

Management *Affects* Yield

Certain Practices Can Boost Ear Size For Optimum Yield

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Planting population and nitrogen rate can affect ear size in corn, according to Dr. Rick Mascagni, corn and feed grain agronomist for the LSU AgCenter at St. Joseph, La. On the Mississippi River Alluvial Plain where he works, he's primarily concerned with Sharkey clay and Commerce silt loam soils.

"This morning we discussed the influence of plant population and nitrogen rate on optimal yield for hybrids differing in ear flex," Mascagni explained. "Some hybrids have the capability to grow a larger ear when the conditions are good; thus you can usually go with a lower plant population or lower seeding rate. The optimum rate of nitrogen can also be influenced by this. Whereas, on the other hand, the fixed ear hybrid is similar to a determinate soybean variety, the ear does not move much; with a low or high plant population the ear size is about the same. So, in that case, you generally need a higher

plant population for optimum yield."

One consequence of this is high seed costs. A bag of 80,000 seeds costs \$300, or maybe \$300 plus. So the farmer must weigh seed cost with increased yield and increased profitability.

"Also, if you go with too high a plant population you have to be careful, particularly in dryland situations," Mascagni added. "You can have increased stress with the high plant population, which may result in lower yield as well as increased risk of lodging and with aflatoxin, *Aspergillus flavus*.

"So the bottom line is we're looking at ways the farmer may decrease seed cost by lowering plant population and we're still looking at the optimum N rate. The jury is still out on that, but maybe the lower seeding rate with the flex ear type hybrid will provide good yield, lower risks of lodging and aflatoxin and increased profitability," he summed. Δ

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