Planting Delays And Corn Prospects

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April 2013 has turned into a "second March", with wet weather and cool temperatures persisting into the last week of the month, and corn planting progress stuck at 1 percent, with little chance of much additional progress before the calendar turns to May. Nationally, only 4 percent of the corn crop was planted by April 21, and none of the Corn Belt states had more than 1 percent planted. The corn that has been planted is struggling mightily to survive the soil conditions and to emerge.

If we are lucky enough to "skip" another month and have May look more like a typical June, it's not too late to get the planting and crop back on track. So while yield potential will start to drop as we get farther into May with planting, chances of a good corn crop remain high, as long as weather permits planting soon, and then returns to a more normal pattern of rainfall without summer drought periods like we've had the past three years in parts of Illinois.

Most of our planting date studies show that yield loss accelerates as planting is delayed in May, and getting corn planted by the end of April is a recognized goal in Illinois. The reality is, though, that on average, we have only managed to get a little more than 40 percent of our corn planted by this target date (Figure 1), and it's nearly the end of May before we get to 90 percent planted. We have several times in recent years planted more than 50 percent of the corn crop in a 10-day period, and have the capacity to plant much faster than that if all fields were ready at once. This means that weather and soil conditions are the barriers to planting early.

Despite our anxiousness to finish planting by the end of April, Illinois data over the past 20 years do not show that early planting alone boosts yields. In fact, there is no correlation between time to 50% planted and yield, as measured by departure from trendline yield (Figure 2). It's clear that the early planting and drought-damaged yields of 2012 helped wreck this correlation, but even if we eliminate 2012, percent planted by April 30 still explains only about 5 percent of the yield departure from trend.

Does this mean that getting the crop planted early is not important as a management goal? Certainly not: planting before the end of April generally means that we've removed late planting – and the shortened season and greater chance of stress that follow late planting – as a potential barrier to high yields, thus maximizing yield potential. At the same time, we need to recognize that it's not "game over" if we are forced by weather and soil conditions to plant into May, even past mid-May.

The fact that early planting does not necessarily lead to high yields does tell us that what happens after planting and through the rest of the season is more important than when we get the crop planted. This in turn reminds us that it's important not to do anything that might compromise the plant's ability to take advantage of conditions later in the season that will determine actual yield. That certainly includes taking care not to plant into wet, compacted soils in our rush to plant early. Δ

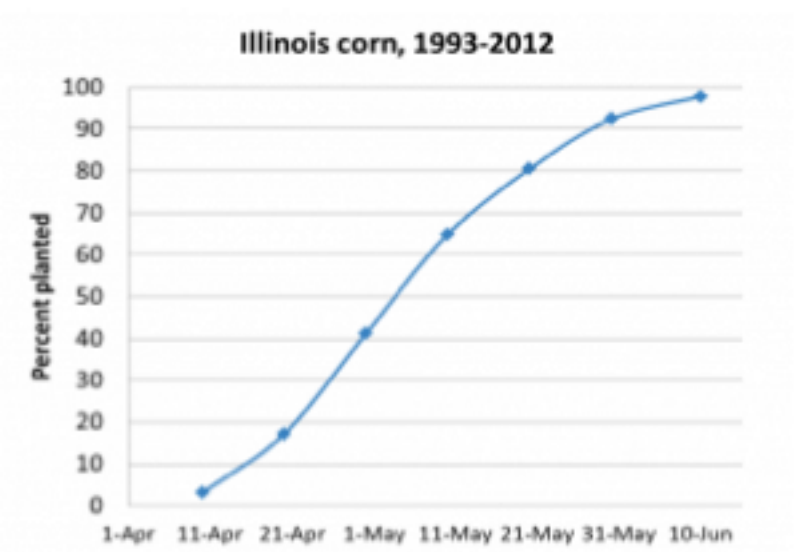

Figure 1. Planting progress for Illinois corn, 1993-2012. Source: NASS

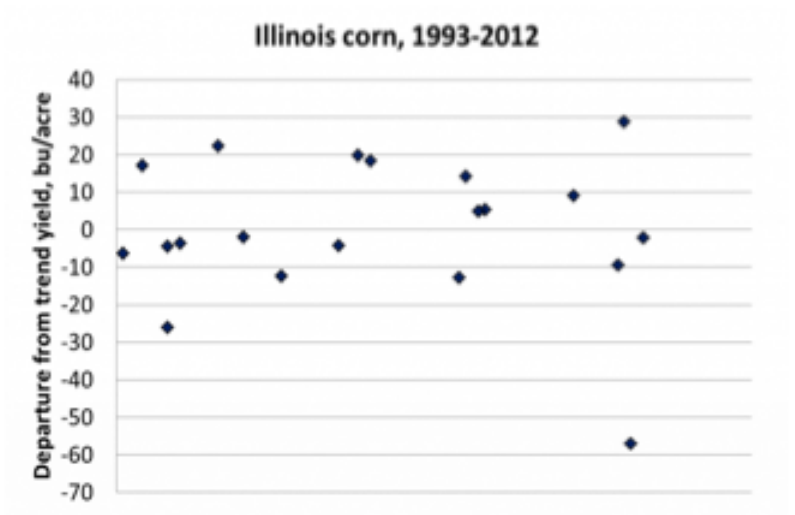

Figure 2. Percentage of Illinois corn planted by April 30 and departure of statewide yield from trend, 1993-2012.

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