

## Increasing Tissue Calcium with Increasing Rates of Macro-Sorb Quelant-Ca

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### Summary:

The objective of this study was to determine how various rates of Macro-Sorb Quelant<sup>®</sup>-Ca influence tissue levels of calcium in tall fescue (*Festuca arundinace* L.) turfgrass plants. Research plots were set up at Colbert Hill Golf Course in Manhattan, Kansas on a tall fescue turfgrass stand. Macro-Sorb Quelant<sup>®</sup>-Ca was applied at rates of 1.0, 2.0 or 4.0 fl oz/1000 ft<sup>2</sup> and was applied on 5 day intervals for a total of 3 applications. Five days after the final applications, leaf tissue samples were collected from each plot and sent to Kansas State University Soil and Plant Tissue Diagnostics Lab for calcium analysis (Figure 1.). Following applications of Quelant-Ca at 1.0, 2.0 and 4.0 fl oz/1000 ft<sup>2</sup>, leaf tissue calcium increases by 3, 11 and 22 percent, respectively. With the addition of Macro-Sorb amino acids, foliar applications of Quelant<sup>®</sup>-Ca efficiently increases calcium concentrations within leaf tissue. Increasing tissue concentrations of calcium strengthens cell walls/membranes and improves stress tolerance related to heat and drought. Macro-Sorb Quelant<sup>®</sup>-Ca is a very effective product for applying plant available calcium to turfgrass.

**Figure 1.** Leaf Tissue Calcium increased by 3, 11 and 22 % following applications of Macro-Sorb Quelant<sup>®</sup>-Ca at 1.0, 2.0 and 4.0 fl oz/1000 ft<sup>2</sup>.

