Twin Row Corn

Three-Year Study Shows Yield Increase With Twin-Row Corn

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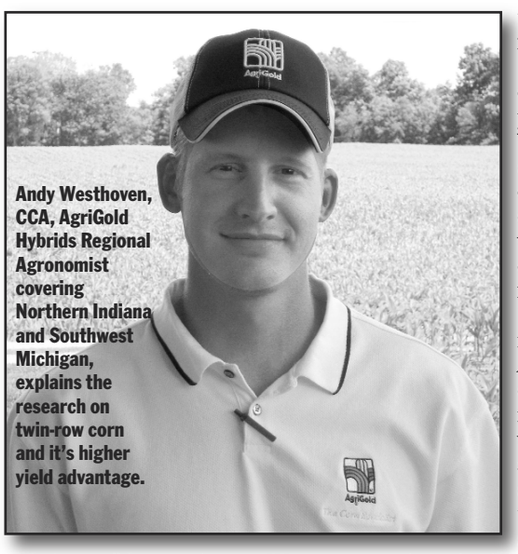
Research on twin-row corn has shown that this system has a higher yield advantage compared to 30-inch rows, according to Andy Westhoven, CCA, AgriGold Hybrids Regional Agronomist covering Northern Indiana and Southwest Michigan.

"AgriGold has been looking at twin row corn for about two or three years now and we ramped up testing in 2009," he said. "Most of those 37 studies were carried out across several different states, including Iowa, Illinois, Indiana, Ohio, Kentucky, Mississippi, and 'Tennessee."

Traditionally farmers have been raising corn on 30-inch rows and there has been much discussion about moving towards narrower rows and different row configurations. The two that are the most popular are 20-inch rows or twin-rows. In twin-row there are actually two rows of corn. The center of each row is still 30 inches, but between the inter rows of corn plants are only about 22 or 23 inches apart.



Andy Westhoven, CCA, AgriGold Hybrids Regional Agronomist covering Northern Indiana and Southwest Michigan, explains the research on twin-row corn and it's higher yield advantage.

"The goal is to have them staggered," Westhoven said. "Ideally we want to stagger them, but they do not always become staggered."

Harvesting is done with a 30-inch row corn head. There may be a little more wear on the corn head, but no other equipment needs to be changed except the planter.

"In our studies we've looked at four different populations," he continued. "We looked at 28,000 plants per acre, 33,000, 38,000 and 43,000 plants per acre.

"For the most part across genetics and hybrids, we've seen that twin rows have had a higher yield advantage compared to 30 inch rows," he reported. "For the most part this occurred in all populations."

AgriGold began research on twin-row corn about two years ago, probably in the fall or spring and fall of 2008. Research began in the south, southern parts of Indiana and Illinois, and it was found to have an advantage there.

"Most people that have done research in the past have always shown that as you go further north, that's where you find the advantage of narrowing the rows," Westhoven said. "So as we've moved these studies further north, we're also starting to see those same observations that we have seen in our previous testing in the south."

The vast majority, at least all of 2009 data, was dryland corn. This year the research includes some of both.

"We have some under irrigation, but I would say as of last year we probably had enough rain where we really didn't have to worry about it," he added. "This will be the third year for the trial, but probably the second year of widespread studies."

Over all genetics, all hybrids, all populations there has been almost a five bushel advantage for twin row corn. Certain hybrids, or certain genetics respond differently, and some have shown up to a six bushel advantage and some down to about three to four bushels.

"We are using a Kinze planter that we've configured for twin row," he explained. "We've used that for the last three years. We also worked with Great Plains directly and had three of their planters as well.

"On the Kinze they made that special. The Great Plains planters that we worked with were actually 8-row, twin-row planters that they pulled off their line. It looked like we were planting twin rows, but only half the units are working on one side, and on the other one bar also."

AgriGold is proud of the results and looks forward to the future.

"With one year's worth of data, we're really proud of what we have," Westhoven said. "Any scientist would say it's only one year's worth of data, it's really not worth a whole lot. However, this year we went from 37 locations up to 118, so we really ramped up our testing. Also, there are a lot of different locations and more areas that we weren't in before, as well as more looks in every state. The key, I think, is trying to get the tests on some marginal soil. We've seen what the high yielding environments can do, but let's get on marginal soil and see if we can't bump up those yield averages."

Twin-row corn is relatively new in northern areas. Because of that presently there are only two manufacturers that produce twin row planters.

"I think that is the issue," he said. "Twin row and row configuration is such a relatively new concept and John Deere is spearheading one in 20 inch rows. So I think that because it's newer technology and not many manufacturers actually have come out with it, that's probably some of the eliminating factors there.

"So weve seen the yield advantage and I think the other side that may be overlooked is the agronomics of it," Westhoven added. "What we've seen is standability; lodging and things like that may be improved in twin rows. There's more spacing between seeds which is really important as you increase planting populations. Then also I feel twin row is more efficient in terms of water, nutrients and sunlight capture."

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