Planter Setup and Technology Considerations for Planting in Cover Crops

Simer Virk
Extension Precision Ag Specialist
University of Georgia
PrecAgEngineer

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Successful stand establishment depends on many different systems on the planter:

Furrow opening system

Creates a furrow at desired **seed depth**

Seed metering & delivery system

Meter seeds at target **seeding rate** and ensures uniform **seed spacing**

Furrow closing system

Closes furrow ensuring adequate **seed-to-soil contact**


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8370R


MaxEmerge XP

Coulters:

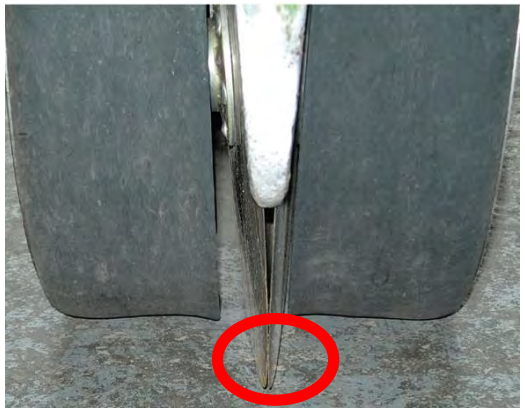
- Have fluted coulters running in front of the double disc openers
- Coulters should be adjusted so they are not running deeper than the bottom of the double disc opener.
- Should be ¼ inch shallower than the double disc opener

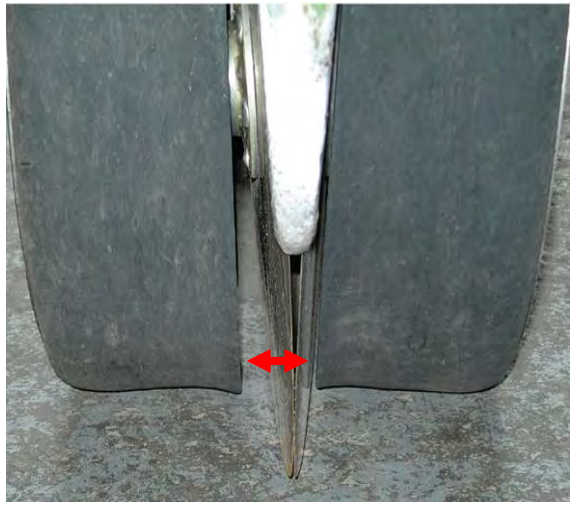
Row-Cleaners:

- Performance depends on blade type, length and sharpness
- Height should be adjusted so that they
  - remove residue, trash or clods out of the way
  - should not dig into or till the soil bed
- Floating row cleaners performs better when planting into cover crops

Double-disk Openers

- Properly setup disk openers should form “V” trench (not W)
- Check point of contact to verify “V” shape
- Disk contact distance should be 1.0” to 2.5” for proper performance
- Replace opening disks if worn by more than 0.5” (most new disks are 14-15” in diameter)





