

Improve Seed-To-Soil Contact With No-Till

While there are dozens of ways to improve your no-till efficiency, one of the best methods is to focus on how the seed is placed — and making sure it stays put.

MIKE BERGMEIER won't argue with you that your old no-till planter is worth salvaging. In fact, he may encourage you to think twice about turning the no-till rig in for something newer. But one area that Bergmeier won't compromise on is the need to concentrate on optimizing seed to soil contact.

Here's what the owner of Acra Plant Precision Planting Equipment in Hutchinson, Kan., says you need to know to make sure you're doing your part to improve and optimize seed-to-soil contact.

1 The Truth About New No-Till Planters.

"Before the salesman starts to talk about specifics, let's just tell the truth," he says. "No-till planters do no-till right out of the box. You can bury the seed and vary the chemical rate based on your yield data and field maps. You can prepare adequately to plant for your crop. Skips and doubles really aren't much of an issue with new no-till planters."

While this sounds awfully gutsy, Bergmeier contends that new planters have taken into consideration many of the problems that no-tillers face on a daily basis. But they can't always correct every situation.

"New planters are a big investment, there's no doubt about that," he continues. "But add environmental factors such as heavy residue or cold, wet planting and you narrow your planting window with short growing days. There are so many other issues to consider."

2 Know What's Going On With Older No-Till Planters.

If you have an older no-till planter, Bergmeier says, you really can continue to use it, so long as you know what you're dealing with.

"Original planters were designed to plant at 3 1/2 to 4 1/2 miles per hour," he explains. "Today, guys are out there at 6 to 9 miles per hour or running even faster. Even if you have

brand-new equipment with all the technology, planting at 7 mph is a crapshoot. Be sure you're not shooting yourself in the foot because you want to get across the field faster."

The problem is the row unit. "It's a simple design," he says. "It features parallel linkage and dates back to the '70s before the onslaught of no-till. It obviously works because it's come through the '70s to today. But now might be a time to re-think that unit and how it might be holding you back from higher no-till yields and profits."

Older planters, Bergmeier says, weren't created with the basic challenges of no-till in mind. Heavy residue wasn't likely an issue for farmers 40 years ago. The key is understanding the point where the seed drops out of the seed tube, and ensuring adequate and improved seed delivery—right where the seed hits the ground.

New No-Till Planter Solutions For Old Planters

Bergmeier says the following solutions can easily be adapted to your current no-till planter — without breaking the bank.

Simple Solution #1...Openers, Coulters

"I like the single-blade coulters," he says. "They get out there and chop through residue, but they can create problems in slotting the seed deeper than optimum."

Simple Solution #2...High Row Unit Down Pressure

"I've seen numbers as high as 600 pounds per row," he says. "That means a planter that was designed in the '70s for 350 pounds of down pressure with a 204 bearing needs to have the cylinders bled so you get high down pressure per row. The 600 pounds of down pressure wears out your no-till planter. Plain and simple."

Simple Solution #3...Optimized Seed Tubes

"They'll get you closer to the higher speeds you want," he says.

Simple Solution #4...Closing Systems.

"Cast iron, rubber, spider wheels — in the no-till environment, what you're really

fighting is the ability to break off one side of the seed trench and get the seed covered up," he says. "If you think about your no-till planter as a single row unit for delivering seeds, what that closing system is actually doing is correcting what the opener system is creating — high sidewall compaction."

Bergmeier explains that with tougher soils, the closing system attempts to correct the opener system. "The closing system is there as a Band-Aid for the opener system that has high row unit down pressure," he says.

Simple Solution #5...Think Twice About Row Cleaners.

"They're great and we make them," he says. "But I don't recommend them. If you're doing zone tillage or need to move residue out of the way, that's another thing. Just keep in mind that a row cleaner is taking residue off that you need to leave to cover the ground."

Bergmeier argues that a well-tuned no-till planter can open the soil adequately enough to provide optimum seed-to-soil contact, even in high residue situations. In fact, the cleaners he sells are typically for cotton and vegetable crops in the southeastern portion of the country.

Simple Solution #6...Don't Overseed Since It's Costly And Inefficient

"We've learned that you don't have to overseed by 40 percent with no-till," he says. "If you have your no-till planter tuned up so you're making sure that seed gets to the bottom of the trench with resilient soil around it and closes up on itself, you don't have to use a mechanical closing system. Some types will pitch seeds out and drag things along."

Bergmeier recommends that you look at converting your existing planter to a no-till machine using Acra-Plant notched retrofit opener discs and V-slice planter inserts. He says this combination will give you good seed-to-soil contact in the toughest residue conditions without having to resort to extremely high down pressure or the added expense of row cleaners.