

Southern Valley Farms

Austin Hamilton - Thomasville, GA

"We've been impressed with EnSoil Algae[™]. This is our second year using the algae and it has improved yields everywhere we have incorporated it into our program. We started on peppers and we are expanding our use of it across the operation. We try a lot of things on the farm. This is one that is delivering a healthy return and it has proven to be very easy to add to our program."

2023 Pepper Results with Herb Young

Southern Valley is one of Georgia's largest and most successful vegetable farms. A test was conducted with EnSoil Algae™ on two adjacent 10-acre pepper blocks. Three applications of EnSoil Algae[™] Chlorella vulgaris were made to one block between transplant and first harvest (of ten). The impact of the EnSoil Algae[™] applications was measured by taking replicated BeCrop DNA and Haney Soil Health tests within each block. Analysis of the microbial changes using BeCrop indicated striking changes through the season. Systems were "turned on" as the season progressed. Block A was supplemented with 3 EnSoil Algae™ treatments and block B was used as the untreated control. (Sample locations = red dots)



Combining the Haney Test with BeCrop gives a chemical analysis that substantiates what the changing microbial systems are doing. Highly statistically significant (**) increases occurred in microbial populations that activated N, P, S and Fe in the EnSoil Algae™ treated block:

- Inorganic nitrogen release + 9.54% **
- Organic P assimilation + 3.95% **
- Iron assimilation + 7.22% **
- Sulfur cycle equilibrium + 10.25%**





Similarly, significant changes in microbial hormonal activity were documented in the EnSoil Algae™ block:

- Gibberellin production (GA) + 39.7% * (* = statistically significant)
- Heavy metal resistance + 76.8% **
- Abscisic acid (ABA) + 69.6%
- Siderophore production + 38.3%* (scavenges iron)

All of the microbes responsible for fighting pathogens and nematodes were turned on by the EnSoil Algae™ treatment:

- Fungicide agents + 280.9%**
- Bactericide agents + 20,599%** (indicates a low starting point)
- Nematicide agents + 109.8%





These powerful changes in the soil, chemically and biologically, were confirmed by a yield increase in the EnSoil Algae[™] block of 13% over the ten harvest timings. This translated to nearly six thousand lbs per acre increase in yield (5,908) which at the average price of \$0.68/lbs is a return of over \$4,000 per acre. While not a guarantee and there is some variability in large block comparisons, documentation of the soil biology changes and the corresponding chemical changes proved a tremendous positive change in the "life in the soil" that can make nutrients more available and heighten defense against pests that would apply to any crop.

Note: The loamy sand Georgia soils at this site had a pH of 7.0 and organic matter content of 1.1%. Because other pepper fields on the farm had severe infestations of Phytophthora earlier this fall, seven applications of biological inoculants were applied to both of these fields during the growing season ranging from multiple Bacillus sp. to Trichoderma.

Trial conducted by Herb Young.