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Rapid Corn Planting Progress, But Well Below the Record Pace

Scott Irwin and Darrel Good

Department of Agricultural and Consumer Economics
University of Illinois

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The USDA's weekly *Crop Progress* report indicated that 43 percent of the U.S. corn acreage was planted during the week ended May 19, 2013. In terms of percentage of acreage planted, that equaled the record progress for the week ended May 10, 1992. In 1992, 79.3 million acres of corn in the U.S. were planted, implying that 34.1 million acres were planted during the peak week that year. U.S. corn planting intentions for 2013 were reported at 97.3 million acres, implying that 41.8 million acres were planted last week. Conventional wisdom explains the rapid rate of planting progress this year as a function of larger and more technologically sophisticated planters.

We begin our analysis by noting that total planting progress does not necessarily reveal the pace (speed) of corn planting during the week because the pace of planting depends on the number of days during the week that were suitable for planting. In an [earlier *farmdoc daily* post](#) based on an analysis of Illinois planting data, we concluded that the pace of corn planting in terms of acres planted per suitable field day during the peak week of planting had increased about 28 percent from 1970 to 2011. Since corn acreage in Illinois increased by about 20 percent during that time period, the *percentage* of acreage planted per suitable field day during the peak week of planting had increased only marginally over time.

Here, we repeat that earlier analysis of peak week corn planting with the addition of 2012 and 2013 planting data. The analysis is limited to Illinois due to the lack of data relative to the number of suitable field days available per week in other states over a long time period. There is not an obvious reason that the results for Illinois would differ for other major corn producing states.

As indicated in Figure 1, a record 57 percent of Illinois corn acreage was reported to be planted in the week ended May 19, 2013. That exceeds the previous total peak-week planting progress record of 50 percent in 1973, 1987, and 1999. Based on planting intentions of 12.2 million acres, the weekly progress implies that a record 7 million acres of corn were planted in the state last week. That is well above the previous record of 5.5 million acres in 1982. As noted above, many observers were quick to credit larger equipment and technological developments for the record planting progress this year. However, planting progress during any week is also influenced by weather conditions, so that rapid progress could also be partially attributed to unusually favorable weather. We measure the effect of weather on planting progress by calculating planting progress per suitable field day as reported by Illinois NASS.

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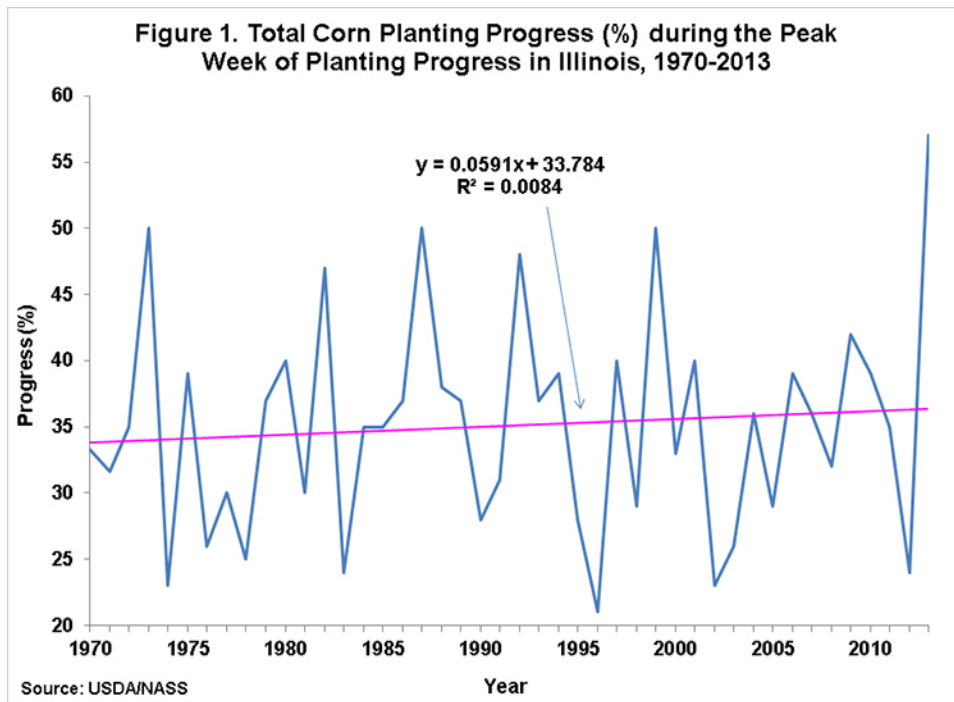
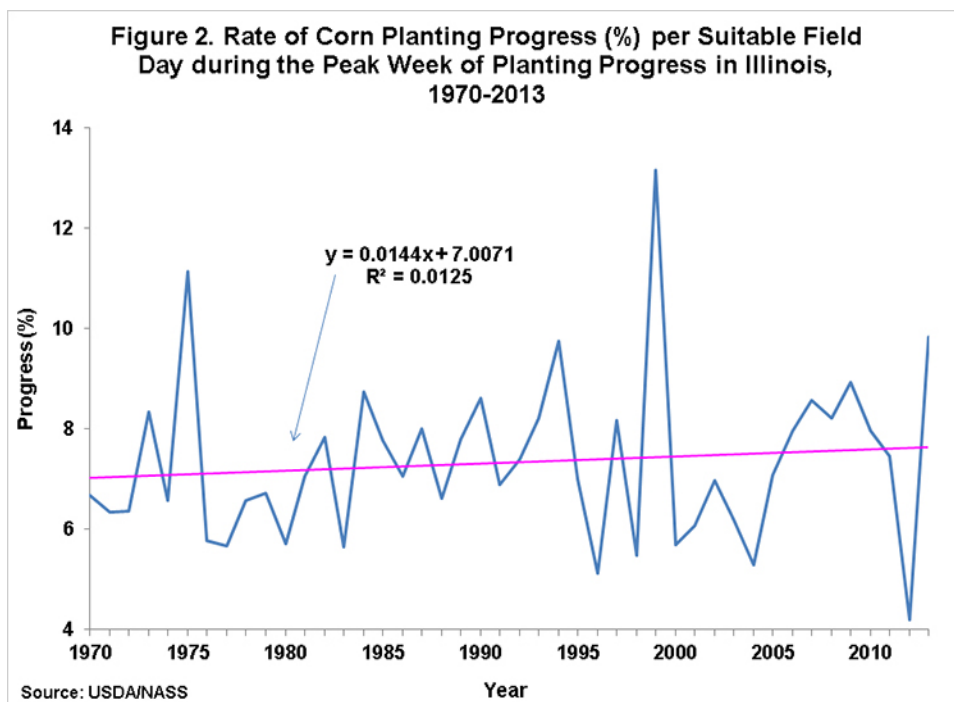
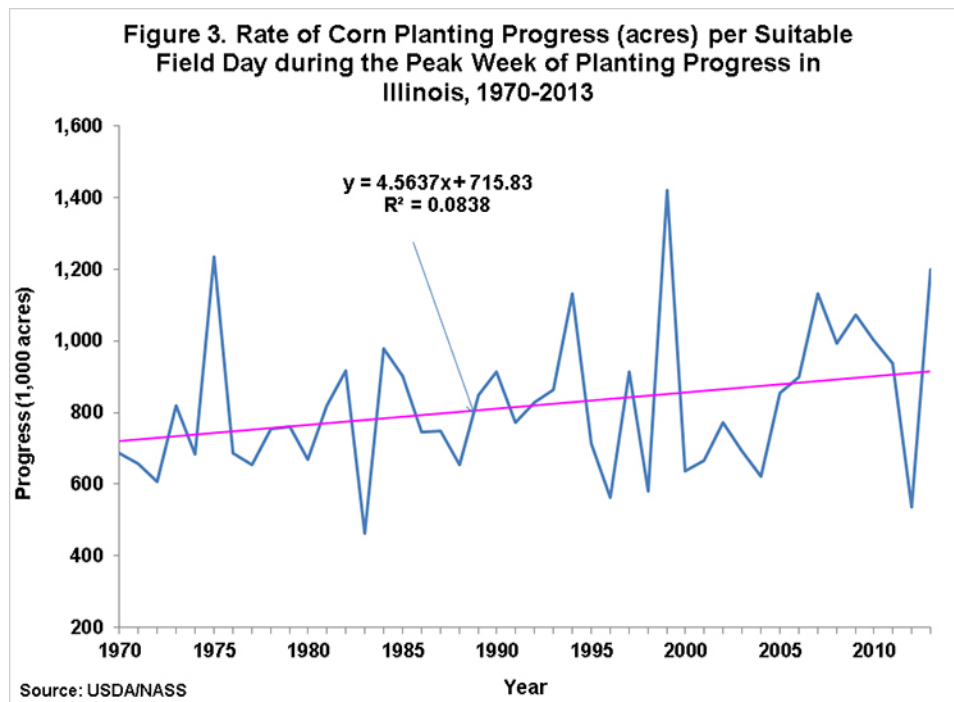


