Photo courtesy of Precision Planting®.

The right planter maintenance and settings are vital to seeding all types of sunflowers, and becomes even more important the larger the seed size.

Planter mechanical issues can lead to undesirable large variances in head size, moisture, kernel size and quality. Poor planting passes can also lead to lodging and make harvesting difficult.

TWO IMPORTANT STEPS

Photo courtesy of Precision Planting®.

1. Parallel arms should be parallel to the ground and are corrected by adjusting the bar height.

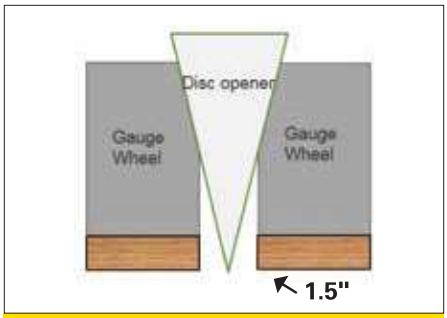

Image courtesy of Precision Planting®.

2. Use wood blocks of the same thickness to ensure each row's mechanical depth setting is identical to the rest of the planter.

PLANTER BASICS

- ☐ Consult your planter manual for proper inflation and tire size. Unwanted population variation occurs with over or under inflation of the meter drive system tires
- ☐ Check closing wheel alignment
- ☐ Check disk openers for wear. For John Deere®, Kinze® and White 8000 and older planters the diameter of a new disk is 15". A disk worn smaller than 14.5" may create a W in the trench and cause a difference of up to ¾" in seed depth. White 9000 planters are 16" openers and Case IH planters are 14" openers when new
- ☐ Make sure drives are all in good working order (chains, bearings and shafts)
- ☐ Make sure all chains and sprockets are properly aligned to ensure there is no binding
- ☐ Make sure all seed tubes and sensors are clean and functional
- ☐ Row cleaners are vital. They should float freely with maintained pivot point and bearings. Residue left in furrow can change soil temperature and cause delayed emergence

AIR SEEDER BASICS

- ☐ Check opener disks for wear – most manufacturers disks are 18"; if they are 17" or less replace them
- ☐ Examine firming and closing wheel arms/check bushings
- ☐ Check the condition of the air delivery system, making sure the air system fan is operating at proper speed
- ☐ Check all hoses and distributors for wear, air leakage, cracks or blockage
- ☐ Make sure seed boots are within spec (if more than ½" is burned off the bottom of the boot it should be replaced. To check, use your tape measure and if the boot is less than 11.3" look into replacing the boot)
- ☐ Calibrate downforce to ensure the boot is running parallel with the ground (too much downforce will cause the seed boot to run deeper in the trench, causing it to not run parallel to the ground)
- ☐ Make sure all bearings are in good condition
- ☐ Check to ensure you have the proper metering roll for the proper application. Also check the metering roll for wear and clean from any foreign material
- ☐ Check meter calibrations prior to entering the field and check your calibrations and seed usage after planting a few acres

ALWAYS WHEN PLANTING SUNFLOWERS

- ☐ Be willing to dig seeds to check placement
- ☐ Be prepared to switch plates, baffle settings, singulator or double eliminator settings, and vacuum or air pressure for desired singulation. Revisit settings between seed lots
- ☐ Use a lubricant, such as eFlow® 80/20 Seed Lubricant
- ☐ Ensure your vacuum is set properly as your skips and multiples should be close to equal (if more multiples, lower your vacuum; if more skips, increase your vacuum)
- ☐ Know the speed your planter's meters operate at best for each lot of seed. Some lots may require faster or slower speeds than normal
- ☐ Consider filling your planter hoppers half full to reduce bridging potential

TIPS BEYOND THE PLANTER

Soil Temperature

- Soil temperature needs to be at 50°F or more for your chosen soil depth (1.5 to 2.5 inches). Planting sunflower seed into cold soils may cause seed to go into dormancy causing delayed germination.

- If planting deeper than two inches, consider increasing planting population. Percent emergence will decrease as planting depth is increased. **Confection sunflowers should never be planted deeper than two inches.**

Seed to Soil Contact

- Make sure soil is pressed firmly against the seed at planting and the furrow is closed following seed placement. This is important in all crops, but particularly for sunflower. Moisture first needs to get through the woody hull and then to the seed. Poor seed to soil contact will result in uneven emergence.

Planting into No-till

- Stop and check incrementally that the planter is knifing into the soil.
- Planting into a field with wet residue can cause "hair pinning" – pushing straw into the seed slot instead of slicing through it.
- Row cleaners should be able to move residue away for the furrow to prevent hair pinning. With air drills very little can be done, wait for better conditions.

PRE-SEASON SET UP AND MAINTENANCE SPECIFIC TO BRAND AND TYPE OF PLANTER

Annually test your meter on a plant meter stand to learn what speed, air or vacuum pressure, plate size, finger type, and eliminator setting should be used for each seed lot. It's an inexpensive way to make sure your planter can place costly inputs at the proper population and spacing for optimal sunflower development.

John Deere® Finger Planter

- Visually inspect meter for worn, damaged or missing parts
- Disassemble meter and check bearing
- Check finger assembly for rust, wear or broken parts
- Bead blast housing and straighten if needed. Replace backing plates if bent or excessively worn
- Coat inside belt housing with graphite
- Re-install and/or replace belt, idler, bushing and drive sprocket
- Align belt
- Replace brush
- Install finger assembly and torque nut for proper operation
- Re-install and/or replace housing cover
- Lubricate and install lock
- Make sure you have proper fingers in your planter
- Sunflower fingers for 3's and 4's
- Corn fingers for 2's and sometimes 3's

John Deere Pro Max 40

- Check plates for wear and warpage
- Plates should be stored vertically when not in use
- Make sure double eliminator is not worn out
- Make sure knock out wheel turns freely and is not worn out and is aligned properly with plate
- Door gaskets are subject to wear and can cause spacing and singulation issues if cracks, holes, or chips are present. Remove from the lid and inspect carefully, replace if damaged
- Check all brushes for wear
- Check bearings in each unit to make sure unit doesn't wobble during operation and turns freely

Case 1200 Early Riser®

- Check wear on plates: if the groove on the face of the plate is no longer visible the plate is worn out (if you replace a plate you also will have to replace the cover as they are mated parts)
- Check to make sure plates are not warped
- Store plates vertically when not in use
- Check all brushes for wear
- Check singulator for wear
- Check that all bearings spin freely and the unit doesn't wobble

Precision Planting eSet® / vSet® / mSet®

- Make sure plates are in good working order and also check wear strips
- Make sure bearings turn freely and do not wobble
- Check quality and position of all brushes. Lower brush should be in the angled position
- Make sure singulator is in specification for wear, undamaged and in the floating unlocked position
- Make sure paper clip is intact and if you are running size 4 seed that you put the rubber hose on
- Make sure paper clip is in up position
- Use the specialty extractor and inspect wear line indicator. Replace when close to the wear lines
- Check butterfly drive for spring tension
- Inspect lid and hub seals for cracks, holes or tears
- Use the specified plate and extractor combination for specific seed size
- Check agitation assembly is present and in good condition