Silica Deficiency in Louisiana Sugarcane. (S04hallmark094122-Poster)

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Abstract:

Substantial sugarcane yield responses to silica application have been documented in Florida and Hawaii, but not in Louisiana. Our research determined the effect of calcitic lime and calcium silicate slag rates and placement on plant cane yields grown on a light-textured soil in Louisiana. Results showed that mixing 2.24 Mg/ha and 4.48 Mg/ha of calcium silicate slag into soil before planting or placing 2.24 Mg/ha of slag under cane at planting resulted in higher (P<0.10) sugar yields compared to the check. Mixing 2.24 Mg/ha and 4.48 Mg/ha of calcitic lime, however, into the soil before planting did not increase (P>0.10) sugar yields. Higher (P<0.10) sugar yields obtained with calcium silicate slag vs. calcitic lime indicate that the yield response obtained with calcium silicate slag was caused by its silica content.

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