Planter Tune-up
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Farmers take advantage of technology to successfully grow a crop. Advance planter technology allows them to quickly and accurately plant a crop. Planting used to take two to three weeks of good weather to finish but now can be accomplished in three to seven days on many farms.

Even farmers take for granted that the today’s planter can clear row residue, place and space the seed accurately within the row, and cover the seed and firm the soil around it. Several farmers in the area have GPS planters so they can come back to the same row year after year.

In order for all of this to happen, grain farmers will inspect and repair planters during the months prior to planting. They must make sure that these planters are at peak performance before planting begins.

A planter that is not operating properly or breaks down during planting can cause serious yield reductions from delayed planting or missing the window of optimal weather.

The following is a planter setup and maintenance list that will impress the mechanically minded and remind the rest of us that farming is a skilled occupation:

- Check meters on a test stand in order to visually inspect parts and evaluate performance.
- Inspect all mechanical drive components and look for any excessive wear including down pressure springs, parallel linkages, and bushings.
- Check seed tubes for any wear, particularly in the bottom section that can wear or become damaged. Replace if damaged or has excessive wear.
- Check size, wear and spacing for opening discs; disc openers should be replaced in pairs.
- Inspect gauge wheels and ensure opening discs make proper contact with the wheels. Adjust the shims for each gauge wheel arm to ensure the correct contact. Inspect closing wheels or discs and ensure bearings are in good shape and that the down force spring is properly set. Replace excessively worn wheels.
- For vacuum planters, check all lines for damaged tubes. Check hydraulic motor for leaks and make sure fan is clean.

These are the planter checkup items before getting to the field. Once at the field the farmers has to check the planting depth, row cleaner setting, closing wheel pressure, and the gauge wheel pressure.

Planting depth is critical for all crops. Corn that is planted too shallow may have problems with root development making the crop vulnerable to dry weather, wind
damage, and poor nutrient uptake. Soybeans planted too deep may have trouble emerging.

Seeding depth needs to be checked periodically during planting since soil conditions may change across a field. The planter row unit must have sufficient weight so the gauge wheels will operate firmly on the soil surface.

Row cleaners need to be checked so they are removing plant residue on the soil surface of the seed row and not tilling the soil. They should only function or rotate when excessive residue is in the planting row.

Closing wheel pressure needs to be adjusted for field conditions to close the furrow (planting trench) without causing soil compaction. Seedlings will have trouble emerging properly from compacted soil. Higher pressures are needed for dry soils and less pressure for moist soils.

Gauge wheel pressure should cause enough contact pressure to firm the soil surface at a specific depth setting but not so much pressure that the soil becomes compacted in the seed zone. Farmers need to adjust to field conditions once they start planting. Compaction risks will increase as soil moisture increases.

Proper planting of the seed has always been critical for the success of the crop. Today’s planter technology has allowed the proper planting of seeds over a large number of acres in a relatively short time. However, the farmer has to insure that the planter is well maintained and make adjustments for soil conditions to take full advantage of the technology.