

**When is it too late to plant corn?**

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Field conditions are just now getting right for the planting of corn on most of the farms in Central Mississippi. The entire scenario has been wrong for several weeks, with morning soil temperatures in the forties, low areas that were too wet to support equipment, and in many cases ruts from last year's harvest, crop residue, and vegetation, that required tillage. I've seen equipment mired in mud as farmers have attempted to get fields ready for planting; but only a few have been able to plant until now. Although waiting is difficult, it seems the wisest choice in many situations.

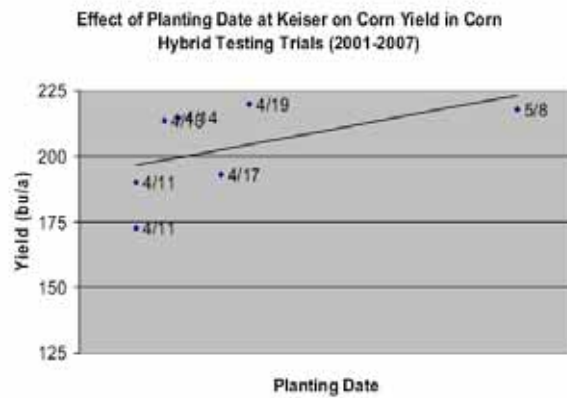
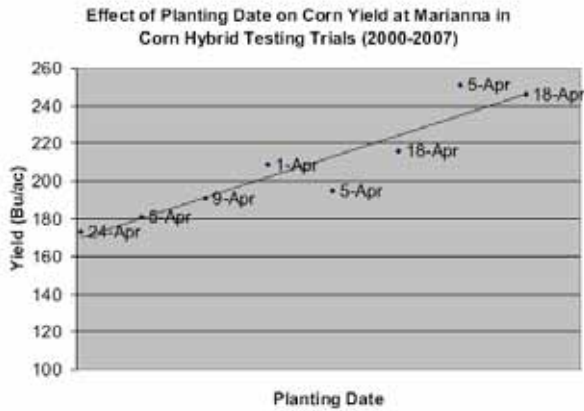
One of the most common questions in recent weeks has been "how late is too late for planting corn?" As usual, Extension agents, consultants, and other technical workers are expected to answer questions like this even though there is no answer that fits every situation. And as usual, experienced farmers already know the answer. They just hope someone will tell them what they want to hear. This proves again what I have said so many times that there is more psychology than agronomy in this work.

There are some basic facts that can be evaluated as spring is rapidly passing. Perhaps the most important of these is that corn is a "Degree Day 50" crop that matures primarily in relation to the accumulation of "heat units". These heat units begin adding up when temperature is above 50 degrees and don't accumulate any faster when above 86 degrees Fahrenheit. This subject has been discussed for many years in crops like corn, rice, and cotton; but the simple fact is that we can't control it. We have to accept what nature sends us. The time of planting has much less effect on maturation than all the attention it gets would suggest. During times like this, corn makes less progress toward maturity than it will later. Plants that emerge days and even weeks apart may mature very close to the same time; and later plantings may enjoy improved plant survival.

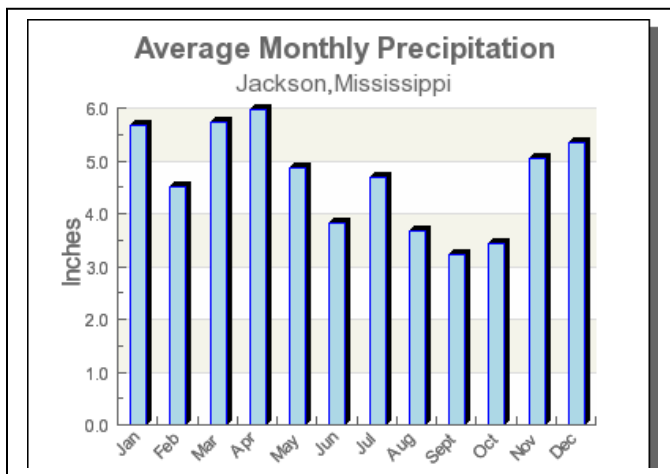
Those who have large amounts of corn acreage must by necessity push the "envelope" on planting in order to get over their fields before the threat of dry weather increases. Moisture becomes for them the main factor in the decision about planting date. Much of their corn is planted when soil conditions are at best marginal for seed germination and emergence of plants. The fact that corn seed are normally high in quality allows them more latitude in planting than in other crops; and seed treatment products provide a good degree of protection from seed rotting organisms and soil insects. Some of the earliest planted corn has to be replanted almost every year; but I am amazed by how much of it survives.

