

## What's On Your Seed?

The purpose of the publication is to take some of the confusion of seed treatments away, giving you a better understanding of what is on your seed. Check it out at

[http://fyi.uwex.edu/fieldcrop/pathology/files/2013/01/Whats\\_on\\_your\\_seed\\_FIN](http://fyi.uwex.edu/fieldcrop/pathology/files/2013/01/Whats_on_your_seed_FIN)

## No-till Planting Tips for a Dry Year

The residue cover in no-till fields is essential when it comes to conserving water. The residue protects the soil surface, reducing crusting and soil moisture evaporation. When it comes to no-till planting, the key is to minimize the soil and residue disturbance.

### Where to Plant?

- When using crop rotation, plant down the old row.
- For corn on corn, plant beside the old row.
- Don't plant between the rows in last year's wheel tracks.
- Don't wear out your tires by driving down the old row.

**Leave residue over the row.** Too many producers move residue away from the row when planting, trying to make the seedbed warmer and drier during the cool part of the growing season. This isn't necessary in a warm, dry spring, especially if drought conditions continue. Growers should focus instead on using residue to keep the soil cooler and wetter during the hot part of the growing season. By leaving the residue over the row while planting, soil moisture evaporation is reduced and the root zone is kept cooler for the entire season.

**Use seeding disks to cut residue.** When properly adjusted and working together, the sharp double disk seed furrow openers on planters can easily cut through the residue and soil to place the seeds. Running coulters in front of seeding disks often increases "hair pinning" of residue as the tillage of the coulters incorporates some of the residue into the seed zone. Planters can more effectively cut residue using the seeding disks, as the disks are sharper than most coulters on the market. In some situations, the coulters start pushing the residue down without cutting it and the seeding disks fold or "hair pin" the residue because they don't have a firm soil surface to cut the residue. If hair pinning of the residue is a problem, increase the planting depth some to improve the residue cutting angle of the disks.

**Provide uniform residue cover.** Producers who did not uniformly spread their residue during the previous harvest could use residue movers to "even up" the residue and create a more uniform residue layer. However, they should not remove all of the residue from the row as soil moisture losses are higher from bare soil. If the residue cover is already uniform, such as in long-term no-till, residue movers can do more harm than good. In these cases, the movers break residue loose from the soil and some of the residue can then blow back over the row, creating non-uniform conditions. In addition, the emerging seedlings may leaf out under the residue and may have difficulty surviving.



With little residue to keep the soil cool and reduce soil moisture evaporation, corn suffered when temperatures were high and moisture was limited.

**Add downpressure springs and weight to ensure penetration.** The residue of no-till, especially in hard, dry soil, requires downpressure springs and extra weight (as necessary) on the planter to cut through and penetrate the soil to achieve the desired seeding depth. Enough downpressure should be on the row units to make sure that the depth gauging wheels are actually gauging planting depth. Check the downpressure on the row units as conditions change to avoid over compacting wet soils, creating sidewall compaction.

**Plant on or near the old row.** Producers should plant down the old row to place the seed in the old root zone, the most biologically active area of the field. Don't seed between the old rows as some of the new rows will be in soft, untrafficked row middles with different soil conditions than the wheel tracks, the most compacted area in the field. Planting about 5 inches to the side of the old row works well for corn on corn to reduce planter bounce, resulting in more uniform depth control. This also reduces tire wear as compared to driving on the root stumps to plant between the old rows.

**Planting deeper may be warranted in dry years.** Producers should consider planting deeper to ensure that all of the seeds are in good soil moisture for uniform emergence. Keeton Seed Firmers or Schaffert Rebounders help place all of the seeds at the bottom of the seed-vee for a more uniform planting depth. Planting the seeds deeper also puts them into a more buffered soil environment with a more uniform soil temperature and soil moisture. This improves uniformity of emergence which increases yields. In addition, by planting deeper, the root system is better established, improving standability and allowing the plant to better handle stresses. Corn should be planted at least 2 inches deep as most corn planters were designed for planting depths of 2 to 3 inches. Consider the 3-inch planting depth in dry years and low residue conditions to reduce potential drying of the seed zone.

**Ensure good seed-vee closure.** The seed-vee should be properly closed for good seed-to-soil contact and to reduce drying out of the seed zone. Some producers add spoked closing wheels to their planters to help close the seed-vee, especially in wet soil conditions. The spoked wheels serve three purposes:

- drying the soil with tillage,
- closing the seed-vee while fracturing the sidewall, and
- providing loose soil above the seed.

The loose soil created by the spoked wheels reduces the potential for the seed-vee opening back up as the soil dries. However, depending on the moisture situation, the tillage of the closing wheels might dry out the soil too much. In some cases, growers get better results using one spoked wheel and one regular closing wheel. Also, some closing wheel brands have less aggressive spokes than others. A drag chain is usually needed behind aggressive spoked wheels to help smooth and level the soil.

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