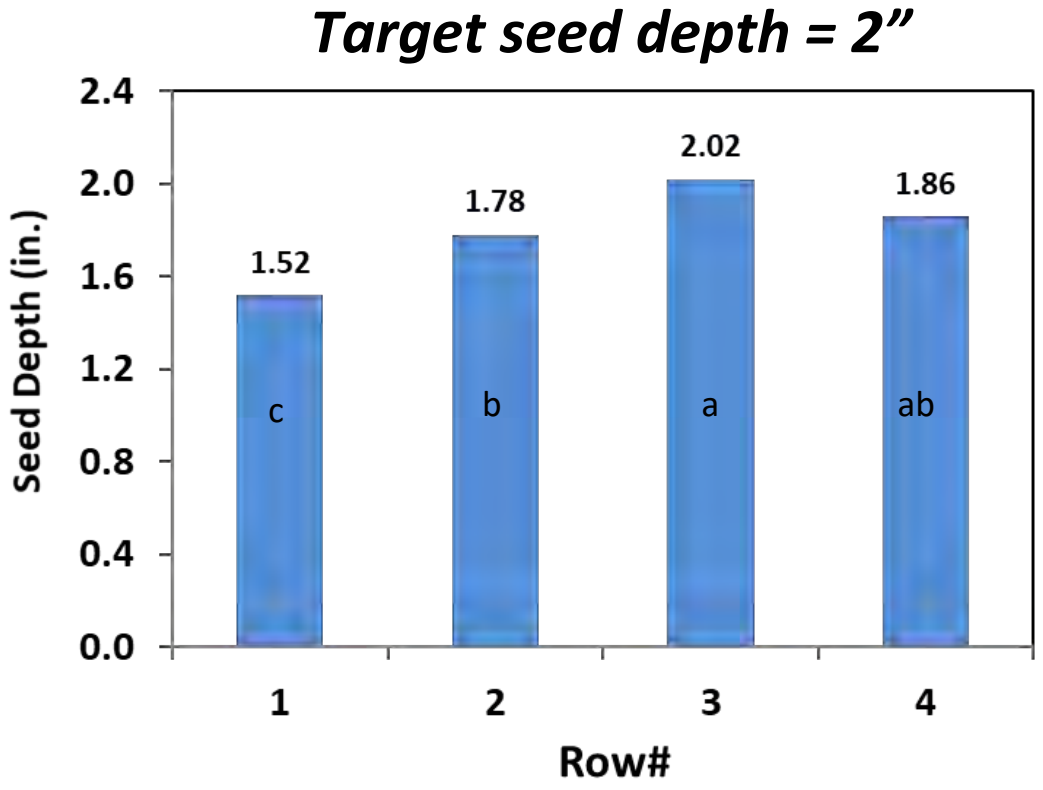
Gauge Wheels:

- Gauge wheels should slightly rub against the disk openers
  - to create a good seed trench sidewall
  - to keep disk openers clean
- In some cases, narrow gauge wheels may perform better in some cover crop situations
- Depends on the amount of residue and field conditions

Seed Depth:

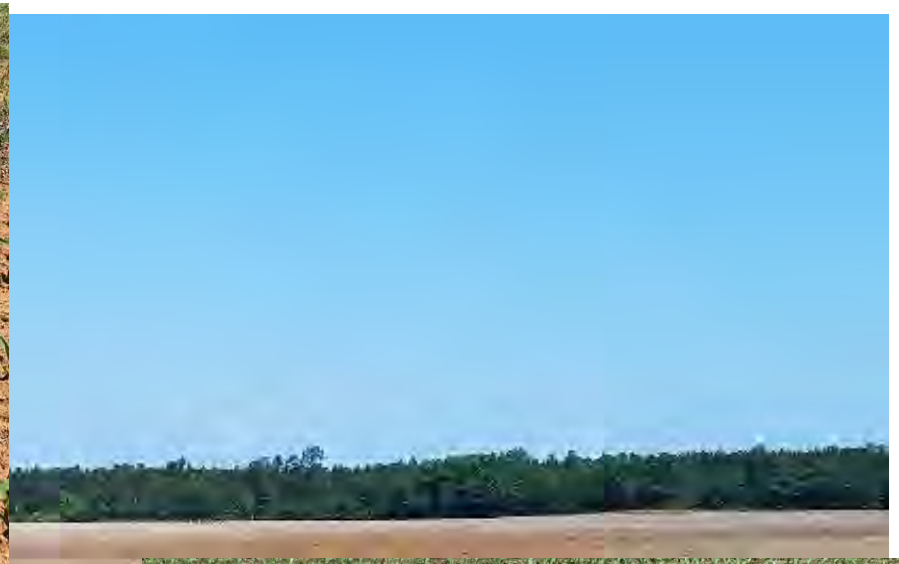
- Adjust planting depth to account for cover crop residue on the soil surface
- In heavy cover, aim to have an 1/4th adjustment deeper to achieve the desired seeding depth.
- Verify depth in the field by digging seeds behind the planter in each row

