



Evaluating the Effectiveness of Mid-Summer Topdress Applications of Chelated Iron

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Nature of Work:

The use of the minor nutrient iron has declined as a major crop supplement on container crops. The inclusion of a minor nutrient charge in controlled release fertilizers has reduced the perceived need for higher iron levels. Some crops usually exhibit iron deficiency symptoms in the heat of the summer most years. Crops that regularly show typical symptoms or that are suspect, have been included in this study.

Ornamental plants included in the trial were *Abelia* 'Edward Goucher', *Rhododendron* 'Gerard Hot Shot', *Hydrangea macrophylla* 'Nikko Blue', *Ilex crenata* 'Helleri', *Juniperus davurica* 'Expansa', *Loropetalum chinense rubrum* 'Sizzlin' Pink', *Spiraea japonica* 'Lime Mound', and *Ternstroemia gymnanthera*. On March 13, 2001, liners were potted into trade gallons except for Nikko Blue hydrangea which was transplanted on April 17, 2001. The potting mix was pine bark and sand (9:1), with 14# Osmocote 15-9-12 and 4# dolomitic lime per cubic yard. Treatments included 1) no supplemental iron and 2) 1/4 teaspoon chelated iron top dressed on July 5, 2001. Twenty single plant replicates were included in each treatment. A buffer border of two plants was placed around the trial and plants were maintained under good nursery conditions.

Results and Discussion:

The cooler than normal summer weather with good rains seem to have reduced to amount of iron deficiency symptoms seen this year in the trial. Only the Edward Goucher abelia showed visual chlorosis with the no supplemental iron treatment.

The plant's top growth was harvested on October 25, 2001 and dried for a week at 180^oF. The top dry weight for each crop and treatment were recorded and the data analyses was done with ANOV. When statistical differences were observed at the 0.05 probability level, the means were separated using Student-Newman-Keuls test.

There were no significant results for *Abelia* 'Edward Goucher', *Rhododendron* 'Gerard Hot Shot', *Hydrangea macrophylla* 'Nikko Blue', *Ilex crenata* 'Helleri' and *Ternstroemia gymnanthera*. The supplemental iron treatment increased top growth on the *Juniperus davurica* 'Expansa' and decreased top growth on *Loropetalum chinense rubrum* 'Sizzlin' Pink' and *Spiraea japonica* 'Lime Mound'.

Results from this study appear to be atypical. It is suggested that this work be repeated before accepting and using these results.