

# Optimizing Planter Performance

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

## Frame



- Periodically check the planter to be certain the frame and planting units are running parallel to the ground, front to rear.
- If the planter is not level front to rear, the tractor hitch may need to be adjusted or the mounting location of the planter frame wheels will need adjusting.
- Side-to-side levelness is also important for improved performance.
  - For integral planters, use the tractor hitch and frame gauge to level the planter.
  - For unlevel drawn planters, be sure to raise and lower the planter several times to rephase the hydraulic system. If still not level, adjust the mounting locations of the frame or wing wheels to achieve a level frame.
- On all planters, be sure all row units are set to an equal amount of downforce before making any frame adjustments.

## Drives

- Monitor drive wheel slippage for mechanical transmissions per the Operator's Manual.
- Repair or replace worn chains and sprockets to ensure correct seed populations and spacing.
  - A Pro-shaft Drive kit is available for most planter models, which reduces daily planter maintenance. See your local John Deere dealer for details.
- Planting rates on Mechanical Transmissions will vary depending on field conditions.

# Optimizing Planter Performance

## Row Unit

- Tru-vee setting
  - Opener blades should be replaced if the beveled edge is worn off or the diameter is below 14 inches.
  - If damage caused by rocks or stumps creates an irregular seed-furrow, replace blades.
  - If blades are replaced for any reason, be certain they are installed with the correct amount of blade contact, 1.5 in. to 2.5 in., at leading edge when nut is tightened. Inserting two business cards between disks on each side of contact points on the leading edge will help verify this dimension.
  - Replace blades in pairs to ensure consistent wear and a uniform seed trench.
- Gauge Wheel setting
  - To prevent a buildup of dirt or trash between gauge wheels and opener blades, gauge wheel tires should just touch blades or be no more than 1.5 mm (1/16 in.) away from blades at their closest point.
- Seed Tube
  - Occasional cleaning of the seed tube will provide more consistent seed population monitoring. AA36824 Seed Tube Brush is available to order through your local dealership.
- Row Unit Downforce
  - Adjust downforce in order to maintain proper seed depth. Excessive downforce may lead to additional wear and/or seed transmission drive slip.

## Tire Pressures

All air pressures should be measured with planter in plant position.

- Ensure all frame tires are inflated to specification.
  - Incorrect frame tire inflation will lead to unlevel planter operation.
- Ensure Contact Drive Tire is inflated to specification.
  - Incorrect Contact Drive Tire inflation will affect seed population.

# Meter Performance

## Seed Treatments

- For best results, use of farmer applied seed treatments is not recommended. If they must be used, apply any seed treatment to seed and allow to fully dry before placing in tanks.

## Seed Disk Selection (Vacuum meters)

- Always verify you are using the correct seed disk for the seed you are planting. If the seed is unusually sized or shaped, the disk recommended by the Operator's Manual may not provide the desired planting accuracy. See your John Deere dealer for assistance.
- For seed varying widely in sizes and shapes, a flat disk and a Doubles Eliminator provides better population control.
- A good way to check your seed disk is to remove the vacuum meter from seed hopper, place seed in the meter, and turn the meter by hand with the vacuum hose connected and the vacuum motor operating at recommended vacuum level.



- Only one seed should be able to fit into each cell.
- For meters with new seals, apply Graphite Lubricant TY25797 to the outside of the seed disk.

# Meter Performance

## Operating Vacuum (Vacuum Meters)

- Clean the vacuum system per the Operator's Manual to purge the system of dirt and talc buildup. Dusty planting conditions and heavily treated seed will require the system to be cleaned more often.
- For initial vacuum settings, use the charts from the Operator's Manual or recommendations from the seed provider.
- For some very small or large seed sizes or shapes, it may be necessary to adjust vacuum levels up or down slightly from the recommended initial setting.
- Some extreme slopes and rough field conditions may require higher vacuum levels.

## Talc Usage (Vacuum meters)

- If planting commercially-treated seed and no farmer-applied treatments are being used, apply talc at the following rates:
- |                     |         |
|---------------------|---------|
| 50 bushel tank..... | 16 cups |
| 35 bushel tank..... | 11 cups |
| 3 bu hoppers.....   | 1 cup   |
| 1.6 bu hoppers..... | 1/2 cup |



