



UNEVEN START: The smaller plant will likely never catch up. Late emergence could be a planter issue.



CHECK WEAR: Barry Fisher suggests measuring the wear of disk openers on planters vs. new openers, no matter which color of planter you operate.

Make preseason planter prep job one!

Key Points

- The job of a planter is to space seeds evenly and at uniform depth.
- Worn parts can cause standard deviation error to be large enough to affect yield.
- A difference of one or two days in emergence may produce weeds instead.

By **TOM J. BECHMAN**

DAVE Nanda likes picket-fence stands when he evaluates corn soon after emergence. “Getting even, uniform emergence sets the stage for high yields,” Nanda says.

Nanda is a consultant for Seed Consultants Inc. A plant breeder by trade, he appreciates the importance of getting each kernel in the right place at the right depth. He points to data Bob Nielsen developed at Purdue University several years ago that emphasizes the importance of spacing and emergence.

Nielsen, Extension corn specialist, determined that spacing alone can affect

yield by 2 to 5 bushels per acre. He calculated what’s called the “standard deviation” in plant spacing. Basically, he counts the distance between plants down the row, compares it to ideal spacing and calculates standard deviation.

Even if planters are adjusted properly and working correctly, plant spacing won’t be perfect, he realizes. “I chose a 2.0-inch standard deviation as a goal because seed germination and emergence is rarely perfect,” Nielsen says. “Even if seed spacing by the planter is perfect, or a standard deviation of zero, a 90% to 95% germination and emergence rate results in a standard deviation of plant spacing of about 2 inches.”

When standard deviations of plant spacing rise much above 2.0 inches, yield suffers.

The recent emphasis on checking seed units with monitoring stands and replacing broken or worn parts helps many people do a good job even with older planters. More people are reducing standard deviation and obtaining more even stands.



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What really hurts are doubles and triples, where two or more seeds were dropped at once, he notes. If plants are only an inch apart, it likely was a double. If they’re 4 inches apart when they should be 7 inches apart, seeds might have been metered correctly, but ricocheted down the seed tube and wound up at uneven spacing.

Emergence matters

More recently agronomists have concentrated on making sure seeds aren’t just spaced correctly, but also that they emerge uniformly, Nanda observes. He likes to see all plants within a cornfield emerge within 24 to 48 hours of each other — the more uniformly they emerge, the better.

“Otherwise late emergers may turn out to be nothing but weeds,” he says. “If they produce an ear, it may be a nubbin.”

No-till experts like Barry Fisher, an agronomist with the Natural Resources Conservation Service, talk to farmers about such things as checking wear on

disk openers. He also wants farmers to check down pressure on planter units to make sure it’s correct. And he advises them to make sure closing wheels are doing the job they’re supposed to do.

These things are important in any planting conditions, but especially in no-till, Fisher says. The goal is to have each seed placed at the same depth. Differences in emergence time magnify when some seeds are placed in moisture and some aren’t.

When openers are worn beyond recommended parameters, replace them, he notes. The goal is to set the planter so that it should deliver each seed at the proper depth in the seed trench.



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Expect more seeds per pound this year

A bag of seed that normally weighs 50 pounds and contains 80,000 kernels may weigh less than 50 pounds this year. That’s the word from testing labs and several seed companies. Also, expect more flats than rounds in seed produced in 2014.

Good weather meant larger ear size and larger yields in seed fields. That tended to make for smaller, flat kernels instead of larger, round kernels common when kernels are more spaced out.

“We’re advising farmers to check planter manuals and make sure they have the correct equipment and settings,” says Brian Denning, an AIM (Agronomy in Motion) agronomist for Stewart Seeds, working primarily in Indiana and Ohio.

Steve Gauck has seen the same trend. “As far as we know, it’s likely industry-wide,” says Gauck, regional agronomist for Beck’s Hybrids. He suggests making sure your planter is set correctly for each lot of seed.

Alan Galbraith, manager of the Indiana Crop Improvement Lab, has noted the same trend in samples sent for germination testing. He also attributes the difference to good growing condition for seed in 2014.



CHECK SEED SIZE: Make sure your planter is set correctly to handle the seed size for each lot you plant.

Seed environment matters!

WHEN you check seed depth at planting, do you just dig until you find enough seeds to satisfy yourself that the depth is correct? Or do you carefully remove soil, noting the condition of the dirt around the seed?

Some agronomists suggest that being aware of the environment where the seed is placed, not just the seed depth, is critical. Things you can pick up looking at the area around the seed include where the moisture line is in the soil, and whether sidewalls are compacted. These factors can affect both when germination starts and how roots develop.

Dave Nanda suggests checking the area around the seed carefully once you begin planting. Make sure your planter is set to place expensive seed in a good growing environment.



READY TO GROW: The condition of the soil around the seed may be as important as planting depth, Dave Nanda says.