

Optimizing Planter Performance

This guide does not replace your Operators Manual. Always read your Operators Manual before operating equipment.

Frame

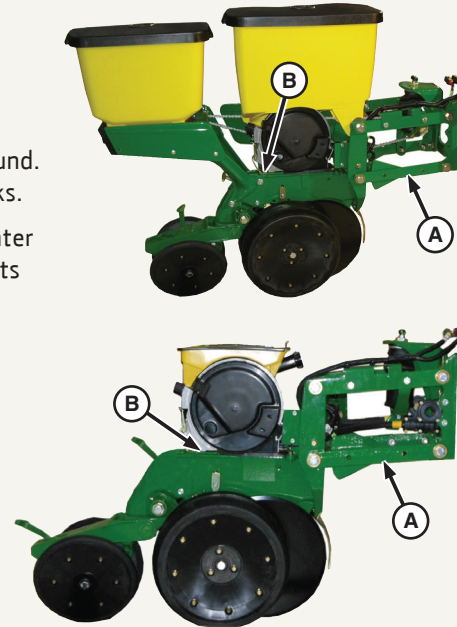
- Verify that the planter frame, parallel arms (A), and planting units (B) are running parallel to the ground. Periodically perform checks.

NOTE: Before adjusting planter frame, verify that all row units are set to equal down force.

- If the parallel arms are not level or angled slightly upward, adjust frame height. If planting units are not level, adjust hitch height.

- Side-to-side level is also important for improved performance.

- **Integral Planters:** Verify that tractor hitch and planter-frame gauge wheels are adjusted properly.
- **Drawn Planters:** To rephase the hydraulic system, raise and lower frame several times. If rephasing does not correct the level, adjust frame wheel height.



Drives

- Monitor drive wheel slippage on planters with mechanical transmissions.
- Application rates with mechanical transmissions vary with field conditions.
- For accurate seed and chemical rates, repair or replace worn chains and sprockets.

A Pro-Shaft™ kit is available for most planter models.

A Pro-Shaft™ reduces daily planter maintenance. See your John Deere™ dealer.

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Row Unit

- **Tru-Vee™ Setting:**
 - If blades are replaced, replace them in pairs to ensure consistent wear and a uniform seed furrow.
 - If beveled edge is worn away or blade diameter is less than 35 cm (14 in.), replace opener blades.
 - If blade damage from rocks or stumps creates irregular seed furrow, replace opener blades.
 - If blades are replaced, verify the correct amount of blade contact. Insert two business cards on each side of blade contact point and measure between cards. The correct blade contact is 3.8–6.4 cm (1.5–2.5 in.).
- **Gauge Wheel Setting:**
 - To prevent material buildup between gauge wheels and opener blades, adjust gauge wheels to specified distance from blade. Specification - Slightly touch blade or no more than 1.5 mm (1/16 in.) from blade at closest point when wheel is rotated.
- **Seed Tube:**
 - To maintain consistent seed population and monitoring, clean seed tube and sensor occasionally during operation. AA36824 Seed Tube Brush is available from a dealership.
- **Row Unit Down Force:**
 - To maintain proper seed depth, adjust down force to a proper level. Excessive down force leads to increased wear and transmission slippage.

Tire Pressures

Measure all air pressures with planter in plant position.

- Verify that all frame tires are inflated to specifications in the operator manual.
 - Correct frame-tire inflation maintains a level frame.
- Verify that contact-drive tires are inflated to specification in the operator manual.
 - Correct contact-drive tire inflation maintains accurate rates.

Meter Performance

Seed Treatments

- For best results, use of farmer applied seed treatment is not recommended. If farmer applied treatments must be used, apply treatment to seed and allow to dry before filling planter.

Graphite Usage (Mechanical Meters)

- Recommended Graphite rates:

Row Unit Hopper – Graphite Application Rate	
Hopper Size	Amount of Graphite
58 L (1.6 bu.)	15 mL (1 tbsp.)
106 L (3 bu.)	30 mL (2 tbsp.)
80 000 kernel seed corn unit	15 mL (1 tbsp.) or (0.5 oz.)
Insecticide Treated Seed	
80 000 kernel seed corn unit	Additional 15 mL (1 tbsp.) or (0.5 oz.)

