Burrus Buzz

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Investing Time Adjusting Your Planter Pays Off

by Chip Turner, Burrus Research Coordinator & Planting Specialist

My father always says, "If you don't plant it right, you're behind the whole season." My experience has consistently proven that maxim to be true. Inconsistent planting leads to uneven emergence which is a drag on yields. This is true in conventional tillage systems and takes on a new level of importance in no-till situations where the margin for error is narrower. Therefore, it makes sense (and cents) to spend time before planting to inspect, adjust, and maintain your planter, setting the crop up for maximum yields.

1. **When in planting position, is the planter level?**
   Seed tubes are designed to give the best seed placement when the planter tongue is level with the planter in planting position. To check this, go to the field, lower the planter to planting position, and have someone else drive while you observe the planter rolling across level ground. The tongue should be level and generally parallel to the ground. If it's not, adjust your hitch height accordingly.

2. **If the planter markers were removed, has weight been added to the wings?**
   On larger, central-fill planters the weight of the markers helps keep the wings at the proper planting depth. Without the weight from the markers, the wings can float, resulting in shallow planted seed on the outside rows. If you have removed the markers, consult with your manufacturer to determine how much weight you need to add to the wings to make up the deficit. Many manufacturers offer weight kits through their parts departments for a clean, easy installation that should not affect the warranty on your planter.

3. **Are the row units running true (i.e. parallel to the direction of travel)?**
   Check the parallel arm bushings and bolts on each row unit. The bolts should be tight and the bushings free of wear. If they are not, the row unit can twist and wander, resulting in poor seed placement.

4. **Are the seed meters delivering uniform seed drop?**
   Disassemble and inspect the seed meters. Consult your operator's manual or your local implement dealer for proper specs. If any part of the meter is out of spec, replace it. When re-assembling the seed meters, it is critical to follow the manufacturer's torque specifications. Some torque specs in seed meters are given in inch-pounds, which is roughly about finger tight if you have strong hands! Also, consider having your meters run on a test stand annually.

5. **Are your inner scrapers or seed tubes worn out?**
   It is easy to overlook these two items, but prior to planting season you should inspect both and make sure they are in spec. Worn out inner scrapers can lead to soil build up on the inside of the disc openers in tacky conditions and worn out seed tubes can cause the seed to bounce between seed meter release and seed placement in the trench. Seed bounce will cause inconsistent intra-row plant spacing.

6. **Are the disc openers excessively worn? Are they making the right amount of contact?**
   Disc opener specs vary by manufacturer and part number. Consult your operator's manual or your local implement dealer to determine the original diameter of your disc openers. If they are out of spec, replace them. Worn disc openers can leave a seed trench that is 'W' shaped rather than 'V' shaped, resulting in poor seed placement. If the disc openers are worn, but still 'in spec', you may still have to adjust the number or thickness of the shims to get proper opener-to-opener contact and make a clean 'V' shaped seed trench. To check contact, use two business cards, sliding one card down from the top between the blades until it stops, and sliding the other card up from the bottom until it stops. Then, measure the distance between the two cards. For most standard thickness blades, the correct distance is 2 to 3 inches. If it is less than that and the blades are still in spec, remove shims and adjust the blades inward until they make proper contact. If heavy duty disc openers are installed on your planter, the measurement between the cards should be 1 to 1.5 inches.

7. **Are your gauge wheels adjusted correctly?**
   Gauge wheels should be in contact with the disc openers. To check for proper adjustment, raise the planter and spin the gauge wheel. It should make consistent, constant contact with the disc opener. Gauge wheels should also 'walk' freely and run parallel to the direction of travel. Worn bearings can cause binding when the gauge wheel walks and can also cause them to stop running parallel to the direction of travel. Any problem with the gauge wheels can lead to inconsistent planting depth.

8. **Are the closing wheels sealing the seed trench without excessive compaction?**
   Make sure your closing wheels are properly spaced by measuring the spacing and checking the manufacturer's guidelines. Also check that they are closing the full depth of the seed trench and that the final result is good, consistent seed-to-soil contact. Do this by taking your planter to the field and planting some corn, then digging seeds. The full depth of the seed trench should be closed with no voids visible and the soil filling the trench should still be fairly loose.

9. **Are the no-till coulters running at the proper depth?**
   No-till coulters should run 1/4 to 3/8 of an inch shallower than the disc openers. To check for proper coulter depth, place a board under the row unit parallel to the direction of travel. Lower the planter until the disc openers contact the board. With the disc openers touching the board, the no-till coulter should be 1/4 to 3/8 of an inch above the board and should spin freely. Coulters should be sharp and not excessively worn. Worn, dull coulters can hair-pin residue in the seed trench rather than cutting is cleanly.

10. **Are the residue managers adjusted to the correct height?**
    With the planter in plant position driving in the field, your residue managers should just skim the ground. If they are digging up dirt, they need to be raised. During normal operation, properly adjusted residue managers will not constantly spin. They should move the residue to the sides without throwing it into the adjacent row and without digging a trench that the row unit then rides in. No two fields are the same, so it may be necessary to re-adjust your residue managers throughout the season.

11. **Are you using the correct down-force for field conditions?**
    The proper amount of down force can vary field to field and down force can have a big impact on uniformity of emergence. This is something that should be checked throughout the season when changing fields or as conditions change. A good rule of thumb when checking down force is to lower the planter to planting position, then try and spin the gauge wheels with your foot. If you can just barely spin the gauge wheel, then the down force is about right. If the wheel spins easily, increase the amount of down force you are using. If the wheel won't spin, back the amount of down force off. Best practice is to check every gauge wheel.

Proper planter adjustment isn't difficult, but it can be time consuming. Take some time before planting to make sure your planter is ready to operate at peak performance. Start your crop out right by taking care of your planter to avoid giving up bushels before the seed emerges.