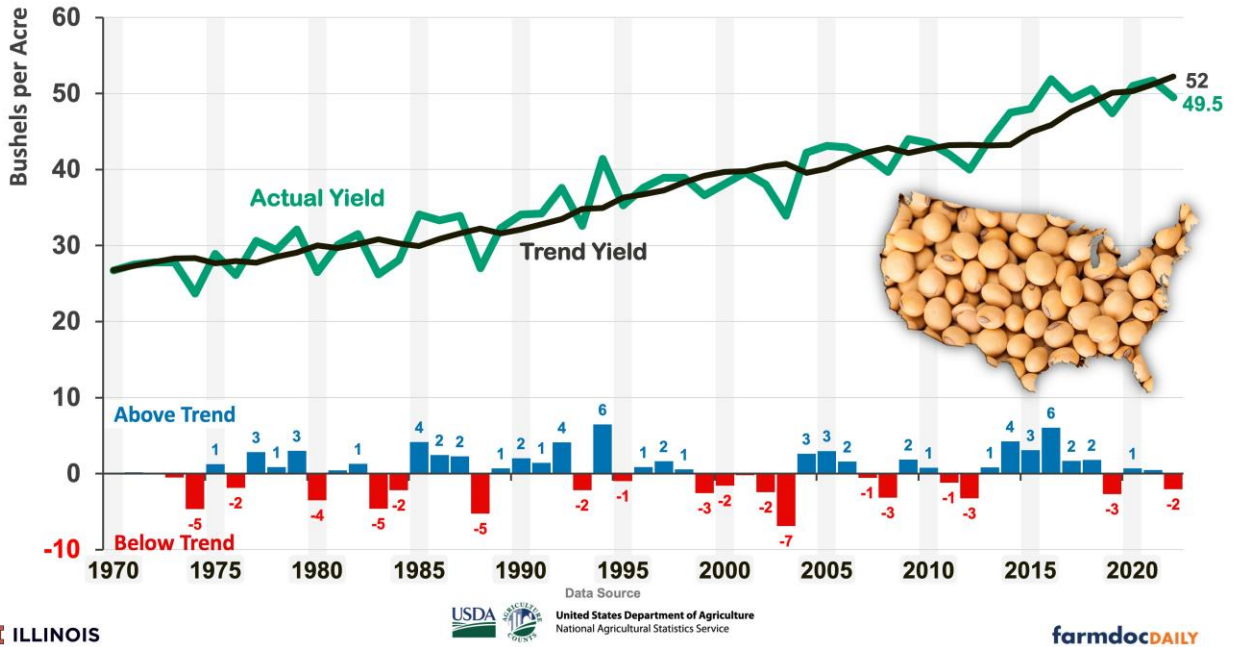


Overall yields were above trend in a geographical area, beginning with some counties in North Dakota, heading east through southern Minnesota and northeast Iowa, then into Illinois, continuing into Indiana and Northwest Ohio (see Figure 3). Outside of this area, many counties had below trend yields, with some of the worst yields being in parts of the Great Plains: South Dakota, Nebraska, Kansas, Oklahoma, and Texas. Actual yields also were below trend in many counties of the Mississippi Delta and the mid-South: Kentucky, Tennessee, Arkansas, Louisiana, Mississippi, and Alabama. These areas of below trend yields faced significant drought during 2022 (see *farmdoc daily*, [December 13, 2022](#)).

### Soybean Yields

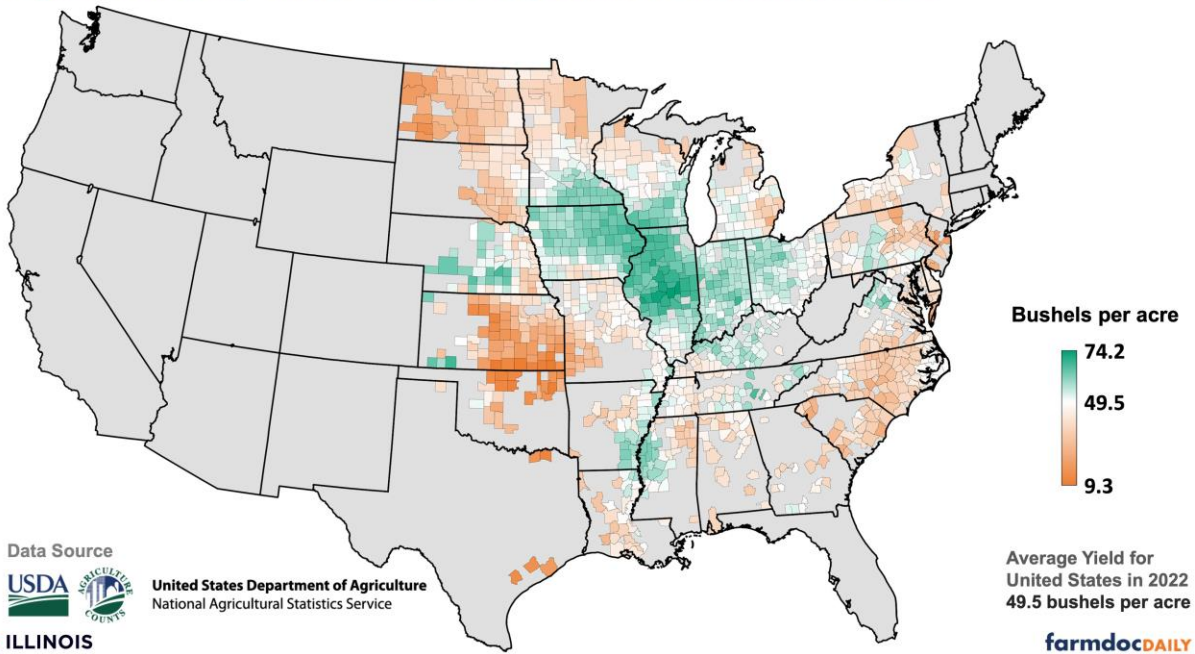
According to NASS, U.S. soybean yields in 2022 averaged 49.5 bushels per acre, below the trend yield of 52 bushels per acre (see Figure 4). Like corn, there was a geographical distribution of yields.