Most of the research into the effect of planting date has been done in the Corn Belt states; and their findings suggest that yields may be expected to begin a slow decline with later planting dates after about the middle of April. Equating this information to our area is difficult; but a rough estimate might be that this may be something like early April in the Midsouth. However, a study done in Arkansas from 2000 through 2007 shows that yields may actually be improved for plantings through the month of April (Jason Kelly, Arkansas Corn and Soybean News, April 2008). The limiting factor is almost certainly water. We can talk about fertility, diseases, insects, and other things; but in the Mississippi Hills the main issue is water since very few of our farms have irrigation.

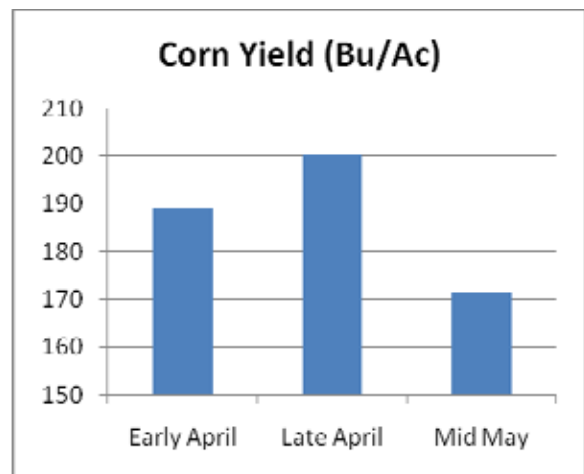
Corn planted in mid to late April will emerge and develop rapidly in most years; and will normally arrive at the silk and tassel stage in early July. Historically, we have enjoyed relatively good rainfall during July, which supports pollination and grain formation. We are now being forced to plant corn in mid to late April; but the result may actually be positive rather than negative if our normal weather pattern arrives as it has during most years in the past. As for when is too late; improvement in hybrids, and the addition of biotech traits for insect suppression have moved that date later. Water will almost certainly be the limiting factor, along with increased chances for arrival of storms later in the season. Take home message: Plant as soon as possible. What a revelation... Thanks for your time.



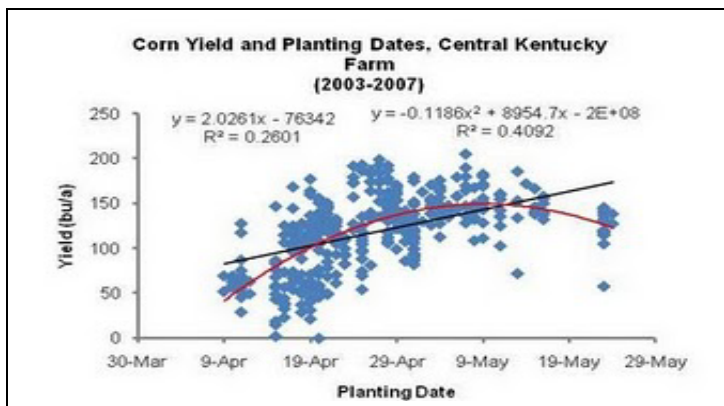
Source: Jason Kelly, Arkansas Corn and Soybean News, April 2008



Average rainfall by month: Note July, as compared with other summer months.



Corn yield vs. planting date (Source: Burns and Abbas, Stoneville, MS, 2008)



Source: Herbek and Lee, Univ. of KY, 2009

This research done by University of Kentucky Extension workers indicates that corn yields may be expected to decline for plantings after about May 10. Since we are well south of that area this date probably should be moved back to about the end of April. This work also validates the idea that later plantings may perform very well. I expect that water is the key factor there as well.