Figure 2 portrays the percentage of the corn acreage planted in Illinois per suitable field day in the peak week of planting from 1970 through 2013. The calculations confirm our previous findings of a very modest increase in the planting rate per suitable day over time. With 5.8 suitable days reported for the week ended May 19, 2013, an average of 9.8 percent of the acreage was planted per suitable field day during the week. That is above the long term trend of 7.6 percent, but well below the previous highs of 11.1 percent in 1975 and 13.2 percent in 1999 and equal to the rate in 1994.



Finally, Figure 3 portrays the number of acres planted per suitable field day during the peak week of corn planting from 1970 through 2013. The trend line confirms our earlier estimate of a 28 percent increase in the number of acres planted per suitable field day during the peak week of planting since 1970. The

implied planting rate of 1.2 million acres per suitable field day last week is well above the trend rate for 2013 of 917 million acres. However, the implied rate is well below the previous record of 1.42 million acres in 1999 and the rate of 1.24 million acres in 1975. The rate also exceeded 1.0 million acres in 1994, 2007, 2009, and 2010.



Implications

The rate of corn planting during the peak week of planting, measured in total acres, has increased over time. Much of that increase is likely attributable to larger equipment and improved technology. However, the increased speed of planting has just about offset the increase in total acreage so that the pace of planting as measured by percentage of total acreage planted has increased very slowly over time. The peak-week corn planting pace, at least in Illinois, was not record high in 2013, as measured in either total acres or percentage of acres planted per suitable field day.

These results suggest that the daily rate at which the U.S. corn crop can be planted is likely still less than generally perceived. A key observation is that weekly progress in percentage terms should be normalized for differences in suitable field days in order to make 'apples to apples' comparisons across time. From this perspective, we see no reason to fundamentally alter the conclusion [we reached in 2011](#) about planting progress, "The evidence suggests that the crop is not planted more quickly with larger, but fewer planters than was accomplished with smaller, but more numerous planters in the past...Weather is likely still the largest determinant of overall planting progress rather than equipment size."

Finally, some argue that the combined pace of corn and soybean planting during the week of peak planting should be analyzed to more correctly measure the trends in planting pace over time. This is relevant because there has been a trend over time to earlier planting of soybeans. We have not done a full analysis of combined corn and soybean planting progress. However, we can observe that the total number of acres of corn and soybeans planted per suitable field day in Illinois during the peak week of corn planting was about 80,000 acres higher in 1999 than in 2013.