Seeding Depth



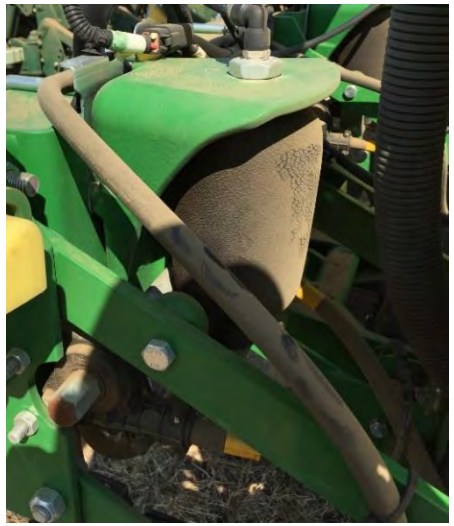
- Depth setting can be different among the rows
- Adjust depth & downforce to minimize variations

Planter Downforce/Downpressure



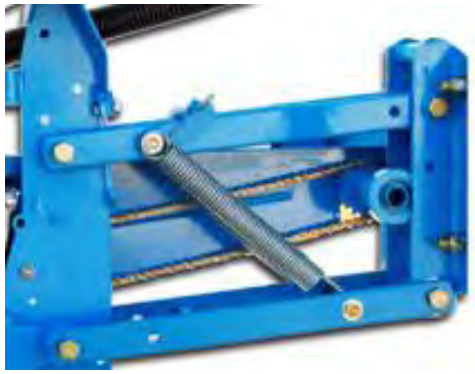
Downforce:

- Downforce requirements changes with soil type, texture, tillage and crop residue
- Planting into cover crops require additional downforce to place seed evenly
- Increase downforce and check:
  - Gauge wheels should take some effort to spin by hand
  - Not enough – shallow seed depth
  - Too heavy – seedbed compaction

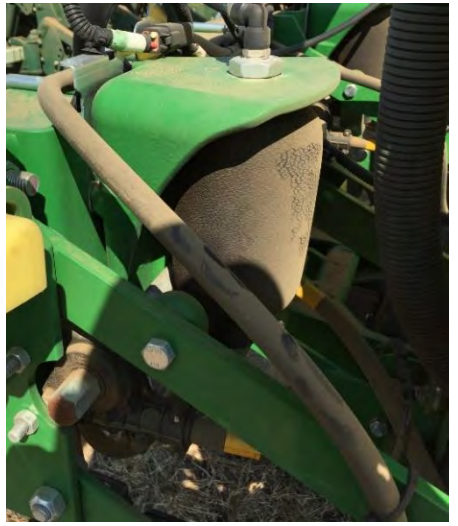


Downforce Technology

Mechanical Downforce options:



Active Downforce Technology options:



Closing Wheels:

- Adjust closing wheel pressure to ensure adequate pressure
- Will need increased pressure than when just planting into bare soil
- Select type of closing wheels based on soil type and tillage conditions
  - a spiked and solid wheel combination works best in heavy crop residue conditions

Planter Operation

Make sure that the planter is running level to the ground.

Planting Technology

Seed Monitor*

- Population (over or under)
- Seed Singulation (98 - 100%)
- Seed Spacing (<> target)
- Spacing Quality (95-100%)

by-row planting feedback


JOHN DEERE
Planter
09:58
RTK
SCV
I
+
2.40
-
C
25400
(seeds/ac)
10.8
(in H2O)
4
8
+
%
-
AutoTrac
A
Active
ON
Steerin
AUTO
0in
Location

Precision Seed Meters

Mechanical Seed Meters

Electric Seed Meters/Drives

Precision Seed Delivery/Placement

Gravity Seed Tube

Brush/Belt Type Delivery

Benefits:

- Controlled seed delivery to the furrow
- Enables planting at higher than nominal speeds (8 – 12 mph)


JOHN DEERE
ExactEmerge

Thanks!

Simer Virk
Extension Precision Ag Specialist
University of Georgia – Tifton
Email: svirk@uga.edu
Phone: (229) 386-3552
@PrecAgEngineer
www.agtechdata.uga.edu

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