



# COLLOIDAL SEA MicroPro MacroMag

This study focused on assessing the effectiveness of NanoCrop, ColloidalSea, MacroMag, and MicroPro products in blueberry cultivation. To see the full report from this study and how all the products performed, scan the QR code at the bottom of the page.

## Key Takeaways:

- **NanoCrop's Surfactant Efficacy:** Demonstrated effective surfactant properties in the study.
- **Length Increase Significance:** Most notable trait was the sizable increase length of blueberry shoots.
- **Brix Analysis in Dormant Phase:** Brix values are static due to plants' dormant growth phase, but nutrient uptake remained consistent with active growth.



## Study Factors:

- Study used trial products only.
- **NanoCrop Application Ratio:** Applied at 1 quart per 100 gallons as a surfactant.
- **Micronutrients Usage:** For this study MicroPro and ColloidalSea were applied at 2qts per acre each, and MacroMag and NanoCrop were added at 1qt per acre.
- **Use Guidelines:** Always follow label guidelines. For specific dilution rates and application advice, please reach out to us directly at (707) 972-5650.

## SAP Analysis

The data reveals significant variations in Iron, Manganese, Zinc, and Magnesium levels between treated and control plots. The treated plots displayed a considerable increase in Iron, Manganese, and Zinc levels. In terms of Manganese, the control plots had higher concentrations in the new leaves compared to the treated plot. However, while the control plot showed a small increase from 18.3 PPM to 20.8 PPM, **the treated plots saw a significant rise from 10.8 PPM to 19.6 PPM, resulting in an 81.48% increase** compared to the control plot's 13.66% increase.

## Shoot Measurements Findings

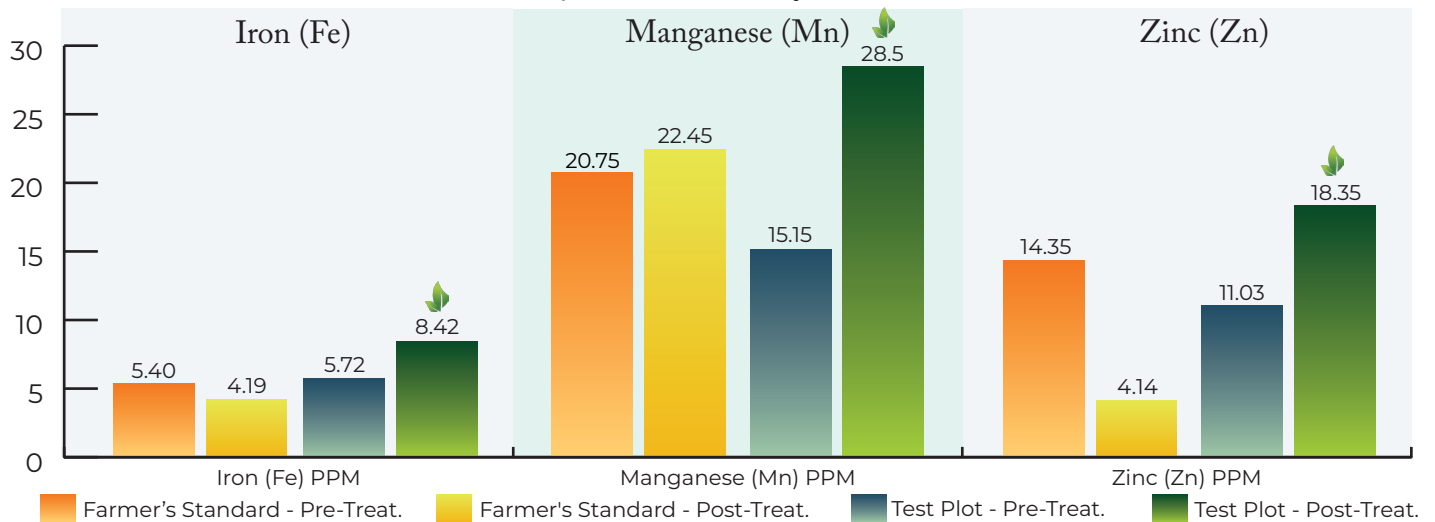
**Treated blueberry shoots consistently exhibited more new growth and vigor than the untreated control samples.** The substantial difference in growth between the two plots underscores the effectiveness of the applied nutrient products.

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## MicroPro | SAP Analysis vs Control



WCA Micronutrient Line is highly effective in promoting plant growth. This is especially evident when it is used alongside NanoCrop, which acts as an adjuvant to facilitate nutrient absorption.

## Brix Analysis

The Brix analysis revealed subtle effects of the treatments on the sugar content of blueberry leaves. In October, treated new and old leaves showed a decrease in Brix values compared to the control group. However, the trend was mixed in November, with old leaves showing a smaller decrease. These findings indicate that while the treatment may influence sugar content in the leaves, the **impact varies with time** and the age of the leaves.

## Blueberry Shoot | Length (mm)

Sample Plot	10/25 - 11/01 Shoot		11/02 - 11/08 Shoot		Total Shoot		Mean Shoot	
	Treated	Control	Treated	Control	Treated	Control	Treated	Control
1	20.51	15.17	19.82	11.23	40.33	26.40	41.45	22.84
2	20.33	11.53	18.74	9.74	39.07	21.27	<b>Average Percent Increase Plot to Plot</b>	
3	20.56	11.32	20.13	9.21	40.69	20.53	<b>Treated</b>	<b>Control</b>
4	24.92	13.02	20.77	10.14	45.69	23.17	92.05%	78.98%

## Conclusion

The trial data highlights the benefits of NanoCrop, ColloidalSea, MacroMag, and MicroPro for blueberry farmers. The blueberries, treated while entering dormancy, showed substantial shoot length and growth, demonstrating the effectiveness of these products. Remarkably, **there was a notable uptake of nutrients and new growth during the dormancy phase**, which is typically uncommon. This evidence further supports the surfactant properties of NanoCrop and the capacity of MacroMag and MicroPro to enhance blueberry cultivation.