



## Abelia & Loropetalum Production Under Elevated Amendment Applications

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**Nature of Work:** Production of *Abelia* × *grandiflora* and *Loropetalum chinense* in North Georgia is troubled by mid summer foliage yellowing. Crops begin to decline with the high temperatures of summer and the root systems become stressed. Yellowing of the foliage follows and plants make little growth the remainder of summer. Crops are unsalable in fall and the following spring. Second year crops which remain in the same pot are more susceptible to this problem. ‘Edward Goucher’ is more susceptible than other *Abelia* selections. The objective is to determine if higher calcium, magnesium and iron levels in the potting substrate have an influence on this problem.

*Abelia* ‘Edward Goucher’ and *Loropetalum chinense* ‘Sizzlin Pink’ crops were produced in the 2005 season. One and three gallon plants which had one previous season of growth were used. One gallon plants were pruned moderately and the three gallon plants were pruned heavily to make room for the new seasons growth. The pine bark:sand (6:1) potting substrate surface was top dressed with Osmocote 19-5-9, a 12 month product or (2) Nutricote 18-6-8, a 270 day product. The one gallon containers were top dressed with 3.23 grams of actual nitrogen per pot, a medium rate, while the three gallon containers were top dressed with 11.78 grams of actual nitrogen per pot, a medium rate. The amendment top dress treatments were (1) 12 #/yd<sup>3</sup> dolomitic lime, 2) 10 #/yd<sup>3</sup> dolomitic lime, 3) 6 #/yd<sup>3</sup> dolomitic lime, 4) 6 #/yd<sup>3</sup> dolomitic lime plus 2 #/yd<sup>3</sup> K-Mag and 5) 6 #/yd<sup>3</sup> dolomitic lime plus 1 #/yd<sup>3</sup> coated slow release iron from Harrell’s Fertilizer. All were based on volume of the container substrate. Treatments were applied on March 29, 2005. There were 10 replicates of each treatment. Plants were to be evaluated for summer yellowing and top growth weight.

The one gallon *Abelias* and *Loropetalums* were harvested on September 15. The three gallon *Abelias* were harvested on August 17. The three gallon *Loropetalums* were not harvested because of the large number of plant deaths. The plant tops were dried and top dry weight determined. ANOV was used to determine treatment differences and means were separated with the Student-Newman-Keuls test.

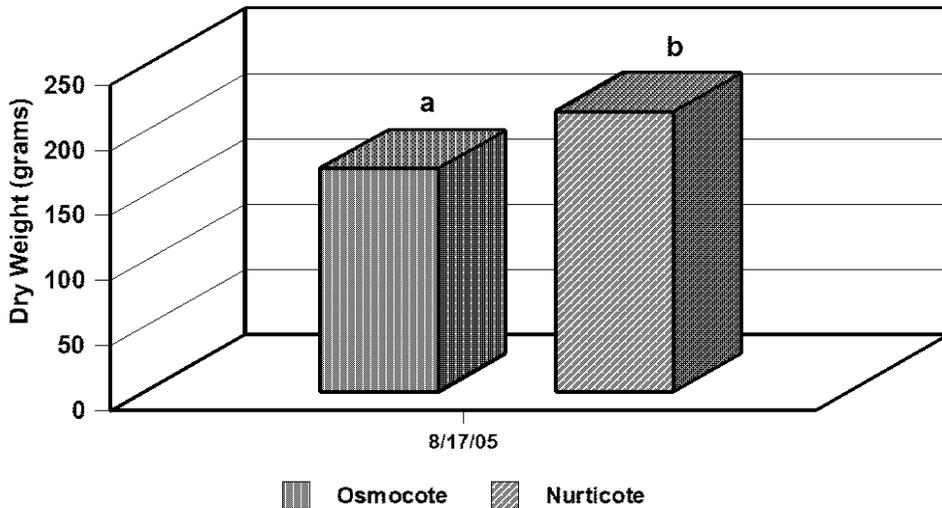
**Results and Discussion:** Treatment on *Abelia* were examined all summer and no significant foliar yellowing was evident. There were minor visual differences between *Abelia* treatments. The one gallon *Abelias* showed no statistical differences between fertilizers or between amendments. The three gallon containers had significantly more top growth with the Nutricote fertilizer treatment (Figure 1). The 12 #/yd<sup>3</sup> dolomitic lime treatment and the 6 #/yd<sup>3</sup> dolomitic lime plus 2 #/yd<sup>3</sup> K-Mag treatment produced greater top growth (Figure 2) but not significantly more than the 10 #/yd<sup>3</sup> dolomitic lime and the 6 #/yd<sup>3</sup> dolomitic lime plus iron. The higher dolomitic lime treatment and the K-Mag treatment appear to be most beneficial.

