

When To Plant?

Studies Show Best Time To Plant Corn Is Early- To Mid-March

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The impact of planting date on corn production is one of the studies led by Dr. Rick Mascagni, professor of agronomy at LSU AgCenter Northeast Research Center at St. Joseph, La.

"We're doing production research, including soil fertility, plant population and irrigation," he said. "In this particular project we're looking at planting date and comparing it to our recommended planting date which is early- to mid-March. We are looking at mid-March, mid-April and mid-May planting dates on the commerce silt loam and the Sharky clay soils for seven hybrids for the second year. The Sharky test is irrigated."

The sharky is an irrigated study and right now everything looks good. Last year in the study the third planting was lost on the clay but this year the third planting date looks good, it's about at the eight leaf stage.

"We did some work back in the mid '90s showing optimum date around mid-March but then, of course, we had older hybrids. We didn't have the new genetics, such as the Bt trait and earworm protection which is available in the hybrids marketed today. So we're looking at some of the newer hybrids to see if we can extend the planting date window.

No one is recommending a farmer plant corn in mid-May, but some have expressed interest. Much is related to the price of the commodities.

"We have a lot of corn this year, and we have a fair amount of late corn," he said. "I say late meaning corn planted up to April 10. I haven't seen any real late corn this year that was planted into May or after wheat. We did have a fair amount of wheat this year. Most of the double cropping is with soybeans, maybe a little bit of cotton.

Mascagni said the thing about the later planting dates is the insect and disease problems. The newer hybrids have genetic packages that have a good resistance to the corn earworm; however, some are not as effective against earworm. The foliar diseases, southern rust and northern leaf blight, are also problems, particularly with the later plantings.

Last year, on the Commerce silt loam the highest yield occurred for the mid-March planting date. Yields were about 10 percent to 15 percent less for the mid-April planting, and the lowest yield occurred for the mid-May planting date.

"That was not surprising, but we had a couple of hybrids for the mid-May date that averaged about 130 bushels/acre, while the mid-March date yielded 160 to 170 bushels/acre," he reported. Other hybrids in the late planting date yielded around 110 to 115 bushels/acre. Mascagni is curious to see if the same hybrids stick out again this year, particularly with late planting dates.

"We're taking several measurements, including yield components," he said. "We determine stand count and kernel weight and then calculate kernels per ear (ear size). We also collect dates to silk and black layer (physiological maturity) and rate for insect and foliar disease damage.

"Last year we just didn't have much earworm pressure, even late. That's part of the problem with research," he noted. "This year we hope,

not from the farmers' perspective, to have more pressure from corn earworm so we can determine the degree of resistance the hybrids have to corn earworm."

Foliar diseases can be a significant problem with a mid-May planting date, particularly southern leaf rust and northern leaf blight.

"We had very little disease pressure in 2011 and have not seen any disease this year yet, but it is potentially a problem and some hybrids may have more resistance than others,"



Dr. Rick Mascagni, professor of agronomy at LSU AgCenter Northeast Research Center, discusses studies on the impact of planting dates on corn production. Photo by John LaRose, Jr.

Mascagni said.

"There's no question, if you look at the average over time, early- to mid-March is probably the optimum planting date," he said. "You may have a year where an April planting will yield well, depending on climatic conditions, i.e rainfall and temperature. On our good, deep alluvial soils such as the Commerce silt loam, timely rains are important for maximum production. For later plantings, adequate soil moisture is even more important for producing top yields.

"Some hybrids may yield respectable with later plantings," he said. "Again, I don't think you are going to make 200 bushels/acre when corn is planted in the middle of May, but you might be able to produce 120 to 150 bushels/acre. That's what we're trying to pin down. Hopefully, we can document the loss in yield and revenue for corn planted later than recommended."

Mascagni is also working on nitrogen management and plant populations for corn, which is a big factor with the price of seed out of sight. He's also conducting corn irrigation work and research is underway on grain sorghum.

The 2011 results are posted on the LSU web page [annual report \(www.lsuagcenter.com/en/our_offices/research_stations/Northeast/Features/annual_progress_reports\)](http://www.lsuagcenter.com/en/our_offices/research_stations/Northeast/Features/annual_progress_reports).

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