

## SCD Probiotics®

### **Case Study Summary – Tomato Trial with SCD Bio Ag®**

*Agriculture – Tomato yield and brix (CSS-001-15)*

**Industry:** Agriculture  
**Crop:** Tomato (drip irrigation)  
**Products:** SCD Bio Ag®

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### Highlights

- SCD Bio Ag stimulated a higher yield (+22%) and improved crop quality in tomatoes
- SCD Bio Ag can be used to improve key characteristics important for the tomato growing

### Introduction

Tomatoes are an economically important, high value crop produced in numerous regions globally for fresh market as well as for processing. Every year in one country, growers plant 160,000 ha tomatoes and deliver nearly 7 million tons of this valuable crop. Recently, SCD Bio Ag received attention for its potential to stimulate tomato yield and quality. A study was conducted to assess the benefits of SCD Bio Ag - yield and quality improvement (Brix°, pH – see notes below for brief explanation of units in relation to tomato quality).

**Figure 1:** View of Tomatoes in the Field.



SCD  
probiotics  
inside

## Methodology

Tomato (var. Troy) was planted on a 0.25 ac (0.1 ha) field (see Figure 1). SCD Bio Ag was applied several times during the growing season. The first application was performed one month after seeding at a 1.6 gal. ac<sup>-1</sup> (15 L ha<sup>-1</sup>) dose. This was followed by another application one month later at a 1.06 gal. ac<sup>-1</sup> (10 L ha<sup>-1</sup>) dose with drip irrigation. The control plants received regular irrigation without SCD Bio Ag.

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Fruit was harvested and yield quantified as fresh fruit biomass. For Bx° measurement, ripe fruit tissue was homogenized and Bx° was measured on a portable refractometer (Figure 2). Results of Bx° and pH measurements are shown in Table 1.

## Results

Treated tomatoes produced 20 ton ha<sup>-1</sup> more than control. The treated group had a 7.1 °Bx while the °Bx in control was 6.3. The pH of tomato in the treated group was 4.27 while the control group showed a pH of 4.19.

**Figure 2:** Measuring Brix and pH in the Lab.



The research group performing this study also reported that, visually, tomatoes in the treated group seemed healthier and had larger fruit than the control group.

**Table 1:** Results of Analysis for Control and SCD Bio Ag-Treated Groups.

Parameters	SCD Bio Ag	Control
Yield (ton ha <sup>-1</sup> )	110	90
Brix (°Bx)	7.1	6.3
pH	4.27	4.19



## Conclusion

SCD Bio Ag stimulated a higher yield (+22%) and improved crop quality in tomatoes exemplified by higher Brix° and moderated, reduced pH. The results indicate that SCD Bio Ag can be used to improve key characteristics important for the tomato-growing bottom line.

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## Notes

Brix° is a measurement of total soluble solids in fruit comprised by sugars, proteins, amino acids, among other constituents. High brix usually indicates well-balanced soil nutrients and good uptake. Superior Brix on tomatoes treated with SCD Bio Ag (7.1 °Bx) compared to control (6.3 °Bx) suggests that SCD Bio Ag stimulates plant metabolism and soil quality.

A normal pH range in tomatoes is 4.0 – 4.5 and the lower pH means more tart or sour the fruit. The pH of tomatoes with SCD Bio Ag was 4.27 and higher than the control group's pH level (4.19) suggesting improved tastefulness.

