

Immediate Release

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Planter setup

Spring planting season is almost here and farmers are making final planter adjustments. Planter setup is critical because “The sins of planting will haunt you all season” according to Ozzie Luetkemeier, Purdue farm Manager. Here are a few planter setup tips:

First, leveling the planter starts at the hitch. Make sure the tractor tires are properly inflated for the ideal hitch height. High tractor tires may require an adjustment on the hitch pin to keep the planter level. Planters need to be level in all directions. Parallel arms should be level in the planting position to maximize benefits of downward spring pressure. Check parallel arms with a level all three ways: up and down, across the arms, and perpendicular. Check that planter boxes and fertilizer units are level and the planter frame are correctly set (check owner’s manual). A level planter is critical for ideal planting.

Second, take some measurements. The planter frame should be 20-21 inches off the soil surface. Many planting problems occur with parallel arms. The bottom of parallel arms on the planter frame should be 20 inches from soil surface and 30 inches at the top. Check for loose or worn bolts and bushings which are common planter problems. Check parallel arms on front and back to make sure they are the same distance apart or the planter will bind and not ride evenly across the soil.

Third, check planter opener disc blades and/or row cleaners. Some planters are set up with a disc blade out front, planter opener disc blades, and row cleaners. The front disc should run 2 inches deep or slightly shallower than the planter opener disc blades and both should be lined up together. If hair-pinning with residue, uneven germination, or high corn brace roots is occurring, the row cleaners need to be set deeper. New shark tooth planter (STP) opener disc blades are designed for no-till conditions and do not require the front disc or row cleaners. Opener disc blades should be replaced when the diameter is less than 14.5 inches and should fit snug with no gaps. Opener disc blades set improperly may create a “W” in the planter slot, improper seed placement, and sporadic seed germination.

Fourth, setting the down pressure wrong causes many planter problems. Ideally, 100 pounds down pressure or 30 pounds per square inch (PSI) creates the best planting conditions and good crop rooting. Press wheels will compact the soil with too much down pressure causing sidewall

compaction and restrict lateral root development. Planting in a “V” slot (compacted sidewalls) and wet soils with too much down pressure causes really poor lateral root growth and lodging.

Fifth, an open seed slot may be an indication of not enough down pressure on the closing wheels. Too much pressure on the closing wheel may close the seed slot but result in poor seed to soil contact with an air pocket around the seed. This happens when the closing wheel pushes down on the top but does not shove the sidewall down enough to seal soil around the seed. Make sure the closing wheels are spaced evenly apart and working properly. Poor root development often occurs in open slots when the soil dries out. Seeds should always be firmly in place, completely surrounded by soil with no gaps or air pockets to maximize even germination.

Sixth, check gauge wheels and fertilizer placement at planting. If the right down pressure is applied, the gauge wheels should be firmly in place and not turn. Gauge wheels should run tightly against disc opener blades. Reduced Inner Diameter (RID) gauge wheels are recommended in no-till fields where higher soil moisture and side wall compaction may occur. The RID gauge wheels collapse the sidewall for improved seed to soil contact. If fertilizer gets too close to the seed, a high fertilizer salt content may reduce root growth. Placing fertilizer “2’ by 2” or 2” by 4” away from the seed is common. For “Pop-up” fertilizer applied directly to the seed, do not apply more than 20 pounds per acre to avoid salt damage.

Seventh, check all chains and grease the planter. Replace worn bolts, chains, bearings, and tighten up anything that is loose. Use seed-firmers to maximize seed-to-soil contact and to achieve uniform seed depth (6-7 bpa advantage). The goal for good corn planting is to get even, consistent corn emergence. Source: David Brandt corn planter setup.