



Weekly Outlook: The Season for Determining Corn Yields is Underway

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May 29, 2012

farmdoc daily (2):101

Recommended citation format: Good, D. "The Season for Determining Corn Yields is Underway." *farmdoc daily* (2):101, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, May 29, 2012.

Permalink: <http://farmdocdaily.illinois.edu/2012/05/the-season-for-determining-cor.html>

http://farmdoc.illinois.edu/podcasts/weeklyoutlook/Weekly_Outlook_052912.mp3

The 2012 U.S. average corn yield will be one of the dominant factors in determining the level of corn prices over the next year. Expectations about that yield have started at a pretty high level, but the critical period for yield determination is really just beginning.

What do we know about yield potential as the summer growing season begins? The most important development to date is the generally timely planting of the crop. There is a relatively wide window of planting dates for maximum corn yield potential, with yield penalties associated with late planting. Since corn planting dates vary considerably by geographic area, corn planting occurs over a period of several weeks, and corn planting has been occurring earlier over time, there may be a number of ways to characterize timeliness of planting on a national basis. For the period beginning in 1986, we have defined late planting as the percentage of the crop planted after May 20 in the major corn producing states included in the USDA's *Crop Progress* report.

This year, only four percent of the corn crop in the 18 major corn producing states was planted after May 20. That is the smallest percentage of the crop planted late during the 27 year period since 1986. On average, 18 percent of the crop was planted after May 20 from 1986 through 2011. There were 9 other years when less than 10 percent of the crop was planted after May 20. In those 9 years, the U.S. average yield was within two bushels of the trend yield in 5 years. Large deviations from trend yield occurred in the early-planted years of 1987 (+ 8 bushels), 1988 (-29 bushels), and 1992 (+16.8 bushels). These yield results are not especially informative for forming expectations about the average yield in 2012. Planting date may be important for yield potential with everything else equal, but summer weather conditions ultimately determine the level of yields. The small percentage of the crop planted late this year suggests that the U.S. average yield will be higher than if a normal percentage had been planted late, but the level of yields is still to be determined.

A second piece of early information relative to corn yield potential is the crop condition rating provided in the USDA's weekly *Crop Progress* report. Historically, there has been a positive relationship between the percentage of the crop rated good or excellent at the end of the season and the U.S. average yield relative to trend. Early crop condition ratings are suggestive of yield potential, but ratings can and do

change substantially by the end of the season. The first crop condition rating of the season this year showed that 77 percent of the crop was in good or excellent condition as of May 20. Since 1986, an average of only 66 percent of the crop was rated in good or excellent condition in the first report of the season. There were only 6 other years when the initial ratings showed 75 percent or more of the crop in good or excellent condition. The rating at the end of the season was higher than the initial rating in two of those years (1987 and 1994) and the U.S. average yield was well above trend in both years. The rating at the end of the season was below the initial rating in 4 of the 6 years. The average yield was near trend value in three of those years when the final ratings showed 60 to 69 percent of the crop in good or excellent condition. The U.S. average yield was well below trend in 1991 when the final rating showed 53 percent in good or excellent condition.

A small percentage of the crop planted late this year and the early condition of the crop point to the potential for an above-trend yield in 2012, but the most important part of the season is just beginning. The corn market will continue to follow weather developments and crop condition ratings in order to refine yield expectations. At this juncture two important developments may be required in order to maintain high yield expectations. The first is some convincing evidence that the relatively long period (8 months or so) of above average temperatures is giving way to normal or below normal temperatures. The second is for soil moisture deficits in important areas of the central, eastern, and southern Corn Belt to be eliminated.

In addition to yield prospects, the expected size of the 2012 crop will be impacted by the magnitude of planted and harvested acreage. The USDA will provide survey-based estimates in the *Acreage* report to be released on June 29. New crop corn prices are expected to remain under pressure as long as large crop expectations prevail.