

UVM Extension Fact Sheet:

Northwest Crops & Soils
Champlain Valley Crop, Soil and Pasture Team**No-Till Corn Planter Checklist: Planter Maintenance & Upgrades***by Jeff Sanders, Agronomy Outreach Professional*

- 1) Planter tires, worn treads, correct psi
- 2) Hitch height should be between 14 and 15 inches from ground to bottom of hitch plate
- 3) Check tool bar for level- torpedo level needs to be level down in the field
 - a. If not pulling up or pushing down on the planter
- 4) Parallel arms are tight and bushings good
 - a. Bouncing around will affect how the planter works in the ground can result in seed bounce.
- 5) Vee Openers- important for the creation of a good seed trench
 - a. Replace at 14.5 inches
 - b. Check with two pieces of paper 1.75 -2 inches with 3mm disks
 - c. Heavy duty 3.5mm openers should be about 1 - 1.25 inches
 - d. Move shims achieve proper contact.
 - i. If you can turn one against the other easily they are not shimmed properly
 - ii. If you shim them to tight you will put additional stress on bearings
- 6) Check Rock Guards on bottom of standard for wear and tightness. This is critical also for making a good seed trench.
 - a. These also help protect seed tube from damage from rocks
 - b. If worn narrower than 5/8" replace
- 7) Check the Keaton Seed Firmers for wear and adjust as needed
 - a. They should be snugged up with the adjusting screw
 - i. NEVER back up with the planter down or they will be damaged
 - ii. After a 2 years add mojo wires to extend life and increase down pressure



8) Check all drive chains make sure not bound up. Do not oil chains daily—dust and dirt will stick and bind up and shorten life of chains. Stiff chains will add vibration and affect seed drop. Best is to remove and place into the seed boxes when not in use

9) Check shafts for alignment and bearing tightness

- a. Problems will lead to skips and broken chains and shafts

10) Check seed tubes for wear and breaks very important

- a. A leading cause of skips and doubles

11) Check downforce pressure

- a. Should be able to turn gauge wheels when planter is on the ground
- b. Too much down pressure will create sidewall compaction and impede root development
- c. If spring system check for broken springs
- d. Ideally you will want to run around 125 psi of downforce on the planting unit
- e. MUST make sure you have enough weight on planter to hold in ground when planting in hard soil surface conditions. Add weight to planter as needed



12) Gauge wheels need to be checked for wear and bearings need to be checked for wear

- a. Gauge wheels need to rub lightly on vee openers any gap can result in plugging and trench filling in resulting in problems irregular emergence
- b. Check scrapers at this time to make sure they are not worn out

13) Check closing system for true running

- a. Any slop in the bushings and arms will result in diminished performance
- b. Check distance between wheels 1.75 inches for spoked wheel systems should be 2.25 – 2.5 inches of space between bottom of wheel body before spoke.
- c. Check springs for wear and the mounting holes for wear and replace repair as needed

14) Check fertilizer system for problems

- a. Check lines for cracks
- b. Check monitoring system for leaks
- c. Check inline filters and screens
- d. Check hardware holding tanks well
- e. Make sure dry fertilizer tanks are cleaned make sure augers are put in correctly, not backwards
- f. For dry fertilizer make sure the banding set up is correct (2X2) and all other
- g. Liquid fertilizer make sure the in row lines are dropping the fertilizer in the correct location or your vee openers will get wet or your keatons will get wet and plugging and dragging will result.
- h. Make sure the ground pump you are using to fill and hoses are all in good shape and the fittings are not busted.
- i. Make sure planter pump is calibrated so you do not burn your seed (in row) or misapply fertilizer.
 - i. Tape a bottle to one hose, drive 136 ft each oz. is a gallon on 30 inch rows



15) Test seed meters

- a. Air meters need to check brushes, seals, etc...
- b. Fingers check belts and other components should be checked annually
- c. Lubricate seed drives annually
- d. Clean seed boxes and plates with warm soapy water
- e. The addition of graphite/talc lubricant to seed will improve performance in all systems

16) Check vacuum system on an air seeder check vacuum gauge

- a. When planting during the day depending on air temperature, humidity, hydraulic oil temp, this pressure will change and you need to keep track or the population will change

17) Check planter standards for cracks and repair as needed

18) Check electronic meter system before you head to the field

- a. Use dielectric grease on connection between planter and tractor

19) Make sure all hydraulic hoses are properly run and tied off so they do not get pinched or blown

20) Check marker arm measurement so that you row spacing is even and that the marker wheels bearings and guards are in good shape. Check fittings for tightness and leaks.

21) Follow planter recommendations for the seed you plant and use seed lubricant if recommended by the planter manual. Pay attention to seed weights and shapes and make the proper adjustments to planter to insure proper planting population.



For more information:

Please contact the UVM Extension Champlain Valley Crop, Soil & Pasture or Northwest Crops & Soils Programs

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