

How has the recent dry and hot weather affected corn yields?

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Introduction¹

The latest USDA Crop Production report on August 11, 2023, predicted an average corn yield of 175.1 bu/ac. Since then, there has been some extremely hot and dry weather in parts of the U.S. This article shows that yields have likely declined since the August crop report but based on the modeling approach discussed here, current yields are still in line with the USDA August estimate.

Ibendahl has been developing yield forecasts for the last several years using the USDA crop condition reports. These reports, which are released every Monday at the state level, can be used as a forecast for state yields. The exact procedure is described in Kansas Wheat Yield Outlook for 2018. To develop a national yield estimate, the 18 leading corn states are estimated individually and then scaled upward to produce a national yield estimate. Unlike the USDA estimate, the model used here provides a confidence interval and can be run every week.

Discussion

Figure 1 shows the estimated national corn yields on a per week basis. When the USDA estimate came out, the model used by Ibendahl was predicting a national yield of 178.1. Since then, the estimate yield from Ibendahl has declined to 175.9. This is a 2.2 bu/acre decline or a decrease of 1.2 percent. The confidence interval from the 9/3/23 estimate is from 171.7 bu/ac to 180.0 bu/ac.

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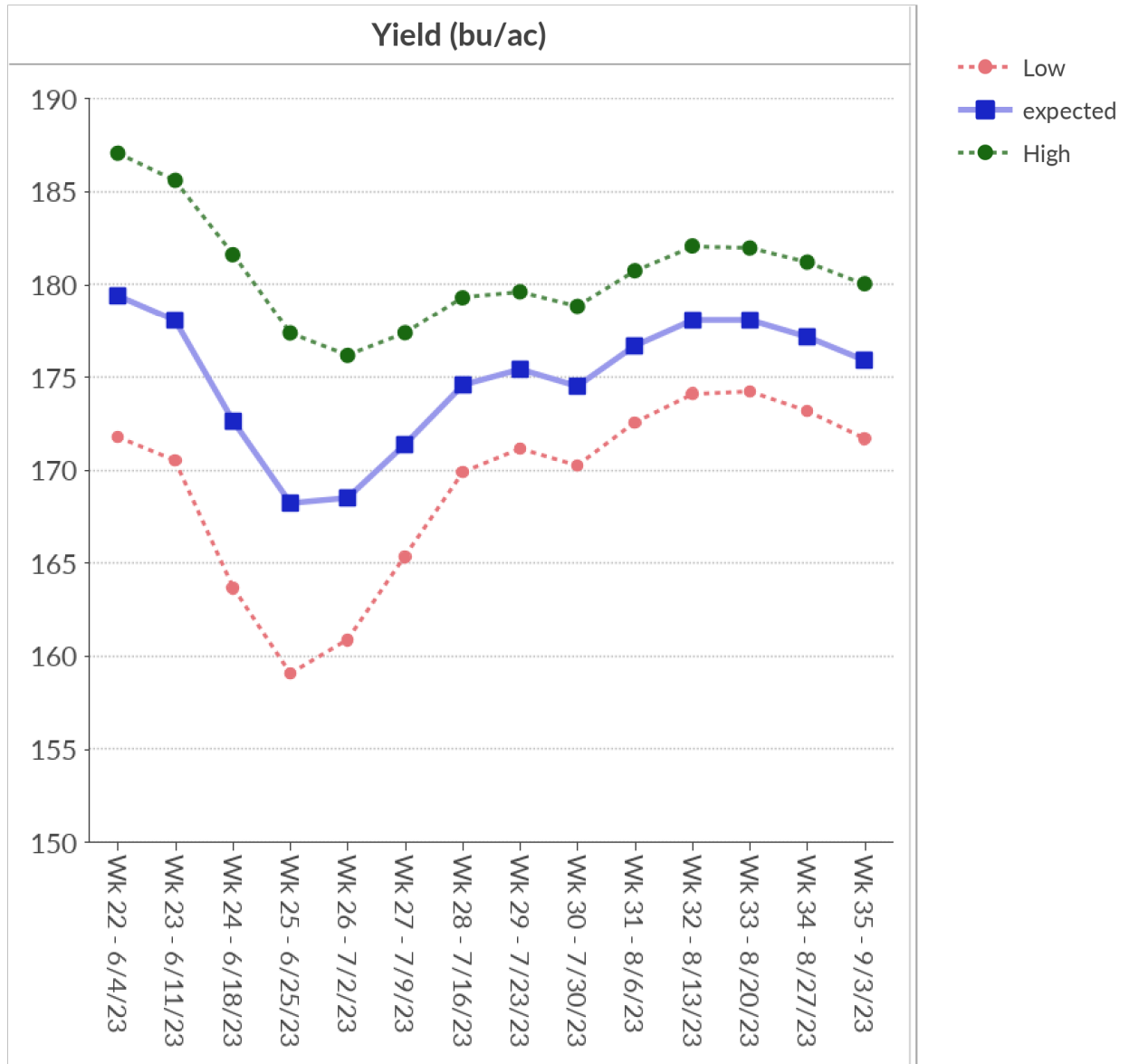


Figure 1. U.S. National Corn Yield Estimates (bu/ac)