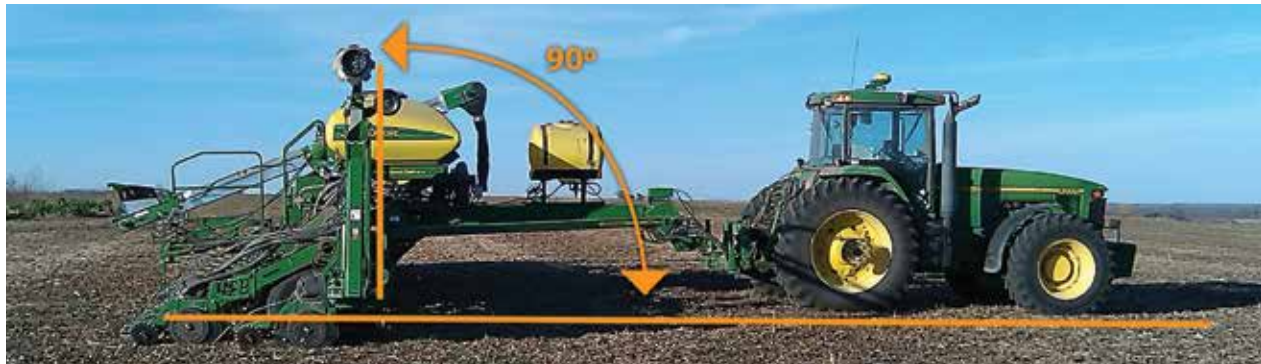


## First Things First! —Planter Function

by Matt Hagny

I know a number of you think you've got this nailed, but the fact is that I see 90% of the planters out there still running nose-down. Part of the problem is that the tongue angle is a big distraction (and the parallel links). And, it takes a trained eye, viewing from a distance, to verify that the planter units are really running level. Sometimes, it's best to take a photo and look at it later, perhaps with a ruler to guide the eye.



You're probably weary of this topic, but it is essential to start with this. Any other adjustments you make to down-force, row-cleaners, depth, firming pressure, and closing action will be incorrect, confusing, and frustrating until you get the planter to be nose-up by a couple degrees (or at least get it dead level). Correcting a nose-down planter unit will greatly increase the closing wheel action, for instance: The best closing action is when the wheels pull soil into the furrow by being slightly toed-out (wider at the front than the back), but with the planter unit slightly nose-down, the closing wheels are actually toed-in. If you run spoked closing wheels that seem to just poke holes in the soil, this is a good clue that your planter units are still nose-down.

Correcting a nose-down planter will also increase the amount of down-force that can be transferred from the toolbar to the row units if soils are tough to penetrate (Level to slightly nose-up: the springs get better leverage; and it relieves some pressure on fertilizer openers or cutting coulters, allowing toolbar weight to be used more effectively on the row units). Correcting a nose-down planter will also make the seed tube more vertical, hence dropping the seed farther forward in relation to the blades, resulting in *much* more consistent seed placement. Correcting a nose-down row unit will also allow more pressure to be generated by the Keeton seed firmer, which then provides better firming action, higher percent emergence, and more uniformity of timing of emergence.

Checking levelness: Use the same tractor that will be pulling the planter 'for real,' and with the tire pressures adjusted to the proper inflation. Set the depth of the row units approx where you'd be planting (doesn't have to be exact). In a field that doesn't have tall stubble, run the planter for a short distance in a perfectly straight line. Stop where there's even terrain surrounding the tractor and planter (i.e., avoid rills, draws, holes, bumps, old fence lines, dead furrows, terraces). It doesn't matter if you're going uphill, or on top of a hill, or whatever. Just so you can easily see the nearby terrain, as well as the lower edges of the tractor tires. Now walk out 80 – 100 yards off to the side and look back across the row units *and down the length of the big square toolbar* (again, take a photo – it really does help). If you have markers that are 90-degrees to the big toolbar, that makes the task easier. If you have row units with boxes, that helps. You'll be more challenged by central-fill planters without markers that have few straight edges on the row unit, in which case you're down to looking at the toolbar itself.

Learn to ignore the tongue angle, and the parallel link angle—these not only distract you, but also create optical illusions as to what is really level. But if you can compare to the surrounding terrain, *and use cues from the tractor tires*, you will be on-track. And don't believe the manufacturer's rec of 'x' inches of toolbar height being the answer!! They have no idea where the tongue will be.

Planters with tongues mounted to the 2-point on the tractor are easy to manipulate to level. The drawbar planters usually have a number of bolt holes to move the pull-loop downward in the tongue. If you run out of holes before the planter is level, either flip the drawbar over, or create more holes by welding plate to the bottom of the tongue bracket (if you're not a professional welder, we strongly recommend you hire one for this task: tongue failure would be a disaster, especially during transport). One more thing: The carrier wheels on the planter may need to be adjusted as to which hole they're mounted in, so as to allow full weight on the row units if need be, and to allow the row units full range of travel.

**Best regards this planting season, and beyond!**

A handwritten signature in black ink, appearing to read "Matt Hagny". The signature is fluid and cursive, with a long, sweeping flourish extending to the right.

Matt Hagny,  
Exapta Solutions