

He Plants Corn In Rows Up To 120 In. Wide

The trend is definitely toward narrower rows for corn and there are good reasons for that. But according to agronomist Leroy Deichman, going to ultra wide rows might be an even better idea.

"We don't have to raise corn in 30 in. or narrower rows. Solar radiation (sunlight) may well be our most overlooked agricultural resource," says the Gibson City, Illinois research and consulting agronomist.

He has spent the past 10 years on a research project to determine whether corn planted in wider than normal rows converts more sunlight into grain than corn planted in narrower rows. His research has looked at rows spaced as wide as 120 in., although, 60 and 72 in. spacings look the best at this time.

"Our basic idea is that planting in wider than normal rows allow plants to make use of more of the available sunlight. In our wide rows, very few of the bottom leaves quit functioning and die, something that's a common sight in narrower rows," he says.

Deichman likes to say that every row in his extra-wide row studies yields as well as an outside row in narrow rows. And that may be true. He has documented yields of as much as 228 bu. per acre in 60-in. wide rows. "That was in our best year," he admits, adding that the trick to wide rows is hybrid selection.

In 2000, he documented 60-in.-row yields of right at 200 bu. per acre from a handful of different hybrids, compared with a popular hybrid planted under identical conditions in 30 in. rows that averaged 186

bu. per acre.

In total, he's looked at 200 hybrids. Thirteen have made it through a second phase of testing, meaning he can say with a great deal of certainty that they would do well in 60 in. rows. One problem he faces is that seed companies keep retiring older hybrids. "Three of the hybrids we started with and that did very well in 60 in. rows are no longer produced," he says.

Trials often include both single row and twin-row plantings. "We prefer twin-rows, but we've been trying to make this method more applicable to everyone. The twin-rows might be a deterrent, since you need a special planter set up," he says.

Most of his data compares wide row to 30-in. rows. "In most cases, wide row yields are 100 to 110 percent of narrow row yields," he says.

He's conducted population studies on four hybrids that suggest yields might be as good or better with lower populations for hybrids that display multi-ear tendencies. He's also conducted fertilizer studies in which wide rows have received reduced nitrogen applications. "These show some real promise on a hybrid-specific basis," he says.

"I definitely think we should be fertilizing differently than we do for 30 in. rows. Banding the bulk of the nutrients near the row rather than broadcasting P and K seems to be the best way to fertilize wide rows," he says.

The most obvious management problem with extra-wide rows is weed control. Corn



Funded by a group of Illinois farmers, Deichman has worked for 10 years on the idea that ultra-wide rows yield better than narrow rows.

in wide rows doesn't completely shade over the row middles. Deichman has also looked at producing low-growing crops like soybeans between the corn rows. The idea of 60-in. twin-row corn with a 4-ft. strip of soybeans between the rows has some appeal in keeping down weed populations and increasing overall income per acre.

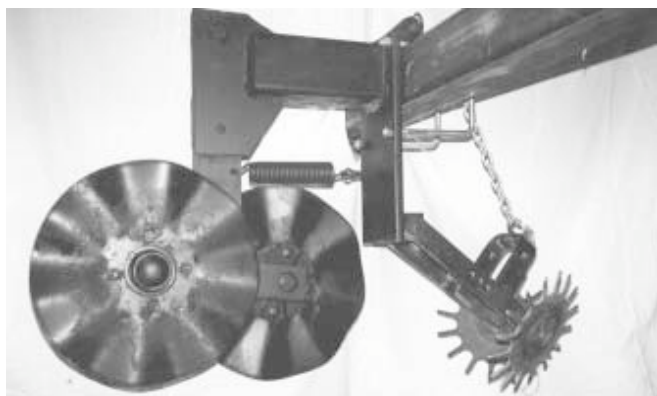
Deichman's work has been funded for the past five years by Maize Research Unlimited, Inc., Paxton, Illinois, a closely held Illinois corporation with the stated purpose of researching and developing unconventional methods of corn production. Twenty-five of the 28 shareholders are farmers. Deichman sits on the group's five-member board of directors. Maize Research has applied for patents and copyrights to protect these discoveries.

"The overall conclusion from these studies

is that if you can provide light to all of the mature chloroplasts in all the leaves on a corn plant right up to physiological maturity, you can select hybrids that will make full use of that extra light," he says.

Another thing they've learned is that their results are repeatable on a field from year to year, but the hybrids and row spacing that work on one field may not work on another. "Our results are site specific. That's not a problem, though. We just have to come up with the right solution for each specific site," he says.

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Gunnink's strip till toolbar is equipped with Yetter row-clearing trash units on front and pairs of 17-in. dia. wavy coulters on back. A 28% solution of liquid nitrogen is applied 3 in. to side of row behind a single, spring-cushioned coulters.

He Strip-Tills Fertilizer Just Before Planting

Strip tillage tools have been used for years as a way to clear away trash and warm up soil, allowing earlier planting. Most commercial units are equipped with shanks for deep placement of dry fertilizer or anhydrous ammonia - often in the fall.

Darrel Gunnink, Clinton, Wis., wanted to strip till and apply fertilizer when he thought it would do the most good - a few days before planting. So he converted a used IH 500 12-row, 30-in. vertical folding planter toolbar into a pull-type, 12-row strip-till toolbar. He uses it during the spring to clear and work strips of soil while applying 28% liquid nitrogen.

The machine is equipped with Yetter row-clearing trash units on front and pairs of 17-in. dia. wavy coulters on back that till 2 in. deep. A 28% solution of liquid nitrogen is applied about 3 in. to the side of the row behind a single, spring-cushioned coulters. The liquid fertilizer tank is pulled behind the rig.

"I've been using this machine for six years and couldn't be happier with it. I've been able to reduce my total nitrogen use by 20 percent or more and still get yields comparable to conventional tillage methods," says Gunnink. "I didn't want to apply fertilizer during the fall because a lot of fall-applied nitrogen leaches out of the soil. On my machine, the coulters till the ground only about as deep as the seed goes. The walking tandem coulters are mounted on an upright beam and are spring-loaded to absorb shocks from rocks.

"I strip till anywhere from one day to a week ahead of planting. You can't use a deep-tilling shank at that time because you end up with seed in open pockets that won't germinate."

Gunnink says he's willing to build units for other farmers. In fact, he's already built two additional rigs.

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Rancher Shoots Wolves With "Bean Bags"

Wyoming rancher Jon Robinett recently received a federal permit to shoot wolves on his property - with "bean bags."

The U.S. Fish & Wildlife Service permit followed a wolf attack on his family dog. It's the first time the Fish and Wildlife Service has approved a non-lethal means of shooting wolves on private land in the Rocky Mountains, says Mike Jimenez, federal wolf recovery project leader in Wyoming.

The 60-day permit, which can be extended, allows Robinett to use a 12-ga. shotgun to fire no. 9 shot wrapped inside cloth bags. The bags fit inside shotgun shells, which were originally designed for crowd control by law enforcement. The bags sting but don't

penetrate the skin.

The idea is to chase wolves out of the area. There have been numerous reports of attacks on dogs and cattle in Robinett's area. However, he says he doesn't expect the bean bag projectiles to solve the wolf problem. "But federal agents have said 'that's all we can do,' so that's what we'll do."

"The specially designed shells are issued only under permit to ranchers who have problems with wolves. They are not available to the general public," says Jimenez.

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Some of the best new ideas we hear about are "made it myself" inventions born in farmers' workshops. If you've got a new idea or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors? Send to FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 or call toll-free 800 834-9665. Or you can submit an idea at our web site at www.farmshow.com.

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