



## COFFEE RESEARCH TRIAL IN BRAZIL - RESULTS SUMMARY

### OBJECTIVE

This field trial assessed the effects of **TrueSolum**<sup>®</sup> when added to grower's standard treatment, on the yield of coffee (*Coffea arabica* L.), when compared to the grower's standard plant health program alone.

### TRIAL SPECIFICS

**Location:** Cabo Verde, MG - Brazil

**Date:** November 2022 – July 2023

**Treatments:**

- Control (A): Grower's Standard (Durivo at 1 L/ha)
- Treatments
  - B: Grower's Standard + 2.5 L/ha **TrueSolum**
  - C: Grower's Standard + 5 L/ha **TrueSolum**
  - D: Grower's Standard + 7.5 L/ha **TrueSolum**
  - E: Grower's Standard + 10 L/ha **TrueSolum**

**Product applications:**

- 1st: November 2022
- 2nd: February 2023

### OVERVIEW

This research trial was conducted at the Experimental Coffee Farm Luiz Viana in Cabo Verde, Southern Minas Gerais, Brazil, at an average altitude of 1122 meters. Plant spacing in the coffee plantation was 3.5 x 0.5 meters, resulting in a density of 5714 plants per hectare. The coffee variety (*Coffea arabica* L.) used for the study is Catuai Amarelo IAC-62. The experiment followed a Randomized Complete Block Design (RCBD) with five treatments and four replications, totaling 20 experimental plots. Each plot included 10 plants, with the central 6 plants used for analysis. The treatments involved TrueSolum applications at different dosages, along with the soil insecticide Durivo at a rate of 1 L/ha. These applications occurred in November and February, aligning with standard practices in the coffee farming industry.

### RESULTS

Among the treatments, the average yield and productivity was 477.33 L per bag and 61.15 bags per hectare, respectively. Treatments B, C and E consistently outperformed the overall average in all evaluated parameters and achieved higher averages than the other treatments.

Treatments	Productivity (bags/ha)	Yield (L of coffee/bag)	Total Production (L/ha)
Treatment A	45.20	481.58	21,773.94
Treatment B	63.58	478.93	30,464.49
Treatment C	65.10	477.78	31,092.86
Treatment D	58.28	478.75	27,900.46
Treatment E	73.63	469.60	34,519.49
Average	61.15	477.33	29,186.69
CV%	21.21	7.20	



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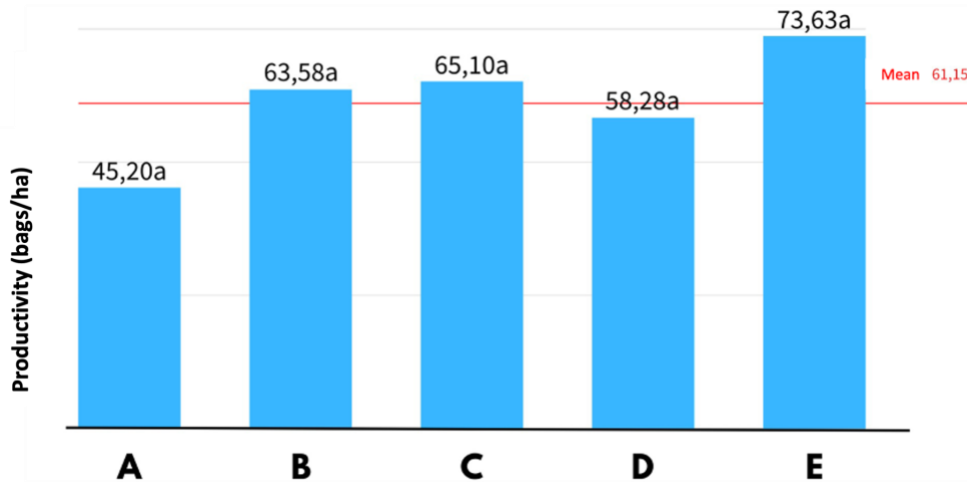
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In the chart below, it is possible to observe the numerical difference in productivity between the treatments. Treatment E achieved the highest average productivity, which was also observed in the field on the day of harvest.



## CONCLUSIONS

**TrueSolum treatments resulted in increased bag yields compared to the control.** Productivity improvements ranged from 30% to 60% in comparison to the grower's standard treatment. Specifically, treatment B (2.5 L/ha) saw a 40.61% increase, Treatment C (5 L/ha) had a 44.07% boost, Treatment D (7.5 L/ha) showed a 28.95% increase, and Treatment E (10 L/ha) achieved a 62.85% increase.

Furthermore, the biological soil analysis demonstrated a **consistent increase in Arylsulfatase enzyme activity** in all TrueSolum-treated soils. Arylsulfatases, produced by soil bacteria, play a crucial role in sulfur mineralization, impacting soil health and pH. This finding reinforces the efficacy of TrueSolum treatments in enhancing soil enzymatic processes and nutrient availability, contributing to the observed yield improvements.



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