

## RESPONSE OF SUGARCANE TO MICRONUTRIENT APPLICATION

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Micronutrient fertilization has been neglected in sugar-cane fields in São Paulo State, where most of the ethanol and sugar is produced in Brazil. The objective of this study was to evaluate the response of sugar-cane to Cu, Zn, Mn, Mo, and B under field conditions. Eleven experiments were carried out in different soils and climatic environments in representative sugar-cane-producing regions in the State of São Paulo, Brazil. The fertilizer treatments were applied in the planting row of sugar-cane using sulfate as source of Zn, Cu and Mn, borax to supply B and ammonium molybdate as source of Mo: T1: Control with no micronutrients, T2: 10 kg.ha<sup>-1</sup> Zn; T3: 10 kg.ha<sup>-1</sup> Mn; T4: 10 kg.ha<sup>-1</sup> Cu; T5: 3 kg. ha<sup>-1</sup> B; T6: 2 kg. ha<sup>-1</sup> Mo; T7: Zn + Mn + Cu + B + Mo. All plots were fertilized at planting with 25, 150, 100, and 15 kg ha<sup>-1</sup> N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, and S, respectively. Stem yields (18-month cycle) increased up to 17% with the addition of Zn, Mn, Mo, Cu and B but the total recoverable sugar was not affected by micronutrient application. Sugar yield followed the same trend as the stem yield, indicating that the use of micronutrient may be important to increase the output of sugar from sugar-cane grown in low fertility soils of São Paulo.

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