

Wheat Row Spacing

Specialist Discusses Wide, Ultra Narrow Spacing Of Wheat

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Wheat row spacing gained some attention at the UK Wheat Field Day recently. Dr. Jim Herbek, extension grain crop specialist from the Research and Education Center in Princeton, made the presentation.

"Some of our producers are asking about going to a 15-inch row which is double the commonly used width," he said. "Any wheat planted at 10 inches or wider is considered a wide row. They're considering going to a wide row, and they could then eliminate a drill from their equipment inventory. They could use their regular soybean/corn planters, modify them and use them for 15-inch rows on wheat."

The thinking is that a drill would not be needed.

"I think their main concept is to go with a regular row unit for corn or soybeans and just modify it to plant wheat," Herbek added. "One of the other questions they asked is 'if I go to wide row wheat what can I expect in terms of yield?'"

"We haven't had any recent work on wide row wheat but we're starting to do some now. Looking back on the old data from Kentucky and some research from surrounding states on wider rows, there is a pretty good yield reduction with a wide row. It'll range all the way from probably five percent to over a 20 percent yield reduction and probably average about a 15 percent yield reduction."

There are other things that also need to be looked at with wide rows are as seeding rates and whether varieties respond differently. While one negative of the wide row is yield reduction, there is also an extra expense of modifying a regular row unit planter.

"We have some studies set up this year to see if this wide-row yield reduction still holds," he added. "We are not sure about seeding rates. However, I'm thinking you could reduce your wheat seed cost by dropping from the recommended seeding rate of 30/35 seeds per square foot for narrow 7- to 8-inch rows. If you're putting it all into a 15-inch row you're doubling your population within that row. So you could probably reduce that seeding rate some and reduce your seed cost."

He also suggested that a farmer choose a variety that tillers better than other varieties.

"You'd want to fill in that big 15-inch gap as much as possible, so this probably could help compensate some," Herbek said. "Still, even with a prolific tillering variety, you probably won't get a lot of additional heads formed, because a lot of those tillers would abort as there is just so much within row plant competition."

Herbek also discussed an ultra-narrow row, a three- to five-inch row.

"There was a lot of work done on that, probably 15-20 years ago," he said. "A lot of it came out of Virginia Tech University and they were getting pretty good results, maybe a five to 10 percent yield increase. A lot of other states that looked at it weren't getting quite that good a result and there was a lot of mixed results. Some studies showed there wasn't a yield increase going to an ultra-narrow row. Possibly it's a mixed bag, so to speak, because you don't get that positive response all the time."

Some of the negatives for ultra-narrow rows include buying an extra drill for three- to five-inch rows and these drills aren't readily avail-

able.

"The other thing is the ultra-narrow row wheat would probably not work in a no-till wheat planting situation because the units are so close together and that would probably really cause problems with residue," he explained. "In Kentucky most no-till wheat is planted following corn. The excessive residue may clog up a



Dr. Jim Herbek, Extension Grain Crop Specialist from the Research and Education Center in Princeton, discusses row spacing for wheat

Photo by John LaRose, Jr.

drill by not passing through those very narrow units, so that's a big negative, along with the extra cost of another drill."

The best solution may be to just stay with seven- to eight-inch rows on wheat.

"We've got good yield potential in the seven- to eight-inch rows," Herbek summed. "It'll work well for no-till wheat so I think that's probably the best alternative. Not only is it practical, but it's suitable and the economics of it probably turns out the best."

Still, a study is underway looking at wide-row wheat vs narrow-row wheat to see if it conforms with the other data gathered in the past and from other states.

"I don't think you can make up for a 15 percent yield reduction at 70-bushel wheat," Herbek continued. "That has been our state average, and it's close to a 10-bushel yield drop. At \$4 or \$5 a bushel, economics aren't there for it."

"Some may be thinking it's easier to plant double-crop soybeans behind the wide-row wheat, and you'd probably get better soybean stands doing that because they're spaced wider apart," he said. "You would have less wheat residue, but you'd really have to make up a lot in soybean yields to make up for that decrease in yields on wheat on a double cropping system. So it's mainly an economical thing and I don't think wide row wheat fits unless we find a particular variety that will do exceptionally well; and that would require some testing." Δ

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