Cover Crops in Reduced Till Organic Systems

Chris Reberg-Horton, Scott Wells, Rachel Atwell
Weed coverage in soybean as affected by cereal rye biomass

- **Goldsboro**
  - LOW <6,000
- **Kinston**
  - MED <6-8,000
- **Kinston**
  - MED <6-8,000
- **Plymouth***
  - LOW <6,000
- **Goldsboro**
  - HIGH >8,000
- **Plymouth***
  - HIGH >8,000
High-residue cultivation: Post-emergence
Corn has problems

• What should the cover crop be?
  – Grass
  – Legume
  – Mix
Corn has problems

• What should the cover crop be?
  – Grass- nitrogen problem
  – Legume
  – Mix
Corn has problems

- What should the cover crop be?
  - Grass - nitrogen problem
  - Legume – biomass problem
  - Mix
Corn has problems

• What should the cover crop be?
  – Grass- nitrogen problem
  – Legume – biomass problem
  – Mix – hard to plant into unless clover/grass mix
New Directions
Soil moisture as affected by cover crop treatment averaged over herbicide treatment averaged over 5 environments.
Figure 1. Total biomass as affected by legume genotype and small grain in a combined analysis of the Coastal Plain environments (Clayton 2016, Clayton 2017, Kinston 2016, Rocky Mount 2017).