

SOIL QUALITY AND DIVERSITY RESEARCH SUMMARY

OBJECTIVE

This research trial was performed to assess the effects of **TrueSolum**® on the soil microbiome quality and diversity.

TRIAL SPECIFICS

- **Performed by:** Florida Ag Research
- **Location:** Dover, FL
- **Crop:** Watermelon
- **Trial Period:** February 16 - June 20, 2018
- **Treatment Regiments**
 1. Water only
 2. **TrueSolum** 150, dilution ratio of 1:150 (TrueSolum:Water)
 3. **TrueSolum** 250, dilution ratio of 1:250 (TrueSolum:Water)

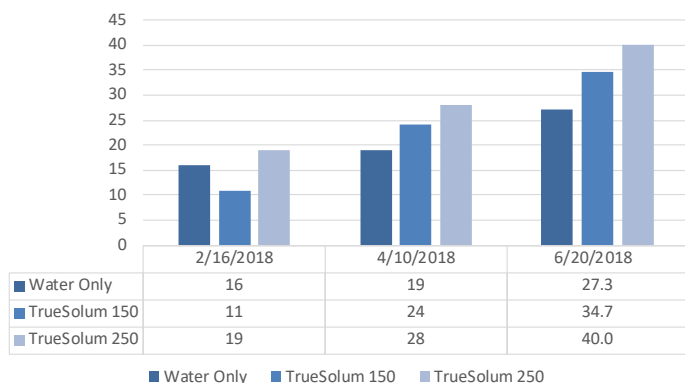
TRIAL DESCRIPTION

Florida Ag Research used drip injection trailer to apply **TrueSolum** to the grower's field. Six soil injection applications (125 gallons each) were made to watermelon transplants in the trial area. Soil samples were taken periodically during the trial to determine the different microbes present in the soil.

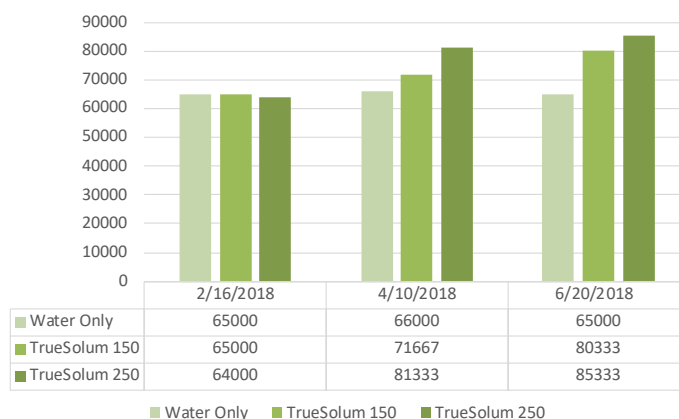
RESULTS

Through the study, it was observed that the soil treated with **TrueSolum** had higher counts of microorganisms such as bacillus, actinomycetes, algae and other beneficial fungi and bacteria. Mycorrhizal spore counts were significantly higher, by **150%**, for the **TrueSolum** treatment at the 1:250 dilution ratio, when compared to the control sample. In addition, beneficial bacteria levels in the soil were increased by **31%**.

Mycorrhizal Spore Count
Cenococcum geophilum (ectomycorrhizal fungus)



Beneficial Bacteria Count



CONCLUSION

The soil treated with **TrueSolum** showed greater biological diversity and higher counts of beneficial microorganisms. Increases in mycorrhizal and other microbial populations in the soil are known to improve fertility and porosity, enhance seed germination and promote primary nutrients in the host plants. In this research trial, better soil conditions reflected in the significant improvement of root vigor of the watermelons planted in the **TrueSolum** treated field.