

Row Spacing Study

Specialist Studies Yields From Wide, Narrow Row Wheat

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Wheat row spacing gained attention recently at the UK Wheat Field Day. Dr. Jim Herbek, University of Kentucky Extension grain crop specialist from the Research and Education Center in Princeton, reported on the second year of a study.

"We've had interest from some of our farmers of going to a wider row than we commonly use," Herbek said. "Normally most of our producers plant wheat in seven- to eight-inch row spacings and they're thinking of going to a wider row because they feel that possibly they can use a normal row unit planter like they do for corn and soybeans to plant wheat in 15-inch

would not be practical for use in any other crop, other than ultra-narrow row wheat. However, if you did stay with a 7- to 8-inch row drill, it can be used to plant other crops, particularly soybeans in the narrow 7- to 8-inch rows. Also farmers have shown very little interest in ultra-narrow row wheat and the drills are not readily available.

"The ultimate would be to look at the wide rows and determine if they do yield as well, then a farmer could get rid of the drill and just modify that row unit planter if possible and the cost wouldn't be as much as investing in a new drill," he reasoned.

"One thing we are looking at this year is if we can reduce the seeding rate in the wide rows," Herbek explained. "We normally recommend

Dr. Jim Herbek, University of Kentucky Extension Grain Crop Specialist from the Research and Education Center in Princeton, reports on the second year of a wheat row spacing study.

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John LaRose, Jr.



rows and they won't have the investment of a drill."

According to studies 15-20 years ago, the wide rows did not yield as well. However, today, with the use of better varieties and high yield management that may have changed, so this study aims to provide some yield data on it.

"Last year our row spacing work on wide rows indicated that we probably lost anywhere from 5 percent to 10 percent in yields, which compares to the results of our older work," he said. "However, sometimes the wide rows will yield a lot less than that. They can yield up to 20 percent less and if that is the case it's really not profitable to go to wide wheat rows."

Last year's results showed yield losses ranging all the way from around zero up to 11 percent, but the average was close to a 5 percent yield loss for wide rows. While that isn't too bad, the economics of that still has to be considered.

"We're also looking at what we call ultra-narrow rows which is between three and five inches," Herbek continued. "Again, there was some previous research which indicated that you could possibly get a yield boost, but the results were really mixed. Yields ranged all the way from no increase to as much as probably 5 percent, so there is a possibility there. However, again, looking at the positives and negatives, it probably is not practical to use ultra narrow rows when you're not sure that you're going to get this yield increase all the time."

A switch to ultra-narrow rows would include a sizeable investment in a new drill. This drill

about 30 to 35 seeds per square foot as a seeding rate. This ends up with about 20 plants per linear foot of row in 7- to 8-inch rows, so when you're going to 15-inch rows with the 35 seeds per square foot recommendation you're essentially doubling the number of plants within a foot of row. This is probably too large a population for wide rows, and that may be part of the reason we're getting a yield loss. There's too much plant competition within the row, so we want to see if we can reduce the seeding rates and save some in seed costs while also increasing yields. This is something we don't know for sure."

With the wider rows, one would expect the plants to tiller more because they have more space between rows, and this may be true. However, if there are too many plants within that row, they may tiller but some never produce a head and they'll probably abort because of the high plant density within the row.

"This is something we need to look at more closely, the seeding rates in these wide rows, and the results with different varieties," he noted. "Some varieties are known to be what we call more prolific tillering varieties. They might be more helpful in these wide rows, so we need to look at that also."

Once all the data is in after harvest, information on the row spacings, best performers in the study and other recommendations will be released. △

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