



ALMOND TRIALS - RESULTS SUMMARY

OBJECTIVE

The three almond trials assessed the effects of **TrueSolum**[®] when added to grower's standard treatment, on nutrient availability in soil in orchards known to have iron uptake problems, when compared to the grower's standard program alone.

TRIAL SPECIFICS

Location: Traiver, Tulare and Reedley, CA

Season: Summer 2021

Tree Details:

- Independence variety
- 4 to 5 year old trees

Treatments:

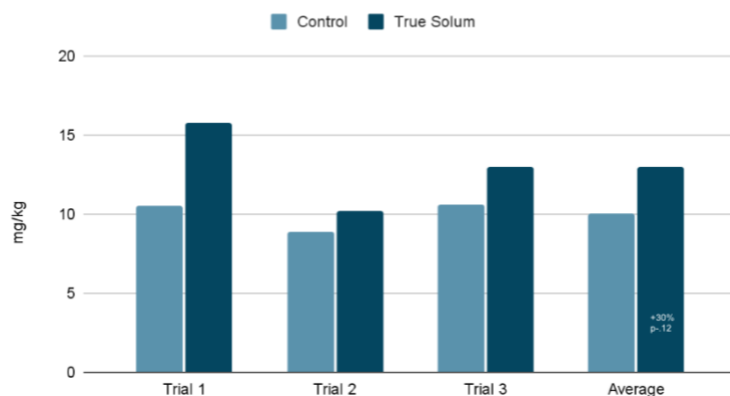
- Control – Grower's Standard
- Treated – Grower's Standard + 1.0 gal/acre **TrueSolum** every 10 days through drip

OVERVIEW

TrueSolum has been shown to increase microbial activity in the soil, particularly the microbes that produce the iron chelating compounds, siderophores. To test further test this effect, TrueSolum was used in three orchards known to have iron uptake problems. Soil samples were taken approximately 45 days after the initial application to assess nutrient availability in the soil. In addition, BeCrop[®] testing by Biome Makers was done to assess microbial activity. This data was only available in two of the three orchards.

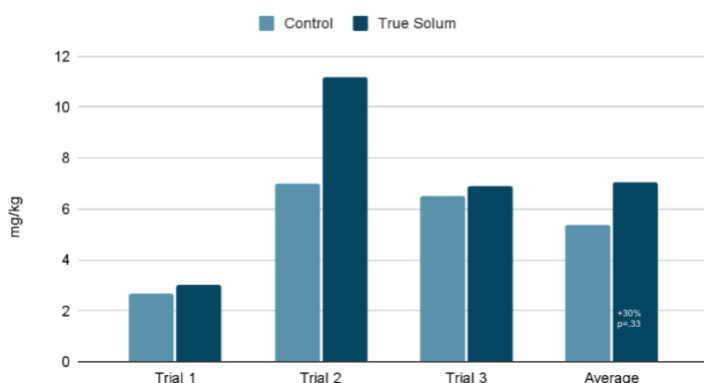
RESULTS

Soil Extracted Iron



There was an average of 30% more iron in the soil treated with TrueSolum compared to control.

Extracted Zn



There was an average of 30% more Zinc in the soil treated with TrueSolum compared to the control.



Manufactured by GreenTech Ventures, Inc.

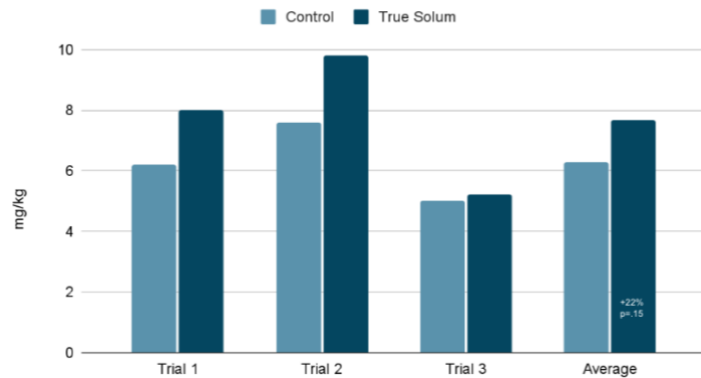
contact@truealgae.com

www.truealgae.com | www.truesolum.com



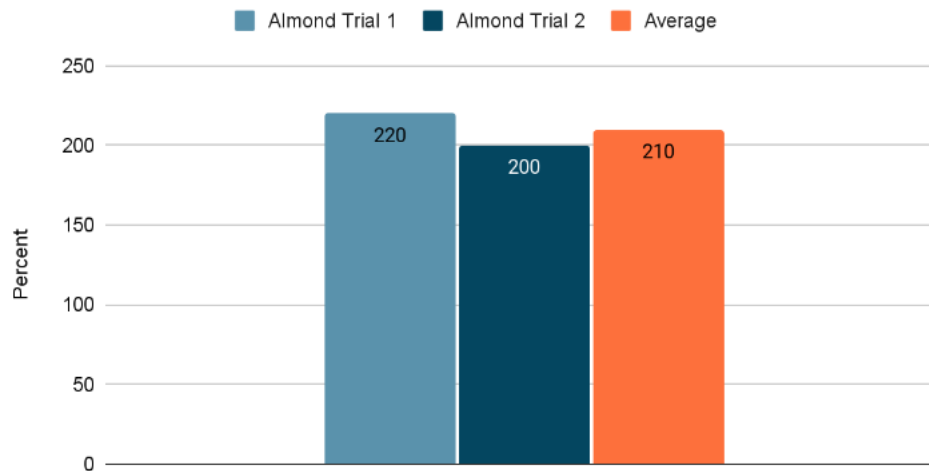
REVISION DATE: 09/18/2023

Extracted Mn



There was an average of 22% more Manganese in the soil treated with TrueSolum compared to the control.

Percent increase in relative abundance of Azospirillum sp. in the TrueSolum treated compared to control



TrueSolum increased the relative abundance of Azospirillum bacteria by an average of 210%. This genus of bacteria fixes nitrogen from the atmosphere and improves root growth. This compared the change in these populations over time from pre-treatment to the final rating at 45 days after the initial treatment.

CONCLUSIONS

Treatments with **TrueSolum** resulted in higher levels of Fe, Zn and Mn. It can be hypothesized that the higher levels of these nutrients seen in this series of 3 trials may be associated with microbes releasing these nutrients from soil particles. TrueSolum also increased the abundance of Azospirillum by an average of 210% which could influence nitrogen availability and root growth.