



PILOT GREENHOUSE LETTUCE TRIAL SUMMARY

OBJECTIVE

This greenhouse trial assessed the effects of **TrueSolum**[®] at two different addition levels to Grower's Standard Treatment (GST) and GST at double the concentration on **lettuce growth measurements, root mass** and **chlorophyll** content when compared to GST alone.

TRIAL SPECIFICS

Crop: Green Cos Lettuce

Growth Method: Hydroponics – Substrate from coir

Growth Period: 49 days (7 weeks)

Treatments (10 heads/treatment):

- | | |
|------------------------|----------------------------|
| 1. Control – GST only | 1. Control – GST x 2 only |
| 2. GST + TrueSolum | 2. GST x 2 + TrueSolum |
| 3. GST + TrueSolum x 2 | 3. GST x 2 + TrueSolum x 2 |

RESULTS

TrueSolum significantly increased the growth rate of the lettuce when measured using leaf number ($p = 0.0242$). The effect was significant in **all four TrueSolum treated groups**. Interestingly, the greater effect was seen in the GST + TrueSolum and TrueSolum x 2 groups over the GST x 2 groups. In addition, TrueSolum showed a **positive trend in growth rate of chlorophyll content** in both TrueSolum x 2 treated groups. Chlorophyll content can be a limiting factor for photosynthetic rate and can indicate vegetative productivity or the presence of abiotic stress. Other results included a **positive trend in fresh plant mass and fresh and dry root mass** in TrueSolum treated groups. Because of the limited sample size, these effects were not significant.

CONCLUSION

TrueSolum had a **positive impact on the growth and health of the lettuce** in varying degrees with a significant impact occurring on the growth rate as measured through the number of leaves. The results were somewhat unexpected as previous trials with TrueSolum were completed in soil with an active microbiome.

Those results showed significant increase in that microbiome community leading to the conclusion that TrueSolum impacts the microbe community. This study indicates that **TrueSolum can also have impact without that microbial community**. As this trial was a pilot to determine if a larger study is warranted, these results indicate that a larger study is certainly worth pursuing.



Manufactured by GreenTech Ventures, Inc.

contact@truealgae.com

www.truealgae.com



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