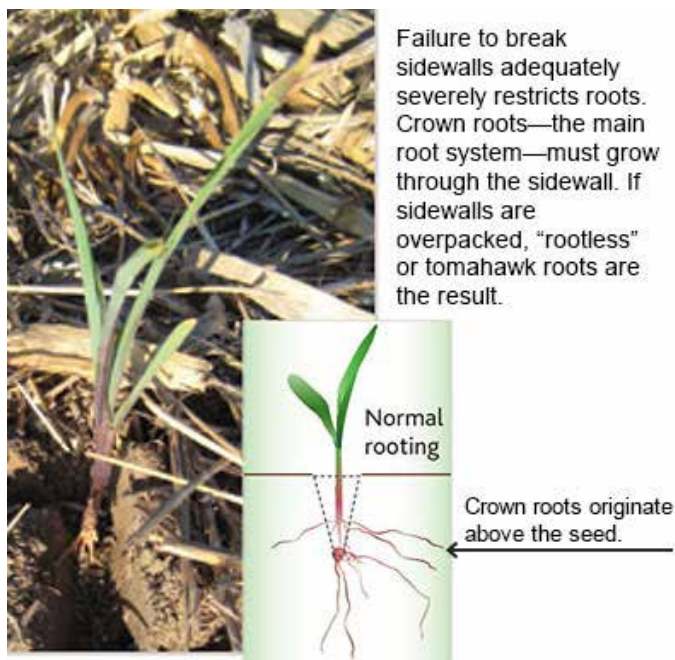


Liberate the Roots!

by Matt Hagny

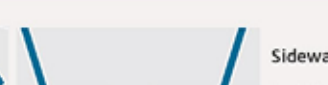
Many of you are fighting to get your corn crop planted in the mud across the central & eastern corn-growing areas of the US/Canada. Just a reminder that in damp conditions, it's especially important to make sure you break the sidewall adequately with spoked closing wheels--make sure you've got enough spring pressure on them to break up the sidewall as much as possible, but without disturbing the seed placement. (If in doubt about spokes pulling seeds loose, tie-up the closing bracket on a row and compare--sometimes seeds are misplaced before the closing wheel gets there. If some seeds are loose or misplaced, check to see that you're not allowing the sidewall to lift too much, and that your seed tube & guard are up to snuff. Also, the better the seed is embedded in the bottom of the furrow--with a Keeton + Mojo Wire, or a seed-lock wheel--the less likely it is to roll loose as the sidewall is broken by the closing wheels.)

I've been guilty of over-emphasizing being gentle on the furrow closing, and have been complacent at times in not getting after clients to do more sidewall breakage. That was a big mistake last year (2012) in KS/Neb/Okla, when we planted in damp clays and it didn't rain for 50 days--not even a small shower. Stands were perfect, but roots absolutely couldn't get thru the slickened sidewall. Getting both sidewalls broken up is absolutely essential! We don't want any root restrictions, especially not for corn that grows so rapidly and is on a 'fixed' schedule to reach maturity. Each and every day the crown roots' growth is subpar, there is yield being lost.



Another way to get more closing action on any closing wheel is to toe them out (wider at the front), with Exapta's toe-out wedges--they simply go onto the bolt holding the closing wheel (n/a for closing wheels held by studs, such as Deere 7200 closing brackets). On the other hand, planters that are running nose-down will be carrying the closing bracket at an angle that creates toe-in, which prevents the closing wheels from doing anything. If in doubt, the planter running slightly nose-up is better. See our [April newsletter](#) for more details.

And, there are major differences in how the various spoked or cage-type closing wheels shatter the sidewall. Some do a lot more packing than others, which is detrimental--assuming, of course, that you're already doing seed-firming with a Keeton or seed-lock wheel at the seed's location in the bottom of the furrow. Packing or squeezing the soil with closing wheels only worsens sidewall compaction. Much better to close by slicing and crumbling. Here's a chart that may help you visualize the differences:

		Poor				Fair			Good										
		1 2 3 4				5 6 7			8 9 10										
Smooth OEM closing wheel						Sidewall Shatter		1		1		Mud/Stalk Cleaning		8		Depth-limited		10	
						Excess packing, poor closing													
Curved-spoke closing wheel, with wide spoke tips						Sidewall Shatter		6		3		Mud/Stalk Cleaning		3		Depth-limited		5	
						Usually good closing, but excessive packing (intermittent)													
"Spike" closing wheel						Sidewall Shatter		10		10*		Mud/Stalk Cleaning		8		Depth-limited		1	
						No packing, but spokes may pull seeds out													
Notched spoked wheel with thick spokes						Sidewall Shatter		9		6		Mud/Stalk Cleaning		7		Depth-limited		9	
						Can overpack													
Cage-type closing wheel: horizontal feet						Sidewall Shatter		5		5		Mud/Stalk Cleaning		4		Depth-limited		10	
						Excessive packing; problems with standing stalks and small rocks													
Thompson wheel						Sidewall Shatter		10		10*		Mud/Stalk Cleaning		8		Depth-limited		8	

* From numerous observations by 3rd-party scientists and farmers.

* Closing wheels that don't pack the soil above the seed (a good thing) shouldn't be used without a separate in-furrow firming device (Keeton seed firmer or seed-lock wheel).

For some other common errors (both planters and drills), you might want to review our [Seeding Mistakes newsletter](#).

We at Exapta wish you the best this growing season! (but stack the odds in your favor with careful planter adjustment)

Best regards this planting season, and beyond!