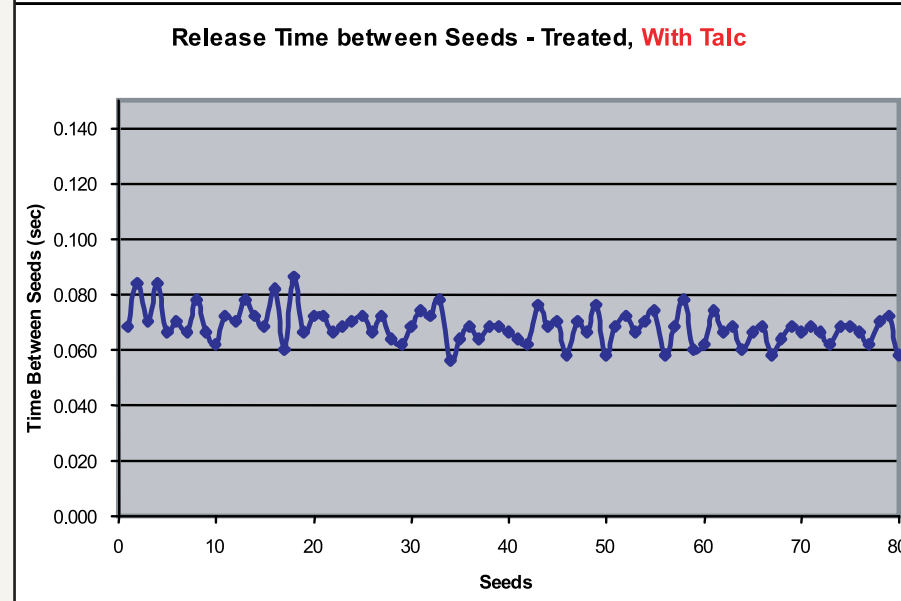
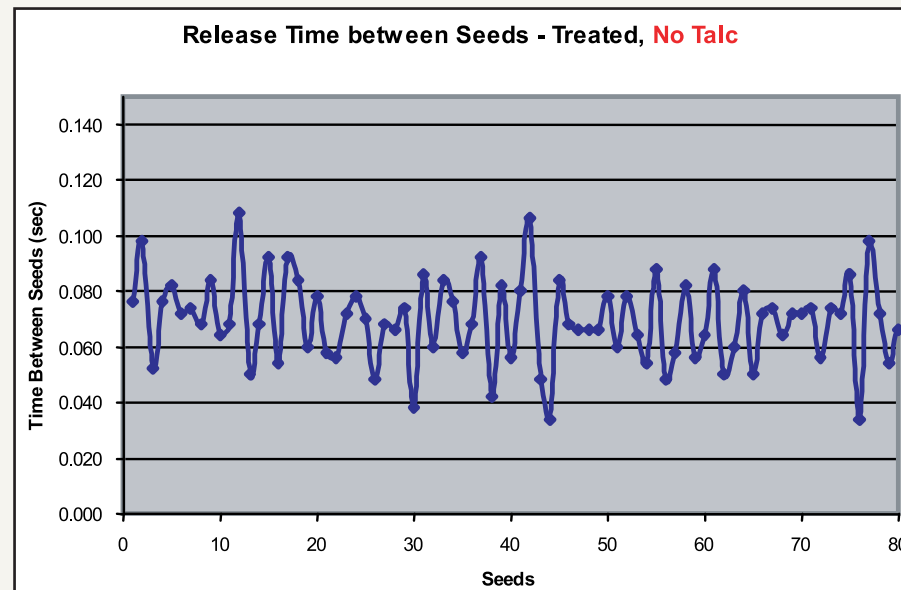
- Adjust these rates as necessary so all seeds become coated with talc, while avoiding an accumulation of talc at the bottom of the tank.
- **IMPORTANT:** Double talc application for very large or very small seed sizes, seeds with heavy and/or sticky treatment, or for humid planting conditions.
- For 35 or 50 bushel tanks, metering the talc into the tanks while filling with seed is the best way to add talc to the seed. The seed and talc mix should also be stirred in the tanks to ensure complete and equal distribution of the talc.
- Occasionally check seeds in the ground behind the planter to verify all seeds are coated with talc.

# 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.

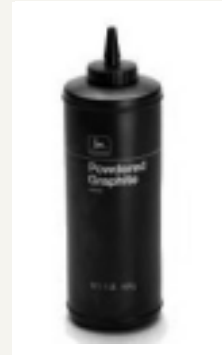
Seed properly treated with talc releases from the seed disk more consistently, leading to more accurate spacing when the seed is placed in the ground.



# Meter Performance

## Graphite Usage (Mechanical Meters)

- Recommended Graphite rates:
- |                     |                   |
|---------------------|-------------------|
| 50 bushel tank..... | 32 Tbls. (16 oz.) |
| 35 bushel tank..... | 22 Tbls. (11 oz.) |
| 3 bu hoppers.....   | 2 Tbls. (1 oz.)   |
| 1.6 bu hoppers..... | 1 Tbls. (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.
- For 35 or 50 bushel tanks, metering the graphite into the tanks while filling with seed is the best way to add graphite to the seed.
- Ensure all meters are clean of any build-up.

## 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.