

Planter Maintenance: Less Down Time, More Yield

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The days are getting longer and temperatures are slowly rising. That can only mean that corn planters will soon be running in fields across Indiana. If you haven't taken the time to go over your planter or have it inspected and serviced by your local dealer, please take the time to do so before planting begins.

A well-maintained planter will lessen the risk of down time and ensure a timely finish to planting this spring. Another benefit to a smooth-running planter will be a greater likelihood of uniform stand establishment; an important factor for achieving maximum yields (Doerge et al., 2002; Nielsen, 2001; Nielsen, 2004).

Several seed companies plus a number of planter dealers offer planter unit testing with the use of several planter test stands on the market. One of the more popular test stands being used is called the Meter Max™, manufactured by Precision Planting™ (<http://precisionplanting.com/>). This type of planter test stand not only measures the accuracy of seeding rate, but can also give you an idea of the uniformity of the seed drop by virtue of the seed dropping onto a horizontal seed belt.

Check out the related references below for links to service support Web pages at Case-IH, Deere, and Kinze. Here are some general guidelines and tips for planter maintenance and adjustments.

- Clean the planter inside and out. This should have been done at the end of last year's planting season before the planter was 'put to bed' for the off-season. Check for old seed left in the hoppers, mouse nests, and anything else that may interfere with the operation of the seed meter or seed drop tubes.
- Check and replace all worn out parts.
- Ensure that coulters and disc openers are aligned accurately.
- Replace worn seals and check trueness of fit of seed drum (Case IH Cyclo™).
- Replace worn rubber seals on JD vacuum seed discs.
- Adjust or replace worn disc openers.
- For finger-pickup type planters, check finger-pickup back plates for rust buildup, seed treatment residues, and worn down 'dimples'. Check and adjust finger tension.

- Check condition of seed conveyor belt. Age + seed treatment = brittleness.
 - Also check condition of belt drive sprocket teeth.
- Replace worn chains. Lubricate or replace chain links.
- Inflate tires to their correct pressure.
- Clean seed tubes and monitor sensors to ensure accurate monitoring of seed flow.
- Replace seed tubes if excessively worn at bottom.

CALIBRATE THE PLANTER!

- For air or vacuum planters:
 - Calculate & record the seed weight for each seed lot you intend to plant.
 - Identify & record the correct pressure (air or vacuum) for the calculated seed weight.
 - Identify & record the correct seed disc (or drum) for the calculated seed weight.
- Double-check the operations manual and identify the correct transmission setting for the desired seeding rate.
- Calibrate actual seed drop against ...
 - Planter transmission settings
 - Planter monitor readouts
- Calibrate at normal planting speeds and seeding rates.
 - Calibrate in as close to field conditions as possible.
 - Don't calibrate the planter in the farm lane.
- Calibrate pesticide and fertilizer planter attachments at same time because application rates can easily change from year to year.
- Check that the planter toolbar is parallel to ground when planter is in use because this affects disc opener depth, press wheel efficiency, & seed to soil contact.

Related References

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<http://www.pioneer.com/usa/agronomy/corn/1202.htm> (URL verified 2/21/05).

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Kinze Manufacturing. 2004. **Kinze Row Unit and 3000 Series Planter Maintenance Reference Guide**. Available online at <http://www.kinzemfg.com/pdf/servicepdfs/rum1000.pdf> (URL verified 2/21/05).

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Don't forget, this and other timely information about corn can be viewed at the Chat 'n Chew Café on the Web at <http://www.kingcorn.org/cafe>. For other information about corn, take a look at the Corn Growers' Guidebook on the Web at <http://www.kingcorn.org>.

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