**Figure 4. U.S. Soybean Yields in Bushels per Acre, 1970 to 2022**



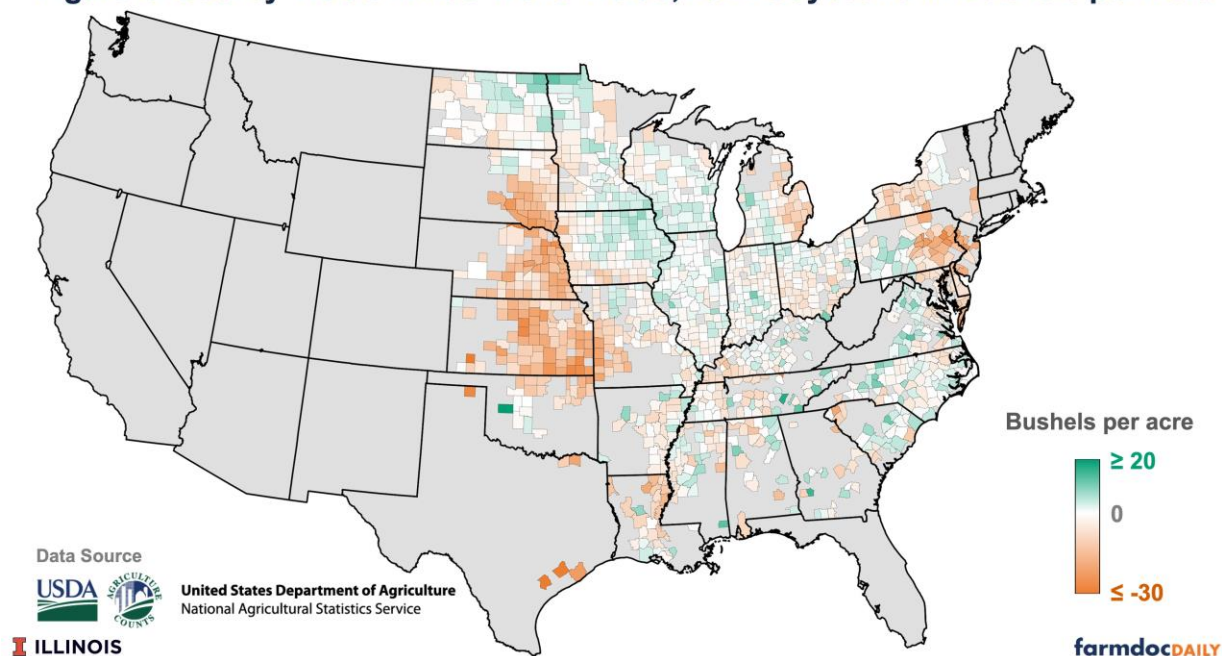
The highest county yields were in Illinois (see Figure 5). Eight Illinois counties had yields above 70 bushels per acre: Piatt (74.2 bushels per acre), Macon (73.8), Sangamon (72.7), Scott (72.1), Logan (71.8), Tazewell (71), Stark (70.8) and Morgan (70). These counties were in central Illinois, which has experienced exceptional soybean yields in recent years. No counties outside of Illinois had yield above 70 bushels per acre.

**Figure 5. County Yields for 2022 Soybeans in Bushels per Acre**



Overall, most counties in the Corn Belt were at or above trend. However, below-trend yields occurred in many counties in parts of the Great Plains: South Dakota, Nebraska, Kansas, and Oklahoma). Below trend yields occurred in New York, eastern Pennsylvania, and the southern Mississippi River.

**Figure 6. County Yields Minus Trend Yields, 2022 Soybeans in Bushels per Acre**



### Summary

Both U.S. average corn and soybean yields were below trend in 2022. For both crops, areas of the Midwest had above-trend yields. The Great Plains, Mississippi Delta, and Mid-South drought adversely impacted yields. However, above-trend yields in the Midwest kept U.S. yields closer to trend nationally.

Notably, yields have been below trend in recent years, particularly for corn. A return to above-trend yields could lead to a return of lower corn and soybean prices.

### References

Schnitkey, G., C. Zulauf, N. Paulson, K. Swanson and J. Baltz. "[Are Long-Run Prices Still \\$4 for Corn, \\$10 for Soybeans, and \\$5.50 for Wheat?](#)" *farmdoc daily* (12):79, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, May 31, 2022.

Schnitkey, G., N. Paulson, C. Zulauf and J. Baltz. "[Corn and Soybean Yields in 2022.](#)" *farmdoc daily* (12):188, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, December 13, 2022.