- When using meters for the first time each season, add an additional 0.6 Tbls. or 0.3 oz. to each row unit.

IMPORTANT: Double graphite application for seeds with heavy and/or sticky treatments.

NOTE: If graphite builds up in bottom of hopper, reduce the quantity. Every seed is visibly gray when coated properly.



- Ensure all meters are clean of any build-up.

Vacuum Meters

- Verify that the correct seed disk is installed for the seed being planted. If seed contains mixed sizes or shapes, see a John Deere™ dealer for assistance in disk selection.
- If seeds contain a large variety of sizes and shapes, a flat disk with double eliminator improves population control.
- Verify that the meter brushes, baffle, scraper, double eliminator, hub adjustment, and other factors are all adjusted according to the seed used. See the operator manual.
- If new disks are installed, apply graphite-lubricant spray TY25797 to the outside of the seed disk.

Meter Performance

Operating Vacuum (Vacuum Meters)

- To purge the system of dirt and talc buildup, clean the system as directed in the operator manual.
- For initial settings, use the operator manual or seed supplier recommendations.
- For some small or large seed, adjust vacuum level up or down from recommended setting.
- If planting on extreme slopes affects performance, use a higher vacuum level.

Talc Usage (Vacuum Meters)

- With untreated seed and commercially treated seed (not farmer treated seed), apply these talc rates.
- To coat all seeds with talc, but avoid talc accumulation in bottom of tanks and hoppers, adjust talc rates as necessary.
- Double talc rates with very large or very small seeds, with heavy or sticky seed treatment, or in humid planting conditions.
- With 35 or 50 bushel bulk tanks, meter the talc into the tanks while filling with seed. To ensure complete coverage, stir the seed.
- To verify that all seeds are coated with talc, occasionally inspect seeds in the ground behind planter.



Application Rate of Talc in CCS™ Tanks	
CCS™ Tank Size	Amount of Talc
1233 L (35 bu.) Bulk Tank	2.6 L (11 cups)
1762 L (50 bu.) Bulk Tank	3.8 L (16 cups)
Per 80 000 kernel seed corn unit	74 mL (5 tbsp. (2.5 oz.))
Row Unit Hopper – Talc Application Rate	
Hopper Size	Amount of Graphite
58 L (1.6 bu.)	120 mL (1/2 cup)
70 L (2 bu.)	177 mL (3/4 cup)
106 L (3 bu.)	240 mL (1 cup)

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Meter Performance

Wax-Based Lubricant Usage (Vacuum Meters)

- Wax-based lubricant typically has lower levels of inert and seed treatment dust in the vacuum exhaust.
- With untreated seed and commercially treated seed (not farmer treated seed), apply these rates.
- To coat all seeds with lubricant, but avoid accumulation in bottom of tanks and hoppers, adjust lubricant rates as necessary.
- Double lubricant rates with very large or very small seeds, with heavy or sticky seed treatment, or in humid planting conditions.
- With 35 or 50 bushel bulk tanks, meter the lubricant into the tanks while filling with seed. To ensure complete coverage, stir the seed.
- To verify that all seeds are coated with lubricant, occasionally inspect seeds in the ground behind planter.

Application Rate of Approved Fluency Agent in CCS™ Tanks	
CCS™ Tank Size	Quantity of Fluency Agent
1233 L (35 bu.) Bulk Tank	1.05 L (4-3/8 cups)
1762 L (50 bu.) Bulk Tank	1.5 L (6-1/4 cups)
Per 80 000 kernel seed unit	30 mL (1/8 cup)
Hopper Size	Quantity of Fluency Agent
58 L (1.6 bu.)	48 mL (1/5 cup)
70 L (2 bu.)	60 mL (1/4 cup)
106 L (3 bu.)	90 mL (3/8 cup)
Per 80 000 kernel seed unit	30 mL (1/8 cup)

Always verify population and spacing with a field check



Annual Meter Inspections are recommended to ensure proper performance. See your John Deere dealer to have your meters tested with your seed prior to planting.

Meter Performance

Positive Effects of Talc

The following charts show an example of the positive effects of using talc on treated seed with a cell type vacuum disk. The measurements shown are the release time between seeds coming off the seed disk.

Seed properly treated with talc releases from the seed disk more consistently, leading to more accurate spacing when the seed is placed in the ground.