The one gallon Loropetalums produced significantly more top growth with the Nutricote fertilizer treatment. The 6 #/yd<sup>3</sup> dolomitic lime produced the greatest top growth, although there was little significant difference from the other treatments (Figure 3). The 3 gallon Loropetalums suffered great losses from the Osmocote treatments. The plants, stressed by the heavy pruning that occurred prior to the treatment applications, were adversely affected by the Osmocote treatments. Sixty-eight percent of the Osmocote treatment plants died while 14 percent of the Nutricote plants died.

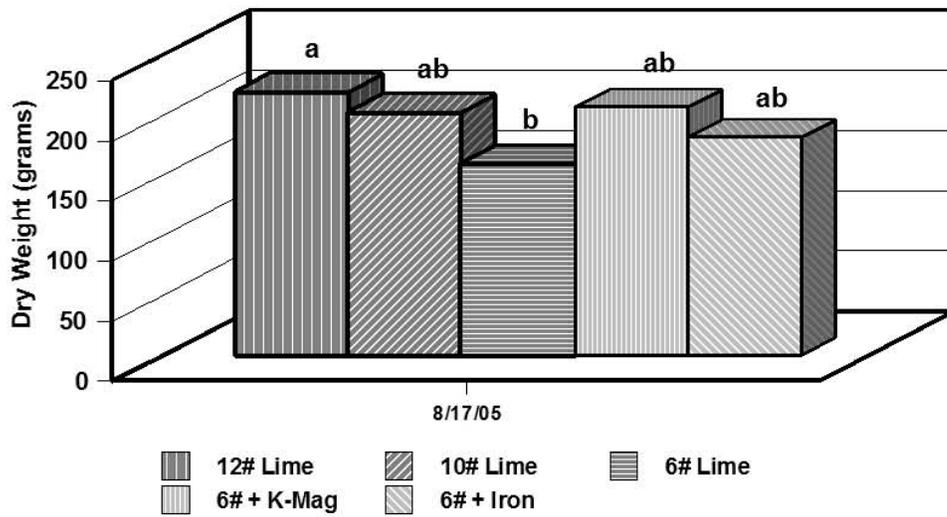
**Significance to the Industry:** The Nutricote fertilizer treatment proved to be superior in these trials on Abelia and Loropetalum. Selection of a fertilizer product may affect the amount of plant growth and survival of stressed plants.

Three gallon *Abelia* 'Edward Goucher' appear to respond to higher levels of dolomitic lime or addition of K-Mag as a topdress on two year crops. One gallon *Loropetalum chinense* 'Sizzlin Pink' preformed best with lower levels of dolomitic lime. These results are preliminary and should be tested by the producer before widely implemented into their production systems.

**Figure 1. Fertilizer Effects on Abelia 'Edward Goucher'.**



**Figure 2. Amendment Effects on *Abelia* ‘Edward Goucher’ in three gallon containers.**



**Figure 3. Amendment Effects on Sizzlin Pink Loropetalum in one gallon containers.**

