## Experiment Info:

| | |
|---|---|
| Planted: | |
| Harvest: | |
| Yield Goal: | |
| Target Fert.: | |
| Variety: | |
| Population: | |
| Row Width: | |
| Prev. Crop: | |
| Plot Size: | |
| Replications: | |

## Soil Test Values (ppm):

| | |
|---|---|
| pH: | |
| CEC: | |
| %OM: | |
| Bray P1: | |
| Bicarb P: | |
| K: | |
| S: | |
| %K: | |
| %Mg: | |
| %Ca: | |
| %H: | |
| Zn: | |
| Mn: | |
| B: | |

## Objective:

Measure the effects of biological nutrient enhancements on cotton stand when afflicted with *Pythium* root rot.

There are times in conducting research trials that an adverse situation arises that affects the test, but it turns into a learning opportunity.  Crop disease can certainly have a negative effect. Such was the case in a cotton trial in a high organic matter soil where the effects of PRIMAGRO biological fertilizers were being compared to AgroLiquid core fertilizers for yield and cotton quality.  The spring was cold and wet, and the test site experienced infestation of the soil pathogen *Phythium spp.* resulting in a reduced stand.  However, stand count data indicated that, although reduced, that there were better stands in the plots that received PRIMAGRO biological nutrient products or additives.  This test was established in an field where a cotton test was established in 2015 with a good stand.   The 2017 stand counts from the same rates of in-furrow applications appear in the following table.



### Stand Counts

| 2015 | Plants/A |
|---|---|
| Pro-Germ. + Kalibrate | 43,187 |

| 2017 | |
|---|---|
| Pro-Germ. + Kalibrate | 18,241 |
| Pro-Germ. + Kalibrate + C-Tech | 27,679 |
| PRIMAGRO P + PRIMAGRO K | 28,359 |

All at 2.5 gal + 2.5 gal (in furrow)
C-Tech at 2 qt/A

*Pythium Root Rot* reduced stand.
6/29/17

Impact Agronomics.  Pantego, NC

## Conclusions:

• Based on these results, it is apparent that the biological components of the PRIMAGRO and C-Tech enabled a better stand of cotton.

• North Carolina State University Plant Pathology Extension estimates that seedling diseases cause an estimated average annual yield loss of 5% in North Carolina.  So even when such stand losses seen here aren't apparent, there is still the chance for some yield loss annually.